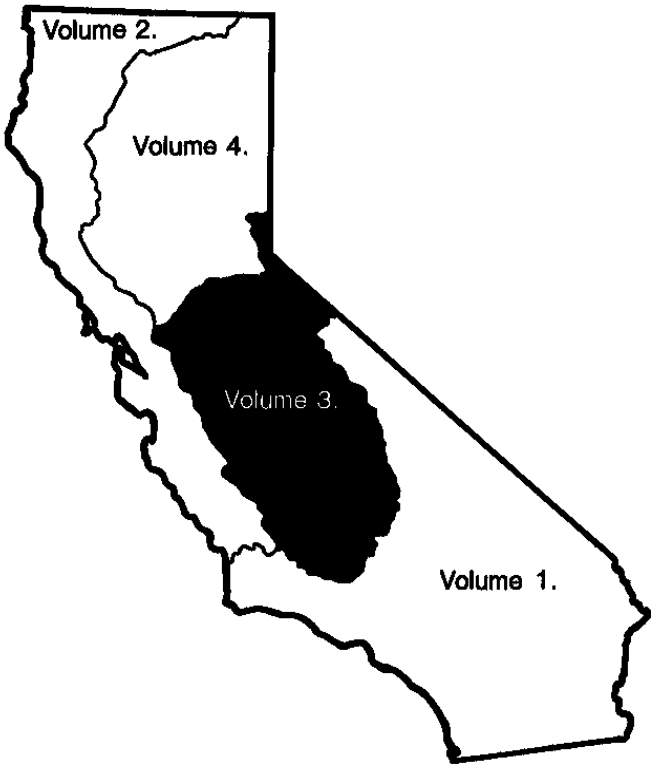
USGS
science for a changing world

Prepared in cooperation with
California Department of Water Resources and with other agencies

Water Resources Data California Water Year 2003

Volume 3
Southern Central Valley Basins and
the Great Basin from Walker River to Truckee River



Water-Data Report CA-03-2

U.S. Department of the Interior
U.S. Geological Survey

CALENDAR FOR WATER YEAR 2003

2002

OCTOBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

NOVEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

DECEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

2003

JANUARY

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

FEBRUARY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

MARCH

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

APRIL

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

MAY

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

JUNE

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

JULY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

AUGUST

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

SEPTEMBER

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Water Resources Data
California
Water Year 2003

Volume 3. Southern Central Valley Basins and the Great Basin from Walker River to Truckee River

By G.L. Rockwell, G.L. Pope, J.R. Smithson, and L.A. Freeman

Water-Data Report CA-03-3

Prepared in cooperation with the
California Department of Water Resources and with other agencies

U.S. Department of the Interior
U.S. Geological Survey

U.S. Department of the Interior
Gale A. Norton, Secretary

U.S. Geological Survey
Charles G. Groat, Director

2004

U.S. Geological Survey
Placer Hall, Suite 2015
6000 J Street
Sacramento, California 95819-6129
916-278-3000

Information about the USGS, California District is available on the Internet at *http://ca.water.usgs.gov/*

Information about all USGS reports and products is available by calling 1-888-ASK-USGS or on the Internet via the World Wide Web at *http://www.usgs.gov/*

Additional earth science information is available by accessing the USGS home page at *http://www.usgs.gov/*

PREFACE

This volume of the annual hydrologic data report of California is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and water quality provide the hydrologic information needed by Federal, State, and local agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for California are contained in four volumes:

Volume 1. Southern Great Basin from Mexican Border to Mono Lake Basin and Pacific Slope Basins from the Tijuana River to Santa Maria River
Volume 2. Pacific Slope Basins from Arroyo Grande to Oregon State Line except Central Valley
Volume 3. Southern Central Valley Basins and The Great Basin from Walker River to Truckee River
Volume 4. Northern Central Valley Basins and The Great Basin from Honey Lake Basin to Oregon State Line

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to U.S. Geological Survey policy and established guidelines, the individuals contributing significantly to the collection, processing, and tabulation of the data are given on page V.

This report was prepared in cooperation with the California Department of Water Resources and with other agencies, under the general supervision of Michael V. Shulters, District Chief, California.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	May 2004	Annual—Oct. 1, 2003, to Sept. 30, 2004

4. TITLE AND SUBTITLE
Water Resources Data—California, Water Year 2003, Volume 3. Southern Central Valley Basins and The Great Basin from Walker River to Truckee River

5. FUNDING NUMBERS

6. AUTHOR(S)
G.L. Rockwell, G.L. Pope, J.R. Smithson, and L.A. Freeman

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
U.S. Geological Survey, Water Resources Division, California District
Placer Hall, Suite 2015
6000 J Street
Sacramento, CA 95819-6129

8. PERFORMING ORGANIZATION REPORT NUMBER
USGS-WDR-CA-03-3

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)
U.S. Geological Survey, Water Resources Division, California District
Placer Hall, Suite 2015
6000 J Street
Sacramento, CA 95819-6129

10. SPONSORING / MONITORING AGENCY REPORT NUMBER
USGS-WDR-CA-03-3

11. SUPPLEMENTARY NOTES
Prepared in cooperation with the California Department of Water Resources and with other agencies.

12a. DISTRIBUTION / AVAILABILITY STATEMENT
No restriction on distribution. This report may be purchased from the National Technical Information Service, Springfield, VA 22161

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*
Water-resources data for the 2003 water year for California consist of records of stage, discharge, and water quality of streams, stage and contents in lakes and reservoirs, and water levels and water quality in wells. Volume 3 contains discharge records for 185 gaging stations, stage and contents for 47 lakes and reservoirs, water quality for 45 stations and 13 partial-record stations, and precipitation data for 2 stations. Also included are 1 miscellaneous partial-record site and 1 crest-stage partial-record station. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in California.

14. SUBJECT TERMS
*California, *Hydrologic data, *Surface water, *Water quality, Flow rate, Sampling sites, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment, Water temperatures, Water analyses

15. NUMBER OF PAGES
699

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
Unclassified	Unclassified	Unclassified	

WATER RESOURCES DIVISION

Donna M. Schiffer, Chief, Operations
James C. Bowers, Assistant Chief, Operations

Embele G. Awipi, Hydrologic Clerk
Owen Baynham, Hydrologic Technician
Kevin Bazar, Hydrologic Technician
William R. Brazelton, Hydrologic Technician
Susan Brockner, Hydrologic Technician
John Budlong, Hydrologic Technician
Kimberly S. Engelking, Editor
Tracy Frentzen, Information Technology Specialist
Laureen J. Fong-Frydendal, Hydrologic Technician
Michael Dean Galvez, Hydrologic Aid
Mike Galvez, Gaging Station Construction Worker
Joe Grant, Hyrdologic Technician
Ryan Gromer, Hydrologic Technician
Kim L. Hanson, Computer Specialist
William J. Hardy, Hydrologic Technician
Paul D. Hayes, Hydrologic Technician
Travis Hiett, Hydrologic Technician
Stuart A. Hill, Hydrologic Technician
Paul D. Honeywell, Hydrologic Technician
Ernest R. Houston, Hydrologist
Rick T. Iwatsubo, Hydrologist
Joel D. Johnson, Supervisory Hydrologist
Mark V. Johnson, Hydrologic Technician
Michael Judd, Hydrologic Technician
Michael P. Mann, Hydrologist
Delia A. Millers, Hydrologic Clerk
Allan C. Mlodnosky, Hydrologic Technician
Denis J. O'Halloran, Hydrologic Technician
Christine S. O'Neil, Hydrologic Technician
David J. Peyton, Hydrologic Technician
Russell P. Ramey, Hydrologic Technician
Matthew C. Scrudato, Hydrologic Technician
Robert Sheipline, Hydrologic Technician
Carol J. Simons, Hydrologic Technician
Daryl R. Slawnikowski, Hydrologic Technician
David M. Sparks, Hydrologic Technician
Shawn G. Welch, Hydrologic Technician
Jeffrey B. West, Hydrologic Technician
Jonathan J.Willis, Hydrologic Technician
Mark H. Woloszyk, Hydrologic Technician
David K. Yancey, Computer Specialist
George S. Yamamoto, Scientific Illustrator
Brian T. Yost, Hydrologic Technician

Richard A. Hunrichs, Surface Water Hydrologist
Robert W. Meyer, Surface Water Hydrologist

CONTENTS

ILLUSTRATIONS

SURFACE-WATER AND WATER-QUALITY STATIONS IN DOWNSTREAM ORDER FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

[Letters after station name designate type of data collected: (d), discharge; (l), lake or reservoir elevation, gage heights, or contents; (g) gage height; (p), precipitation; (c), chemical; (b), biological; (t), water temperature; (u), turbidity; and (s), sediment]

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

SURFACE-WATER AND WATER-QUALITY STATIONS IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME—CONTINUED

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

SURFACE-WATER AND WATER-QUALITY STATIONS IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME—CONTINUED

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

SURFACE-WATER AND WATER-QUALITY STATIONS IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME—CONTINUED

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

SURFACE-WATER AND WATER-QUALITY STATIONS IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME—CONTINUED

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

SURFACE-WATER AND WATER-QUALITY STATIONS IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME—CONTINUED

DISCONTINUED GAGING STATIONS

The following continuous-record streamflow stations in California have been discontinued or converted to partial record stations. Daily records were collected and are stored in USGS Water Data for the period of record shown for each station.

Station No.	Station name	Drainage area (mi^2)	Period of record (Water Year)
10295200	West Walker River at Leavitt Meadows, near Coleville	73.4	1945–64
10303000	Silver King Creek near Coleville	31.8	1947–51
10303500	East Fork Carson River at Silver King Valley, near Markleeville	—	1947–51
10336593	Grass Lake Creek near Meyers	6.99	1971–74
10336600	Upper Truckee River near Meyers	33.1	1961–86
10336625	Fallen Leaf Lake near Camp Richardson	16.7	1968–92
10336626	Taylor Creek near Camp Richardson	16.7	1968–92
10336675	Ward Creek at Stanford Rock Trail Crossing, near Tahoe City	8.97	1991–2001
10336686	Carnelian Creek at Carnelian Bay	2.93	1999–2000
10336759	Edgewood Creek near Stateline, NV	3.20	1983–87
10338100	Summit Creek above Donner Lake, near Truckee	4.96	1997–98
10339419	Truckee River above Prosser Creek, near Truckee	644	1994–98
10341950	Little Truckee River below diversion dam, near Sierraville	36.1	1993–98
10342000	Little Truckee River near Hobart Mills	37.1	1947–72
10343200	Little Truckee River at Highway 89, near Truckee	59.0	1993–94
10345700	Bronco Creek at Floriston	15.4	1993–98
11185000	Grayson Creek near Hookston	1.96	1955–60
11185100	Grayson Creek near Pacheco	4.35	1954–58
11185300	Golden Trout Creek near Cartago	23.6	1957–67, 1969
11185350	Kern River near Quaking Aspen Camp	530	1961–71, 1973–74
11185400	Little Kern River near Quaking Aspen Camp	132	1957–69
11185600	Packsaddle Canyon Creek near Fairview	4.05	1960–66
11186340	Salmon Creek Tributary B near Fairview	.46	1963–69
11186360	Salmon Creek Tributary C near Fairview	.30	1963–69
11186380	Salmon Creek Tributary E near Fairview	.23	1963–69
11186500	Salmon Creek near Kernville	25.8	1922–23
11187000	Kern River at Kernville	1,009	1905–12, 1953–93
11188000	Kern River at Isabella	1,068	1911, 1926–35
11188200	South Fork Kern River near Olancha	146	1956–67, 1969
11189700	Kelso Creek near Weldon	101	1958–66
11190000	South Fork Kern River at Isabella	982	1929–52
11191000	Kern River below Isabella Dam	2,074	1945–90
11193000	Kern River below Kern Canyon Powerhouse, near Bakersfield	2,307	1954–64
11194000	Kern River near Bakersfield	2,407	1894–1976
11194200	Wagon Wheel Creek near Reward	1.38	1966–71
11195500	San Emigdio Creek at San Emigdio Ranchhouse	48.8	1959–81
11195600	Pastoria Creek near Lebec	27.5	1965–71
11196000	Tejon Creek at Tejon Ranchhouse	48.7	1895–96
11196400	Caliente Creek above Tehachapi Creek, near Caliente	165	1962–83
11196420	Tehachapi Creek near Tehachapi	53.2	1963–85
11197250	Avenal Creek near Avenal	57.1	1962–86
11197800	Poso Creek near Oildale	230	1959–85
11199000	White River near Ornia Hot Springs	14.0	1911–13
11200000	Deer Creek at California Hot Springs	16.8	1911–15, 1917–34
11201200	Deer Creek Diversion near Terra Bella	—	1971–87
11201500	Pacific Gas & Electric Co. Conduit near Springville	—	1940–54, 1966–67, 1969–71, 1976–83
11201800	North Fork of Middle Fork Tule River below Hossack Creek, near Springville	33.8	1909–13
11202750	Middle Fork Tule River above Springville	92.4	1979–88
11203000	Bear Creek near Springville	13.5	1911–16
11203100	North Fork Tule River at Springville	97.6	1957–67
11203190	Tule River Diversion Ditch near Springville	—	1968–88
11203200	Tule River near Springville	247	1958–68

DISCONTINUED GAGING STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi^2)	Period of record (Water Year)
11203220	Tule River at Highway 190, near Springville	247	1968–90
11203500	Tule River near Porterville	253	1902–60
11204000	South Fork Tule River near Porterville	80.3	1911–23, 1925, 1928–32
11204500	South Fork Tule River near Success	109	1930–54, 1956–90
11204680	Pioneer Ditch below Success Dam	—	1959–90
11204900	Tule River below Success Dam	393	1953–90
11205000	Tule River at Worth Bridge, near Porterville	395	1954–60
11205680	Frazier Creek near Strathmore	3.05	1974–94
11208500	Middle Fork Kaweah River Tributary near Hammond	1.90	1967–70, 1972–73
11208610	Monarch Creek near Hammond	1.89	1968–73
11208620	East Fork Kaweah River below Mosquito Creek, near Hammond	16.0	1968–73
11208625	East Fork Kaweah River at Sequoia National Park boundary, near Hammond	23.7	1968–71
11209500	North Fork Kaweah River near Three Rivers	129	1911–60, 1980–81
11209900	Kaweah River at Three Rivers	418	1959–90
11210000	South Fork Kaweah River near Three Rivers	66.5	1912–24
11210100	South Fork Kaweah River at Three Rivers	86.7	1959–90
11210500	Kaweah River near Three Rivers	519	1904–18, 1921–61
11210850	Lemoncove Ditch below Terminus Dam	—	1962–90
11210930	Foothill Ditch below Terminus Dam	—	1962–90
11210950	Kaweah River below Terminus Dam	561	1962–90
11211300	Dry Creek near Lemoncove	75.6	1960–94
11211500	Kaweah River at McKay Point, near Lemoncove	647	1919–21
11211785	Cottonwood Creek above Collier Creek, near Elderwood	52.3	1985–94
11211790	Cottonwood Creek near Elderwood	60.4	1971–85
11212000	Sand Creek near Orange Cove	31.6	1944–54, 1956, 1967, 1969, 1971–94
11212500	South Fork Kings River near Cedar Grove	408	1951–57
11213000	Kings River near Hume	835	1922–36, 1952–58
11213500	Kings River above North Fork, near Trimmer	952	1927–28, 1932–82
11214000	North Fork Kings River below Meadowbrook	37.7	1922–35, 1957–81
11214200	Fleming Creek near Blackcap Mountain	15.0	1957–65
11214400	Post Corral Creek near Blackcap Mountain	27.9	1957–65
11214500	Helms Creek at Sand Meadows	34.7	1923–31, 1956–58
11215500	Rancheria Creek near Smith Meadows	21.3	1925–31
11215800	Teakettle Creek Tributary No. 3 near Dinkey Creek	.86	1958–69, 1977–83
11215810	Teakettle Creek Tributary No. 7 near Patterson Mountain	.11	1958–63
11215820	Teakettle Creek Tributary No. 2 near Dinkey Creek	.85	1958–69, 1977–83
11215830	Teakettle Creek Tributary No. 2a near Dinkey Creek	.27	1958–69, 1977–83
11215840	Teakettle Creek Tributary No. 1 near Dinkey Creek	.77	1958–69, 1977–83
11216000	North Fork Kings River below Rancheria Creek	229	1927–50
11216800	Rock Creek at Dinkey Creek	7.60	1961–70
11217000	Dinkey Creek at Dinkey Meadow, near Shaver Lake	50.7	1922–35, 1977–87
11217500	Deer Creek below east Fork, near Shaver Lake	19.0	1924–31
11218000	Dinkey Creek at mouth, near Trimmer	132	1920–37
11218500	Kings River below North Fork, near Trimmer	1,342	1951–93
11219000	Big Creek near Tollhouse	19.8	1911–13
11220000	Big Creek above Pine Flat Lake, near Trimmer	70.0	1954–73
11220500	Sycamore Creek above Pine Flat Lake, near Trimmer	56.1	1953–73
11221500	Kings River below Pine Flat Dam	1,545	1954–90
11221700	Mill Creek near Piedra	127	1958–94
11222000	Kings River at Piedra	1,693	1896–1959
11225000	Los Gatos Creek near Coalinga	105	1932–41
11226000	North Fork San Joaquin River below Iron Creek	35.5	1922–28, 1959–69

DISCONTINUED GAGING STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi^2)	Period of record (Water Year)
11226500	San Joaquin River at Miller Crossing	249	1921–28, 1951–91
11227000	West Fork Granite Creek near Timber Knob	26.4	1922–25
11227500	Middle Fork Granite Creek near Cattle Mountain	2.25	1922–23
11228000	East Fork Granite Creek near Cattle Mountain	14.6	1922–25
11228500	Granite Creek near Cattle Mountain	47.8	1922–28, 1966–86
11230000	South Fork San Joaquin River near Florence Lake	171	1922–81, 1984
11230650	Bolsillo Creek above diversion dam, near Big Creek	1.3	1986
11232000	South Fork San Joaquin River near Hoffman Meadow	424	1922–28
11232500	Jackass Creek near Bass Lake	12.1	1922–28, 1961–68
11234500	Chiquito Creek near Bass Lake	60.1	1922–28, 1956–70
11235000	San Joaquin River above Big Creek	1,050	1913–15, 1922–62
11236080	Huntington–Shaver Conduit at Huntington Lake	—	1975–83
11238000	Pitman Creek at Big Creek	23.7	1910–16, 1922–27
11239000	Huntington–Shaver Conduit near Shaver Lake	—	1929–85
11242350	Soquel diversion near Sugar Pine	—	1970–77
11245000	South Fork Willow Creek near North Fork	39.8	1910–17
11245500	Whiskey Creek near North Fork	11.6	1911–16
11246000	Cascadel Creek near North Fork	3.31	1910–12
11247000	San Joaquin River below Kerckhoff Powerhouse, near Prather	1,480	1910–14, 1937, 1943–82, 1988–89
11247200	Big Sandy Creek Tributary near Tollhouse	.46	1969–71
11247500	Big Sandy Creek near Auberry	27.3	1947–51
11248000	Fine Gold Creek near Friant	92.7	1937–58
11250500	Cottonwood Creek near Friant	35.6	1942–51
11251500	Little Dry Creek near Friant	57.9	1942–56
11251600	Little Dry Creek at mouth, near Friant	77.4	1957–61
11252500	San Joaquin River at Herndon	1,802	1895–1901
11253000	San Joaquin River near Biola	1,811	1953–61
11255500	Panoche Creek below Silver Creek, near Panoche	293	1950–53, 1959–70
11255550	Little Panoche Creek Tributary No. 1, near Panoche	.33	1959–64
11256000	San Joaquin River near Dos Palos	4,669	1941–54
11257100	Miami Creek near Oakhurst	10.6	1961–80
11257500	Fresno River near Knowles	133	1911–13, 1915–90
11257700	Picayune Creek near Coarsegold	8.17	1965–68
11258000	Fresno River below Hidden Dam, near Daulton	237	1942–90
11258800	East Fork Chowchilla River near Ahwahnee	57.8	1958–67
11258900	West Fork Chowchilla River near Mariposa	33.6	1958–80
11258920	North Fork Chowchilla River near Nippinnawassee	13.6	1959–67
11258960	Chowchilla River above Willow Creek, near Raymond	173	1980–90
11258980	Chowchilla River near Raymond	201	1972–80
11259000	Chowchilla River below Buchanan Dam, near Raymond	236	1922–23, 1931–72, 1976–90
11259300	Chowchilla River below Raynor Creek, near Raymond	254	1973–75
11259900	Chamberlain Slough near El Nido	—	1940–49
11260000	San Joaquin River near El Nido	6,443	1940–49
11260001	San Joaquin River plus Chamberlain Slough, near El Nido	6,450	1940–49
11260200	Bear Creek near Catheys Valley	24.9	1958–69
11260225	Burns Creek at Hornitos	26.7	1965–69
11260480	Mariposa Creek near Catheys Valley	65.7	1959–80
11261000	Salt Slough near Los Banos	—	1941–68
11262800	Los Banos Creek near Los Banos	159	1959–66
11262890	San Luis Drain, Site A, near South Dos Palos	—	1999
11263000	San Luis Creek near Los Banos	84.6	1950–63
11265000	Tenaya Creek near Yosemite	46.9	1912–58
11265500	Merced River at Yosemite	236	1912–17

DISCONTINUED GAGING STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi^2)	Period of record (Water Year)
11266000	Yosemite Creek at Yosemite	42.7	1912–16, 1918
11267300	South Fork Merced River at Wawona	100	1959–68
11267500	South Fork Merced River near Wawona	132	1912, 1914–15, 1918–21
11268000	South Fork Merced River near El Portal	241	1951–75
11268200	Merced River near Briceburg	691	1966–74
11268500	Merced River at Bagby	911	1923–30, 1932–66
11269300	Maxwell Creek at Coulterville	17	1960–74, 1976–80
11270000	Merced River at Exchequer	1,037	1901–14, 1916–64
11270800	Northside Canal at Merced Falls	—	1987–94
11271320	Dry Creek near Snelling	67.6	1966–92
11271500	Merced River near Livingston	1,259	1922–24, 1926–44
11273000	Merced River Slough near Newman	1,276	1942–72
11274554	Spanish Grant Combined Drain near Patterson	—	1993–95
11274600	Del Puerto Creek Tributary No. 1 near Patterson	.71	1964–69
11274610	Del Puerto Creek Tributary No. 2 near Patterson	.024	1959–63
11274710	Maclure Creek below Maclure Glacier, near Tuolumne Meadows	.37	1967–72
11274800	Tuolumne River at Hetch Hetchy Cabin, near Sequoia	404	1911–16
11275000	Falls Creek near Hetch Hetchy	46	1916–83
11277000	Cherry Creek near Hetch Hetchy	111	1910–55
11278200	Cherry Creek Canal near Early Intake	—	1956–71, 1987–96
11278500	Jawbone Creek near Tuolumne	19.1	1911
11279500	South Fork Toulumne River at Italian Flat, near Sequoia	64.9	1925–30, 1932–33
11280000	South Fork Tuolumne River near Sequoia	68.3	1914–17
11281000	South Fork Tuolumne River near Oakland Recreation Camp	87	1923–96, 1998–2002
11281500	Middle Tuolumne River near Mather	52.4	1925–29, 1932–33
11282000	Middle Tuolumne River at Oakland Recreation Camp	73.5	1917–96, 1998–2002
11282500	South Fork Tuolumne River near Buck Meadows	164	1912, 1914, 1917–21
11283000	Tuolumne River near Buck Meadows	924	1908, 1911–36
11283100	Lily Creek near Pinecrest	11.9	1964–74
11283200	Bell Creek near Pinecrest	9.11	1964–79
11283250	Clavey River near Long Barn	48.9	1987–94
11283350	Reed Creek near Long Barn	27.2	1987–94
11283500	Clavey River near Buck Meadows	144	1960–84, 1987–94
11284500	Big Creek near Groveland	25	1932–33, 1960–74
11284700	North Fork Tuolumne River near Long Barn	23.1	1962–86
11285000	North Fork Tuolumne River above Dyer Creek, near Tuolumne	69.2	1959–66
11286500	Woods Creek near Jacksonville	97.2	1926–68
11288000	Tuolumne River above La Grange Dam, near La Grange	1,532	1896–1970
11288500	Tuolumne River at La Grange	1,539	1896–1911
11291500	Relief Creek near Baker Station	24.4	1911–18
11292500	Clark Fork Stanislaus River near Dardanelle	67.5	1951–94
11292680	Cascade Creek near Pinecrest	4.97	1963–65
11293000	Middle Fork Stanislaus River at Sand Bar Flat, near Avery	325	1906–66
11293500	North Fork Stanislaus River below Silver Creek	27.8	1953–88
11293650	North Fork Stanislaus River at Camp Wolfesboro, near Big Meadows	47.4	1994–96
11293700	Hobart Creek at North Fork Stanislaus River Diversion Tunnel Outlet, near New Spicer Meadow Dam	1.13	1989–94
11294300	North Fork Stanislaus River below Ganns Dam Site, near Big Meadow	111	1961–67
11294400	North Fork Stanislaus River at Sourgrass Campground, near Dorrington	149	1991–96
11295000	Utica Canal near Avery	—	1970, 1976–89
11295400	Stanislaus River near Hathaway Pines	629	1967–94

DISCONTINUED GAGING STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi^2)	Period of record (Water Year)
11299500	Stanislaus River below Melones Powerhouse, near Sonora	905	1931–67
11300000	Stanislaus River near Knights Ferry	980	1916–33
11300600	South San Joaquin Main Canal below diversion point, near Knights Ferry	—	1983–89
11300700	South San Joaquin Main Canal below Woodward Reservoir, near Oakdale	—	1982–89
11300800	North Main Canal below diversion point, near Knights Ferry	—	1983–89
11304000	Corral Hollow Creek near Tracy	61.6	1959–66
11305000	San Domingo Creek near San Andreas	26.2	1950–62
11305500	San Antonio Creek near San Andreas	48.0	1950–59
11306000	South Fork Calaveras River near San Andreas	118	1950–79
11306500	Calaveritas Creek near San Andreas	53	1950–66
11307000	Esperanza Creek near Mokelumne Hill	16.6	1952–59, 1962–71
11307500	Jesus Maria Creek near Mokelumne Hill	34.6	1950–59
11308000	North Fork Calaveras River near San Andreas	85.2	1950–79
11308300	Eldorado Creek at Mountain Ranch	1.97	1963–73
11308500	Murray Creek near San Andreas	23.6	1950–59
11308900	Calaveras River below New Hogan Dam, near Valley Springs	363	1961–90
11309000	Cosgrove Creek near Valley Springs	21.6	1930–69
11309500	Calaveras River at Jenny Lind	393	1907–66
11310500	Calaveras River near Stockton	—	1926, 1944–50
11311000	Stockton Diverting Canal at Stockton	—	1944–53
11311500	Bear Creek near Clements	42.2	1927
11312000	Bear Creek near Lockeford	47.4	1931–85
11312500	Bear Creek at Harmony School, near Lockeford	51.1	1927–31
11315500	Bear River at Pardoe Camp	33	1928–51
11316000	Bear River near Salt Springs Dam	48	1952–87
11316500	North Fork Mokelumne River near West Point	273	1924–32
11317500	South Fork Mokelumne River near Railroad Flat	38.7	1912–34
11318000	Licking Fork Mokelumne River near Railroad Flat	6.32	1912–13, 1915–16
11321000	Mokelumne River at Lancha Plana	587	1926–63
11321500	Camanche Creek near Camanche	5.19	1933–34
11322000	Rabbit Creek near Camanche	8.55	1932–34
11326300	Dry Creek above Sutter Creek, near Ione	70.9	1960–70
11326500	Sutter Creek near Volcano	29.8	1924–27
11327000	Sutter Creek near Sutter Creek	48.1	1936–41, 1961–80
11327500	Sutter Creek at Sutter Creek	50.7	1922–36
11328000	Dry Creek near Ione	266	1912, 1926–32
11329000	Goose Creek near Elliott	8.26	1928–33
11329500	Dry Creek near Galt	324	1927–33, 1945–87, 1996–98
11330000	North Fork Cosumnes River at Cosumnes Mine	38.7	1949–53
11331000	Camp Creek near Sly Park	8.59	1924
11331500	Camp Creek near Camino	32.4	1949–56
11332500	Sly Park Creek near Pollock Pines	18.2	1947–55
11333500	North Fork Cosumnes River near El Dorado	205	1884, 1912–41, 1949–83, 1985–87
11334200	Middle Fork Cosumnes River near Somerset	107	1958–71
11334300	South Fork Cosumnes River near River Pines	64.3	1958–80
11334500	Cosumnes River near Plymouth	436	1952–60
11335700	Deer Creek near Sloughhouse	46	1961–66, 1968–77
11336000	Cosumnes River at McConnel	724	1942–82
11336500	Hadselville Creek at Clay	18.1	1931
11337500	Marsh Creek near Byron	42.6	1953–83

DISCONTINUED LAKES AND RESERVOIRS

The following continuous-record lake stations in California have been discontinued. Daily records were collected and are stored in NWIS for the period of record shown for each location.

Station No.	Station name	Drainage area (mi^2)	Period of record (Water Year)
10336625	Fallen Leaf Lake near Camp Richardson	16.7	1968–92
10339380	Martis Creek Lake near Truckee	39.6	1972–90
11190500	Isabella Lake near Lake Isabella	2,074	1954–90
11197000	Tulare Lake in Kings County	—	1969–82
11204700	Success Lake near Success	391	1962–90
11210900	Lake Kaweah near Lemoncove	560	1962–90
11221000	Pine Flat Lake near Piedra	1,545	1952–90
11257950	Hensley Lake near Daulton	236	1976–90
11258990	H.V. Eastman Lake near Raymond	235	1976–90
11308700	New Hogan Lake near Valley Springs	362	1964–90
11320000	Pardee Reservoir near Valley Springs	578	1962–93
11322300	Camanche Reservoir near Clements	621	1964–93

DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS

The following continuous-record water-quality stations in California have been discontinued. Daily records were collected and are stored in USGS Water Data for the period of record shown for each location.

Station No.	Station name	Drainage area (mi^2)	Type of record	Period of record (Water Year)
10336593	Grass Lake Creek near Meyers	6.99	T,S	1972–74, 1997–2001
103366092	Upper Truckee River at Highway 50, above Meyers	39.3	C,T	1997–2003
10336610	Upper Truckee River at South Lake Tahoe	54.9	C,T,S	1972–74, 1978, 1980–2003
10336612	Upper Truckee River at mouth, near Venice Drive	56.5	T	1997–2001
10336630	Eagle Creek near Camp Richardson	6.38	T,S	1972–74
10336640	Meeks Creek at Meeks Bay	8.08	T,S	1971–74
10336645	General Creek near Meeks Bay	7.44	C,T,S	1981–92
10336650	Quail Lake Creek at Homewood	.95	T,S	1972–74
10336655	Madden Creek near Homewood	1.40	T,S	1972–74
10336658	Madden Creek at Homewood	2.06	T,S	1972–73
10336670	Ward Creek near Tahoe Pines	2.03	T,S	1973–76
10336672	Ward Creek Tributary near Tahoe Pines	.91	T,S	1973–76
10336684	Dollar Creek near Tahoe City	1.07	T,S	1972–74
10336689	Snow Creek at Tahoe Vista	4.43	C,T,S	1981–85
10336740	Logan House Creek near Glenbrook, NV	2.08	S	1984–87
10336759	Edgewood Creek near Stateline, NV	3.20	S	1983–87
10336775	Trout Creek at Pioneer Trail, near South Lake Tahoe	23.1	C,T	1990–2003
10336780	Trout Creek near Tahoe Valley	36.7	C,T,S	1971–74, 1978, 1980–85, 1987–88 1997–2003
10336795	Trout Creek near mouth east, near Bellevue/Eldorado Avenue	41	T	1997–2001
10337000	Lake Tahoe at Tahoe City	506	WQ	1969, 1978–79
10337500	Truckee River at Tahoe City	507	WQ,T	1978–81, 1993–94
10338000	Truckee River near Truckee	553	WQ,C,T	1951–66, 1977–94
10338700	Donner Creek at Highway 89, near Truckee	29.1	T	1993–94
10339250	Martis Creek at State Highway 267, near Truckee	25.8	WQ,T,S	1975–95
10339380	Martis Creek Lake near Truckee	39.6	WQ,S	1975–95

DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi^2)	Type of record	Period of record (Water Year)
10339400	Martis Creek near Truckee	—	WQ,S	1975–95
10339419	Truckee River above Prosser Creek, near Truckee	644	C,T	1994–98
10340500	Prosser Creek below Prosser Creek Dam, near Truckee	52.9	T	1993–98
10341950	Little Truckee River below diversion dam, near Sierraville	36.1	T	1993–94
10343200	Little Truckee River at Highway 89, near Truckee	59.0	T	1993–94
10344500	Little Truckee River below Boca Dam, near Truckee	173	T	1993–98
10345700	Bronco Creek at Floriston	15.4	T	1993–94
10345900	Truckee River at Floriston	932	T	1968–71
10346000	Truckee River at Farad	932	WQ,B,C, T,S	1951–61, 1964–81, 1993–98
11185350	Kern River near Quaking Aspen Camp	530	T	1966–74
11187000	Kern River at Kernville	1,009	WQ,B,T,S	1962–93
11191000	Kern River below Isabella Dam	2,074	WQ,T	1956–66, 1971–94
11204900	Tule River below Success Dam	393	WQ,T	1962–69, 1971–94
11206500	Middle Fork Kaweah River near Potwisha Camp	102	WQ,C,T	1958–63, 1972, 1980–81
11208000	Marble Fork Kaweah River at Potwisha Camp	51.4	WQ,C,T	1980–81
11208610	Monarch Creek near Hammond	1.89	T	1969–73
11208620	East Fork Kaweah River below Mosquito Creek, near Hammond	16.0	T	1968–73
11208625	East Fork Kaweah River at Sequoia National Park boundary, near Hammond	23.7	T	1968–71
11208730	East Fork Kaweah River near Three Rivers	85.8	WQ,T,S	1968–76
11209500	North Fork Kaweah River near Three Rivers	129	T	1980–81
11209900	Kaweah River at Three Rivers	418	T	1966, 1968–88
11210950	Kaweah River below Terminus Dam	561	WQ,T	1962–94
11213500	Kings River above North Fork, near Trimmer	952	T	1966–79
11216500	North Fork Kings River above Dinkey Creek, at Balch Camp	250	T	1968–79
11218500	Kings River below North Fork, near Trimmer	1,342	WQ,B,T,S	1956–93
11221500	Kings River below Pine Flat Dam	1,545	WQ,T	1956–66, 1970–94
11230000	South Fork San Joaquin River near Florence Lake	171	T	1961
11235000	San Joaquin River above Big Creek	1,050	T	1961–62
11237000	Big Creek below Huntington Lake	81.1	T	1961–70
11245000	South Fork Willow Creek near North Fork	39.8	T	1961
11246500	Willow Creek at mouth, near Auberry	130	T	1961–72
11247000	San Joaquin River below Kerckhoff Powerhouse, near Prather	1,480	T	1961–68, 1970–74
11253500	James Bypass near San Joaquin	—	T	1969–71
11257500	Fresno River near Knowles	133	T	1971–88
11258000	Fresno River below Hidden Dam, near Daulton	237	T	1976–90
11258960	Chowchilla River above Willow Creek, near Raymond	173	T	1980–88
11258980	Chowchilla River near Raymond	201	T	1971–80
11259000	Chowchilla River below Buchanan Dam, near Raymond	236	WQ,T	1958–65, 1976–94
11260815	San Joaquin River near Stevinson	7,388	C,T	1989–96
11261100	Salt Slough at Highway 165, near Stevinson	—	WQ,S	1983–88, 1993–94
11262890	San Luis Drain, Site A, near South Dos Palos	—	C,T	1999
11266500	Merced River at Pohono Bridge, near Yosemite	321	WQ,T,S	1971–72, 1981–82, 1994–95
11268000	South Fork Merced River near El Portal	241	T	1975–78
11268200	Merced River near Briceburg	691	T	1976–77
11272500	Merced River at Stevinson	1,273	C,T	1989–92
11274000	San Joaquin River near Newman	9,520	WQ,C,T,S	1989, 1992–95
11274554	Spanish Grant Combined Drain near Patterson	—	WQ,C,T,S	1993–95, 2001
11274560	Turlock Irrigation District Lateral No. 5 near Crows Landing	—	WQ,C,T,S	1992–95, 1999–2001
11274570	San Joaquin River at Patterson Bridge, near Patterson	9,760	C,T,S	1989–95
11283100	Lily Creek near Pinecrest	11.9	T	1965–74

DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi^2)	Type of record	Period of record (Water Year)
11292700	Middle Fork Stanislaus River at Hells Half Acre Bridge, near Pinecrest	287	T	1966–71, 1973–78
11294500	North Fork Stanislaus River near Avery	163	T	1990–98
11295400	Stanislaus River near Hathaway Pines	629	T	1970–83
11303000	Stanislaus River at Ripon	1,075	WQ,S	1985–88, 1994
11303500	San Joaquin River near Vernalis	13,536	B	1974–81
11306000	South Fork Calaveras River near San Andreas	118	T	1974–79
11308000	North Fork Calaveras River near San Andreas	85.2	T	1974–79
11308600	Calaveras River above New Hogan Reservoir, near San Andreas	307	T	1970–82, 1984–88
11308900	Calaveras River below New Hogan Dam, near Valley Springs	363	WQ,T	1964–66, 1971–94
11312000	Bear Creek near Lockeford	47.4	C	1976
11313010	Delta–Mendota Canal below Tracy Pump Plant, near Tracy	—	T	1960–66
11319500	Mokelumne River near Mokelumne Hill	544	WQ,T	1961–80
11323500	Mokelumne River below Camanche Dam	621	WQ,T,S	1906–07, 1956–76
11325500	Mokelumne River at Woodbridge	661	WQ,C,T,S	1951–94

Type of record: WQ (Water quality); B (Biological); C (Conductivity); T (Temperature); S (Sediment); P (Precipitation).

THIS PAGE INTENTIONALLY LEFT BLANK

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003
VOLUME 3—SOUTHERN CENTRAL VALLEY BASINS AND THE GREAT BASIN FROM WALKER RIVER TO TRUCKEE RIVER

By G.L. Rockwell, G.L. Pope, J.R. Smithson, *and* L.A. Freeman

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State and Federal agencies, obtains a large amount of data pertaining to the water resources of California each water year. These data, accumulated during many water years, constitute a valuable database for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the U.S. Geological Survey, the data are published annually in this report series entitled "Water Resources Data—California."

This volume of the report includes records on surface water in the State. Specifically, it contains: (1) discharge records for 185 streamflow-gaging stations and 2 partial-record station; (2) stage and content records for 47 lakes and reservoirs; (3) precipitation data for 2 stations; and (4) water-quality records for 58 streamflow-gaging stations. Records included for stream stages are only a small fraction of those obtained during the water year.

The series of annual reports for California began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format changed to include data on quantities of surface water, quality of surface and ground water, and ground-water levels. From the 1985 through the 1993 water years, a separate volume for ground-water levels and quality was published for California.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for California were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 10 and 11." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." These Water-Supply Papers may be consulted in public libraries of principal cities of the United States, or if not out of print, they may be purchased from U.S. Geological Survey, Information Services, Box 25286, Denver Federal Center, Denver, CO 80225-0046.

Publications similar to this report are published annually by the U.S. Geological Survey for all States. Each report has an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report CA-03-1." For archiving and general distribution, the reports for 1971–74 water years also are identified as water-data reports. These water-data reports are for sale, in paper copy or on microfiche, by the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. For further ordering information, the Customer Inquiries telephone number is (703) 487-4650, between 8:30 a.m. and 5:30 p.m. Eastern Standard Time.

Additional information for ordering specific reports may be obtained from the District Office at the address given on the back of the title page or by telephone at (916) 278-3100.

COOPERATION

The U.S. Geological Survey and organizations of the State of California have had cooperative agreements for the systematic collection of records since 1903. Organizations that supplied data are acknowledged in station descriptions. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

California Department of Water Resources, Thomas M. Hannigan, Director.

California State Water Resources Control Board, Winston H. Hickox, Secretary for Environmental Protection.

East Bay Municipal Utility District, Michael J. Wallis, Director of Operations and Maintenance.

Madera Irrigation District, Stephen H. Ottemoeller, General Manager.

Sacramento County Department of Public Works, Warren H. Harada, Administrator.

San Luis and Delta–Mendota Water Authority, Daniel G. Nelson, Executive Director.

San Francisco, city and county, Hetch-Hetchy Water and Power, Camron Samii, Water Resource Manager.

Tulare County Resource Management Agency, Douglas Wilson, Director.

Tule River Tribal Council, Dwayne M. Garfield, Sr., Chairman.

Turlock Irrigation District, Wes Monier, Electric Utility Administrator.

Woodbridge Irrigation District, Anders Christensen, Manager.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army; Bureau of Reclamation, U.S. Environmental Protection Agency, and U.S. Department of Interior.

The following organizations aided in collecting records: Calaveras County Water District, Olcese Water District, Pacific Gas & Electric Co., Southern California Edison Co., Merced and Oakdale–South San Joaquin Irrigation Districts, Northern California Power Agency, and Utica Power Authority.

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, hydrologic-station records in USGS reports have been listed in order of downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary entering between two main-stream stations is listed between those stations. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is located with respect to the stream to which it is immediately tributary is indicated by an indention in that list of stations in the front of this report. Each indentation represents one rank. This downstream order and system of indentation indicates which stations are on tributaries between any two stations and the rank of the tributary on which each station is located.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These station numbers are in the same downstream order used in this report. In assigning a station number, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list composed of both types of stations. Gaps are consecutive. The complete 8-digit (or 10-digit) number for each station such as 09004100, which appears just to the left of the station name, includes a 2-digit part number “09” plus the 6-digit (or 8-digit) downstream order number “004100.” In areas of high station density, an additional two digits may be added to the station identification number to yield a 10-digit number. The stations are numbered in downstream order as described above between stations of consecutive 8-digit numbers.

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The USGS well and miscellaneous site-numbering system is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, and the next 7 digits denote degrees, minutes, and seconds of longitude; the last 2 digits are a sequential number for wells within a 1-second grid. In the event that the latitude-longitude coordinates for a well and miscellaneous site are the

same, a sequential number such as "01," "02," and so forth, would be assigned as one would for wells (see fig. 1). The 8-digit, downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

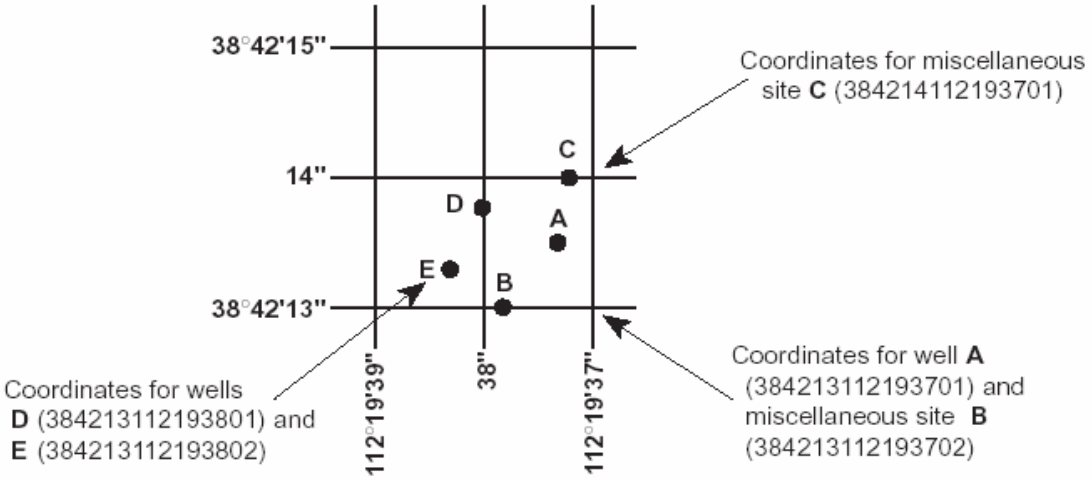


Figure 1. System for numbering wells and miscellaneous sites (latitude and longitude).

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 61 sites in small drainage basins in 39 States that was established in 1963 to provide consistent streamflow data representative of undeveloped watersheds nationwide, and from which data could be analyzed on a continuing basis for use in comparison and contrast with conditions observed in basins more obviously affected by human activities. At selected sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the effects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program may be accessed from *http://water.usgs.gov/hbn/*.

National Stream-Quality Accounting Network (NASQAN) is a network of sites used to monitor the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande River basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia Rivers so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment (NAWQA) Program; (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program may be accessed from *http://water.usgs.gov/nasqan/*.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) is a network of monitoring sites that provide continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from this network of 250 precipitation-chemistry monitoring sites. The USGS supports 74 of these 250 sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as data from the individual sites, may be accessed from *http://bqs.usgs.gov/acidrain/*.

The USGS National Water-Quality Assessment (NAWQA) Program is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; to provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and to provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 42 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents is measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for water-resources managers to use in making decisions and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and Federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key Federal, State, and local water-resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. Additional information about the NAWQA Program may be accessed from *http://water.usgs.gov/nawqa/*.

The USGS National Streamflow Information Program (NSIP) is a long-term program with goals to provide framework streamflow data across the Nation. Included in the program are creation of a permanent Federally funded streamflow network, research on the nature of streamflow, regional assessments of streamflow data and databases, and upgrades in the streamflow information delivery systems. Additional information about NSIP may be accessed from *http://water.usgs.gov/nsip/*.

EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS

Data Collection and Computation

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and volume of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that is either downloaded electronically in the field to a laptop computer or similar device or is transmitted using telemetry such as GOES satellite, land-line or cellular-phone modems, or by radio transmission. Measurements of discharge are made with a current meter or acoustic Doppler current profiler, using the general methods adopted by the USGS. These methods are described in standard textbooks, USGS Water-Supply Paper 2175, and the Techniques of Water-Resources Investigations of the United States Geological Survey (TWRIs), Book 3, Chapters A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

For stream-gaging stations, discharge-rating tables for any stage are prepared from stage-discharge curves. If extensions to the rating curves are necessary to express discharge greater than measured, the extensions are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, or computation of flow over dams and weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharges are computed from the daily values. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features of the stream channel, the daily mean discharge is computed by the shifting-control method in which correction factors based on individual discharge measurements and notes by engineers and observers are used when applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the controlling section, the daily mean discharge is computed by the shifting-control method.

The stage-discharge relation at some stream-gaging stations is affected by backwater from reservoirs, tributary streams, or other sources. Such an occurrence necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage at some distance from the base gage.

An index velocity is measured using ultrasonic or acoustic instruments at some stream-gaging stations and this index velocity is used to calculate an average velocity for the flow in the stream. This average velocity along with a stage-area relation is then used to calculate average discharge.

At some stations, stage-discharge relation is affected by changing stage. At these stations, the rate of change in stage is used as a factor in computing discharge.

At some stream-gaging stations in the northern United States, the stage-discharge relation is affected by ice in the winter; therefore, computation of the discharge in the usual manner is impossible. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter-discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge from other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the volume or contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly changes are computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some stream-gaging stations, periods of time occur when no gage-height record is obtained or the recorded gage height is faulty and cannot be used to compute daily discharge or contents. Such a situation can happen when the recorder stops or otherwise fails to operate properly, the intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records from other stations in the same or nearby basins. Likewise, lake or reservoir volumes may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

Data Presentation

The records published for each continuous-record surface-water discharge station (stream-gaging station) consist of five parts: (1) the station manuscript or description; (2) the data table of daily mean values of discharge for the current water year with summary data; (3) a tabular statistical summary of monthly mean flow data for a designated period, by water year; (4) a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration; and (5) a hydrograph of discharge.

Station Manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments follow that clarify information presented under the various headings of the station description.

LOCATION.—Location information is obtained from the most accurate maps available. The location of the gaging station with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.—Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.—This term indicates the time period for which records have been published for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not and whose location was such that its flow reasonably can be considered equivalent to flow at the present station.

REVISED RECORDS.—If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

GAGE.—The type of gage in current use, the datum of the current gage referred to a standard datum, and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.—All periods of estimated daily discharge either will be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See section titled Identifying Estimated Daily Discharge.) Information is presented relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, the outlet works and spillway, and the purpose and use of the reservoir.

COOPERATION.—Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.—Information here documents major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the USGS.

REVISIONS.—Records are revised if errors in published records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based National data system, NWISWeb (*http://water.usgs.gov/nwis/nwis*). Users are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent data updates. Updates to NWISWeb are made on an annual basis.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because no current or, possibly, future station manuscript would be published for these stations to document the revision in a REVISED RECORDS entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District Office (address given on the back of the title page of this report) to determine if the published records were revised after the station was discontinued. If, however, the data for a discontinued station were obtained by computer retrieval, the data would be current. Any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the REMARKS and in the inclusion of a stage-capacity table when daily volumes are given.

Peak Discharge Greater than Base Discharge

Tables of peak discharge above base discharge are included for some stations where secondary instantaneous peak discharge data are used in flood-frequency studies of highway and bridge design, flood-control structures, and other flood-related projects. The base discharge value is selected so an average of three peaks a year will be reported. This base discharge value has a recurrence interval of approximately 1.1 years or a 91-percent chance of exceedence in any 1 year.

Data Table of Daily Mean Values

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed TOTAL gives the sum of the daily figures for each month; the line headed MEAN gives the arithmetic average flow in cubic feet per second for the month; and the lines headed MAX and MIN give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month is expressed in cubic feet per second per square mile (line headed CFSM); or in inches (line headed IN); or in acre-feet (line headed AC-FT). Values for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if extensive regulation or diversion is in effect or if the drainage area includes large noncontributing areas. At some stations, monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir volumes are given. These values are identified by a symbol and a corresponding footnote.

Statistics of Monthly Mean Data

A tabular summary of the mean (line headed MEAN), maximum (MAX), and minimum (MIN) of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those values. The designated period will be expressed as FOR WATER YEARS __-__, BY WATER YEAR (WY), and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. The designated period will consist of all of the station record within the specified water years, including

complete months of record for partial water years, and may coincide with the period of record for the station. The water years for which the statistics are computed are consecutive, unless a break in the station record is indicated in the manuscript.

Summary Statistics

A table titled SUMMARY STATISTICS follows the statistics of monthly mean data tabulation. This table consists of four columns with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, WATER YEARS __-__, will consist of all of the station records within the specified water years, including complete months of record for partial water years, and may coincide with the period of record for the station. The water years for which the statistics are computed are consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (see line headings below), except for the ANNUAL 7-DAY MINIMUM statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the heading. When the dates of occurrence do not fall within the selected water years listed in the heading, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration-curve statistics and runoff data also are given. Runoff data may be omitted if extensive regulation or diversion of flow is in effect in the drainage basin.

The following summary statistics data are provided with each continuous record of discharge. Comments that follow clarify information presented under the various line headings of the SUMMARY STATISTICS table.

ANNUAL TOTAL.—The sum of the daily mean values of discharge for the year.

ANNUAL MEAN.—The arithmetic mean for the individual daily mean discharges for the year noted or for the designated period.

HIGHEST ANNUAL MEAN.—The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.—The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.—The maximum daily mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.—The minimum daily mean discharge for the year or for the designated period.

ANNUAL 7-DAY MINIMUM.—The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1–March 31). The date shown in the summary statistics table is the initial date of the 7-day period. This value should not be confused with the 7-day 10-year low-flow statistic.

MAXIMUM PEAK FLOW.—The maximum instantaneous peak discharge occurring for the water year or designated period. Occasionally the maximum flow for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak flow is given in the table and the maximum flow may be reported in a footnote or in the REMARKS paragraph in the manuscript.

MAXIMUM PEAK STAGE.—The maximum instantaneous peak stage occurring for the water year or designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

INSTANTANEOUS LOW FLOW.—The minimum instantaneous discharge occurring for the water year or for the designated period.

ANNUAL RUNOFF.—Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

Acre-foot (AC-FT) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Cubic feet per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area.

Inches (INCHES) indicate the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

10 PERCENT EXCEEDS.—The discharge that has been exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.—The discharge that has been exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.—The discharge that has been exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first table lists annual maximum stage and discharge at crest-stage stations, and the second table lists discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are often made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for a special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified. This identification is shown either by flagging individual daily values with the letter "e" and noting in a table footnote, "e–Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of Field Data and Computed Results

The accuracy of streamflow data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretations of records.

The degree of accuracy of the records is stated in the REMARKS in the station description. "Excellent" indicates that about 95 percent of the daily discharges are within 5 percent of the true value; "good" within 10 percent; and "fair," within 15 percent. "Poor" indicates that daily discharges have less than "fair" accuracy. Different accuracies may be attributed to different parts of a given record.

Values of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft^3/s; to the nearest tenths between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures above 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharge values listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, values of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Data Records Available

Information of a more detailed nature than that published for most of the stream-gaging stations such as discharge measurements, gage-height records, and rating tables is available from the District office. Also, most stream-gaging station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the District office (see address that is shown on the back of the title page of this report).

EXPLANATION OF PRECIPITATION RECORDS

Data Collection and Computation

Rainfall data generally are collected using electronic data loggers that measure the rainfall in 0.01-inch increments every 15 minutes using either a tipping-bucket rain gage or a collection well gage. Twenty-four hour rainfall totals are tabulated and presented. A 24-hour period extends from just past midnight of the previous day to midnight of the current day. Snowfall-affected data can result during cold weather when snow fills the rain-gage funnel and then melts as temperatures rise. Snowfall-affected data are subject to errors. Missing values are indicated by this symbol "---" in the table.

Data Presentation

Precipitation records collected at surface-water gaging stations are identified with the same station number and name as the stream-gaging station. Where a surface-water daily-record station is not available, the precipitation record is published with its own name and latitude-longitude identification number.

Information pertinent to the history of a precipitation station is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, period of record, and general remarks.

The following information is provided with each precipitation station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

PERIOD OF RECORD.—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

INSTRUMENTATION.—Information on the type of rainfall collection system is given.

REMARKS.—Remarks provide added information pertinent to the collection, analysis, or computation of records.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Examination of Data

Surface-water samples for analysis usually are collected at or near stream-gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, water temperature, sediment discharge, and so forth); extremes for the current year; and general remarks.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, sampling date, or other pertinent data are given in the table containing the chemical analyses of the ground water.

Water Analysis

Most of the methods used for collecting and analyzing water samples are described in the TWRIs. A list of TWRIs is provided in this report.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross-section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled at several verticals to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent

inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum and minimum values (and sometimes mean or median values) for each constituent measured, and are based on 15-minute or 1-hour intervals of recorded data beginning at 0000 hours and ending at 2400 hours for the day of record.

SURFACE-WATER-QUAITY RECORDS

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because discharge data is useful in the interpretation of surface-water quality. Records of surface-water quality in this report involve a variety of types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A *continuous-record station* is a site where data are collected on a regularly scheduled basis. Frequency may be one or more times daily, weekly, monthly, or quarterly. A *partial-record station* is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A *miscellaneous sampling site* is a location other than a continuous- or partial-record station, where samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between *continuous records* as used in this report and *continuous recordings* that refer to a continuous graph or a series of discrete values recorded at short intervals. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 2 and 12.

Accuracy of the Records

One of four accuracy classifications is applied for measured physical properties at continuous-record stations on a scale ranging from poor to excellent. The accuracy rating is based on data values recorded before any shifts or corrections are made. Additional consideration also is given to the amount of publishable record and to the amount of data that have been corrected or shifted.

Rating classifications for continuous water-quality records

[≤less than or equal to; ±, plus or minus value shown; °C, degree Celsius; >, greater than; %, percent; mg/L, milligram per liter; pH unit, standard pH unit]

Measured physical property	Rating			
	Excellent	Good	Fair	Poor
Water temperature	≤±0.2 °C	> ±0.2 to 0.5 °C	> ±0.5 to 0.8 °C	> ±0.8 °C
Specific conductance	≤±3%	> ±3 to 10%	> ±10 to 15%	> ±15%
Dissolved oxygen	≤±0.3 mg/L	> ±0.3 to 0.5 mg/L	> ±0.5 to 0.8 mg/L	> ±0.8 mg/L
pH	≤±0.2 unit	> ±0.2 to 0.5 unit	> ±0.5 to 0.8 unit	> ±0.8 unit
Turbidity	≤±5%	> ±5 to 10%	> ±10 to 15%	> ±15%

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at

the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

On-Site Measurements and Sample Collection

In obtaining water-quality data, a major concern is assuring that the data obtained represent the naturally occurring quality of the water. To ensure this, certain measurements, such as water temperature, pH, and dissolved oxygen, must be made on site when the samples are taken. To assure that measurements made in the laboratory also represent the naturally occurring water, carefully prescribed procedures must be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in TWRIs Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1-A9. These TWRIs are listed in this report. Also, detailed information on collecting, treating, and shipping samples can be obtained from the USGS District office (see address that is shown on the back of title page in this report).

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at the time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the District office.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross section.

During periods of rapidly changing flow or rapidly changing concentration, samples may be collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples are collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observation, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

Samples for biochemical oxygen demand (BOD) and indicator bacteria are analyzed locally. All other samples are analyzed in the USGS laboratory in Lakewood, Colorado, unless otherwise noted. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chapter C1. Methods used by the USGS laboratories are given in the TWRIs, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. These methods are consistent with ASTM standards and generally follow ISO standards.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.—See Data Presentation information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

DRAINAGE AREA.—See Data Presentation information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

PERIOD OF RECORD.—This indicates the time periods for which published water-quality records for the station are available. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.—Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.—Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.—Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES.—Maximums and minimums are given only for parameters measured daily or more frequently. For parameters measured weekly or less frequently, true maximums or minimums may not have been obtained. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.—Records are revised if errors in published water-quality records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based National data system, NWISWeb (*http://waterdata.usgs.gov/nwis*). Users of USGS water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent updates. Updates to the NWISWeb are made on an annual basis.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Water-Quality Control Data

The USGS National Water Quality Laboratory collects quality-control data on a continuing basis to evaluate selected analytical methods to determine long-term method detection levels (LT-MDLs) and laboratory reporting levels (LRLs). These values are re-evaluated each year on the basis of the most recent quality-control data and, consequently, may change from year to year.

This reporting procedure limits the occurrence of false positive error. Falsely reporting a concentration greater than the LT-MDL for a sample in which the analyte is not present is 1 percent or less. Application of the LRL limits the occurrence of false negative error. The chance of falsely reporting a non-detection for a sample in which the analyte is present at a concentration equal to or greater than the LRL is 1 percent or less.

Accordingly, concentrations are reported as less than LRL for samples in which the analyte was either not detected or did not pass identification. Analytes detected at concentrations between the LT-MDL and the LRL and that pass identification criteria are estimated. Estimated concentrations will be noted with a remark code of "E." These data should be used with the understanding that their uncertainty is greater than that of data reported without the E remark code.

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this District office are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples. These data are not presented in this report but are available from the District office.

Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated in the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. Many types of blank samples are possible; each is designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this district are:

Field blank—A blank solution that is subjected to all aspects of sample collection, field processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank—A blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Equipment blank—A blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank but normally done in the more controlled conditions of the office).

Sampler blank—A blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank—A blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank—A blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank—A blank solution that is treated with the sampler preservatives used for an environmental sample.

Reference Samples

Reference material is a solution or material prepared by a laboratory. The reference material composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the

data contributed by some part of the collection and analytical process. Many types of replicate samples are possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this district are:

Concurrent samples—A type of replicate sample in which the samples are collected simultaneously with two or more samplers or by using one sampler and alternating the collection of samples into two or more compositing containers.

Sequential samples—A type of replicate sample in which the samples are collected one after the other, typically over a short time.

Split sample—A type of replicate sample in which a sample is split into subsamples, each subsample contemporaneous in time and space.

Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the World Wide Web (WWW). These data may be accessed from *http://water.usgs.gov*.

Water-quality data and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on various media. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each Water Discipline District Office (See address that is shown on the back of the title page of this report.)

WATER RESOURCES DATA—CALIFORNIA, 2003

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, and precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units. Other glossaries that also define water-related terms are accessible from *http://water.usgs.gov/glossaries.html*.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an "unfiltered" sample (formerly reported as alkalinity).

Acre-foot (AC-FT, acre-ft) is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also "Annual runoff")

Adenosine triphosphate (ATP) is an organic, phosphatenrich compound important in the transfer of energy in organisms. Its central role in living cells makes ATP an excellent indicator of the presence of living material in water. A measurement of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter.

Adjusted discharge is discharge data that have been mathematically adjusted (for example, to remove the effects of a daily tide cycle or reservoir storage).

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample. (See also "Biomass" and "Dry weight")

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a "filtered" sample.

Annual runoff is the total quantity of water that is discharged ("runs off") from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

Annual 7-day minimum is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most low-flow frequency analyses use a climatic year (April 1–March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day, 10-year low-flow statistic.)

Aroclor is the registered trademark for a group of poly-chlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type, and the last two digits represent the percentage weight of the hydrogen-substituted chlorine.

Artificial substrate is a device that purposely is placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is collected. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection. (See also "Substrate")

Ash mass is the mass or amount of residue present after the residue from a dry-mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. Ash mass of zooplankton and phytoplankton is expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (g/m^2). (See also "Biomass" and "Dry mass")

Aspect is the direction toward which a slope faces with respect to the compass.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, whereas others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Bankfull stage, as used in this report, is the stage at which a stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

Base discharge (for peak discharge) is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peak flows per year will be published. (See also "Peak flow")

Base flow is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

Bed material is the sediment mixture of which a stream-bed, lake, pond, reservoir, or estuary bottom is composed. (See also "Bedload" and "Sediment")

Bedload is material in transport that primarily is supported by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to the top of the bedload sampler nozzle (an elevation ranging from 0.25 to 0.5 foot). These particles are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler also may contain a component of the suspended load.

Bedload discharge (tons per day) is the rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also "Bedload," "Dry weight," "Sediment," and "Suspended-sediment discharge")

Benthic organisms are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as mass per unit area or volume of habitat.

Biomass pigment ratio is an indicator of the total proportion of periphyton that are autotrophic (plants). This also is called the Autotrophic Index.

Blue-green algae (*Cyanophyta*) are a group of phytoplankton and periphyton organisms with a blue pigment in addition to a green pigment called chlorophyll. Blue-green algae can cause nuisance water-quality conditions in lakes and slow-flowing rivers; however, they are found commonly in streams throughout the year. The abundance of blue-green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter (μm^3/mL). The abundance of blue-green algae in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu m^3/cm^2$). (See also "Phytoplankton"and "Periphyton")

Bottom material (See "Bed material")

Bulk electrical conductivity is the combined electrical conductivity of all material within a doughnut-shaped volume surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved-solids content of the pore water, and the lithology and porosity of the rock.

Canadian Geodetic Vertical Datum 1928 is a geodetic datum derived from a general adjustment of Canada's first order level network in 1928.

Cell volume (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are used frequently in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume (μm^3) is determined by obtaining critical cell measurements or cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } 4/3\ \pi r^3 \quad \text{cone } 1/3\ \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

pi (π) is the ratio of the circumference to the diameter of a circle; pi = 3.14159….

From cell volume, total algal biomass expressed as biovolume (μm^3/mL) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes for all species.

Cells/volume refers to the number of cells of any organism that is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per

sample volume, and generally are reported as cells or units per milliliter (mL) or liter (L).

Cfs-day (See "Cubic foot per second-day")

Channel bars, as used in this report, are the lowest prominent geomorphic features higher than the channel bed.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with BOD or with carbonaceous organic pollution from sewage or industrial wastes. [See also "Biochemical oxygen demand (BOD)"]

Clostridium perfringens *(C. perfringens)* is a spore-forming bacterium that is common in the feces of human and other warmblooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and the presence of microorganisms that are resistant to disinfection and environmental stresses. (See also "Bacteria")

Coliphages are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of water and of the survival and transport of viruses in the environment.

Color unit is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Confined aquifer is a term used to describe an aquifer containing water between two relatively impermeable bound-aries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Continuous-record station is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

Control designates a feature in the channel that physically affects the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure, as used in this report, is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

Cubic foot per second (CFS, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term "second-foot" sometimes is used synonymously with "cubic foot per second" but is now obsolete.

Cubic foot per second-day (CFS-DAY, Cfs-day, [$(ft^3/s)/d$]) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables numerically are equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

Cubic foot per second per square mile [CFSM, $(ft^3/s)/mi^2$] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area. (See also "Annual runoff")

Daily mean suspended-sediment concentration is the time-weighted mean concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also "Sediment" and "Suspended-sediment concentration")

Daily record station is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to data collection on a daily or near-daily basis.

Data collection platform (DCP) is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

Data logger is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data usually are downloaded from onsite data loggers for entry into office data systems.

Datum is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or Universal Transverse Mercator (UTM) coordinates. (See also "Gage datum," "Land-surface datum," "National Geodetic

Vertical Datum of 1929," and "North American Vertical Datum of 1988")

Diatoms *(Bacillariophyta)* are unicellular or colonial algae with a siliceous cell wall. The abundance of diatoms in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter (μm^3/mL). The abundance of diatoms in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu m^3/cm^2$). (See also "Phytoplankton" and "Periphyton")

Diel is of or pertaining to a 24-hour period of time; a regular daily cycle.

Discharge, or **flow**, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediment or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, and so forth, within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

Dissolved refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of "dissolved" constituent concentrations are made on sample water that has been filtered.

Dissolved oxygen (DO) is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

Dissolved solids concentration in water is the quantity of dissolved material in a sample of water. It is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L $CaCO_3$) can be converted to carbonate concentration by multiplying by 0.60.

Diversity index (H) (Shannon index) is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = -\sum_{i \approx 1}^{s} \frac{n_i}{n} \log_2 \frac{n_i}{n},$$

where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

Drainage area of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the Earth's surface that contains a drainage system with a common outlet for its surface runoff. (See "Drainage area")

Dry mass refers to the mass of residue present after drying in an oven at 105 °C, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass. (See also "Ash mass," "Biomass," and "Wet mass")

Dry weight refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also "Wet weight")

Embeddedness is the degree to which gravel-sized and larger particles are surrounded or enclosed by finer-sized particles. (See also "Substrate embeddedness class")

Enterococcus bacteria commonly are found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium.

Enterococci include *Streptococcus feacalis, Streptococcus feacium, Streptococcus avium,* and their variants. (See also "Bacteria")

EPT Index is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that generally are considered pollution sensitive; the index usually decreases with pollution.

Escherichia coli *(E. coli)* are bacteria present in the intestine and feces of warmblooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on mTEC medium (νυτρι εντ μεδι υμ φορ βαχτερι αλ γροωτη). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Estimated (E) value of a concentration is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an E code will be reported with the value. If the analyte is identified qualitatively as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an E code even though the measured value is greater than the MDL. A value reported with an E code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<). For bacteriological data, concentrations are reported as estimated when results are based on non-ideal colony counts.

Euglenoids (*Euglenophyta*) are a group of algae that usually are free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also "Phytoplankton")

Extractable organic halides (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semivolatile and extractable by ethyl acetate from air-dried streambed sediment. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediment.

Fecal coliform bacteria are present in the intestines or feces of warmblooded animals. They often are used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5 ×C plus or minus 0.2 ×C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Fecal streptococcal bacteria are present in the intestines of warmblooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 °C plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Fire algae (*Pyrrhophyta*) are free-swimming unicells characterized by a red pigment spot. (See also "Phytoplankton")

Flow-duration percentiles are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

Gage datum is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum is not an actual physical object, the datum is usually defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

Gage height (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height often is used interchangeably with the more general term "stage," although gage height is more appropriate when used in reference to a reading on a gage.

Gage values are values that are recorded, transmitted, and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

Gaging station is a site on a stream, canal, lake, or reservoir where systematic observations of stage, discharge, or other hydrologic data are obtained.

Gas chromatography/flame ionization detector (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

Geomorphic channel units, as used in this report, are fluvial geomorphic descriptors of channel shape and stream velocity. Pools, riffles, and runs are types of geomorphic channel units considered for National Water-Quality Assessment (NAWQA) Program habitat sampling.

Green algae *(Chlorophyta)* are unicellular or colonial algae with chlorophyll pigments similar to those in terrestrial green plants. Some forms of green algae produce mats or floating "moss" in lakes. The abundance of green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter (μm^3/mL). The abundance of green algae in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu m^3/cm^2$). (See also "Phytoplankton" and "Periphyton")

Habitat, as used in this report, includes all nonliving (physical) aspects of the aquatic ecosystem, although living components like aquatic macrophytes and riparian vegetation also are usually included. Measurements of habitat typically are made over a wider geographic scale than are measurements of species distribution.

Habitat quality index is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

Hardness of water is a physical-chemical characteristic that commonly is recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate ($CaCO_3$).

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. *See NOAA Web site:* *http://www.co-ops.nos.noaa.gov/tideglos.html*

Hilsenhoff's Biotic Index (HBI) is an indicator of organic pollution that uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = sum\frac{(n)(a)}{N},$$

where n is the number of individuals of each taxon, a is the tolerance value of each taxon, and N is the total number of organisms in the sample.

Horizontal datum (See "Datum")

Hydrologic index stations referred to in this report are continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as defined by the former Office of Water Data Coordination and delineated on the State Hydrologic Unit Maps by the USGS. Each hydrologic unit is identified by an 8-digit number.

Inch (IN., in.), in reference to streamflow, as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were distributed uniformly on it. (See also "Annual runoff")

Instantaneous discharge is the discharge at a particular instant of time. (See also "Discharge")

International Boundary Commission Survey Datum refers to a geodetic datum established at numerous monuments along the United States-Canada boundary by the International Boundary Commission.

Island, as used in this report, is a mid-channel bar that has permanent woody vegetation, is flooded once a year, on average, and remains stable except during large flood events.

Laboratory reporting level (LRL) generally is equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a nondetection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a "less than" (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory (NWQL) collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually on the basis of the most current quality-control data and, therefore, may change. The LRL replaces the term 'non-detection value' (NDV).

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Latent heat flux (often used interchangeably with latent heat-flux density) is the amount of heat energy that converts water from liquid to vapor (evaporation) or from vapor to liquid (condensation) across a specified cross-sectional area per unit time. Usually expressed in watts per square meter.

Light-attenuation coefficient, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation:

$$I = I_o e^{-\lambda L},$$

where I_o is the source light intensity, I is the light intensity at length L (in meters) from the source, λ is the light-attenuation coefficient, and e is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L}\log_e \frac{I}{I_o}.$$

Lipid is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

Long-term method detection level (LT-MDL) is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike-sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

Low tide is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. *See NOAA Web site:* http://www.co-ops.nos.noaa.gov/tideglos.html

Macrophytes are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that usually are arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

Mean concentration of suspended sediment (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also "Daily mean suspended-sediment concentration" and "Suspended-sediment concentration")

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period. (See also "Discharge")

Mean high or **low tide** is the average of all high or low tides, respectively, over a specific period.

Mean sea level is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also "Datum")

Measuring point (MP) is an arbitrary permanent reference point from which the distance to water surface in a well is measured to obtain water level.

Megahertz is a unit of frequency. One megahertz equals one million cycles per second.

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Method detection limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

Method of Cubatures is a method of computing discharge in tidal estuaries based on the conservation of mass equation.

Methylene blue active substances (MBAS) indicate the presence of detergents (anionic surfactants). The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram (UG/G, mg/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per kilogram (UG/KG, mg/kg) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

Micrograms per liter (UG/L, mg/L) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

Microsiemens per centimeter (US/CM, mS/cm) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in water as the mass (milligrams) of constituent per unit volume (liter) of water. Concentration of suspended sediment also is expressed in milligrams per liter and is based on the mass of dry sediment per liter of water-sediment mixture.

Minimum reporting level (MRL) is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.

Miscellaneous site, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

Nanograms per liter (NG/L, ng/L) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

National Geodetic Vertical Datum of 1929 (NGVD 29) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It formerly was called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations**,** it does not necessarily represent local mean sea level at any particular place. *See NOAA Web site: http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88* (See "North American Vertical Datum of 1988")

Natural substrate refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")

Nekton are the consumers in the aquatic environment and consist of large, free-swimming organisms that are capable of sustained, directed mobility.

Nephelometric turbidity unit (NTU) is the measurement for reporting turbidity that is based on use of a standard suspension of formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.

North American Datum of 1927 (NAD 27) is the horizontal control datum for the United States that was defined by a location and azimuth on the Clarke spheroid of 1866.

North American Datum of 1983 (NAD 83) is the horizontal control datum for the United States, Canada, Mexico, and Central America that is based on the adjustment of 250,000 points including 600 satellite Doppler stations that constrain the system to a geocentric origin. NAD 83 has been officially adopted as the legal horizontal datum for the United States by the Federal government.

North American Vertical Datum of 1988 (NAVD 88) is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian**,** Mexican, and United States first-order terrestrial leveling networks.

Open or **screened interval** is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

Organic carbon (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediment. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

Organic mass or **volatile mass** of a living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass," "Biomass," and "Dry mass")

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Organochlorine compounds are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

Parameter code is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

Partial-record station is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

Particle size is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method uses the principle of Stokes Law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, sedigraph) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification, as used in this report, agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	>0.00024 - 0.004	Sedimentation
Silt	>0.004 - 0.062	Sedimentation
Sand	>0.062 - 2.0	Sedimentation/sieve
Gravel	>2.0 - 64.0	Sieve
Cobble	>64 - 256	Manual measurement
Boulder	>256	Manual measurement

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. For the sedimentation method, most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

Peak flow (peak stage) is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

Percent composition or **percent of total** is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, mass, or volume.

Percent shading is a measure of the amount of sunlight potentially reaching the stream. A clinometer is used to measure left and right bank canopy angles. These values are added together, divided by 180, and multiplied by 100 to compute percentage of shade.

Periodic-record station is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year but at a frequency insufficient to develop a daily record.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. Although primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7.0 standard units are termed "acidic," and solutions with a pH greater than 7.0 are termed "basic." Solutions with a pH of 7.0 are neutral. The presence and concentration of many dissolved chemical constituents found in water are affected, in part, by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms also are affected, in part, by the hydrogen-ion activity of water.

Phytoplankton is the plant part of the plankton. They usually are microscopic, and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and commonly are known as algae. (See also "Plankton")

Picocurie (PC, pCi) is one-trillionth (1×10^{-12}) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields 3.7×10^{10} radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Polychlorinated naphthalenes (PCNs) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

Pool, as used in this report, is a small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated (carbon method) by the plants.

Primary productivity (carbon method) is expressed as milligrams of carbon per area per unit time [mg C/(m^2/time)] for periphyton and macrophytes or per volume [mg C/(m^3/time)] for phytoplankton. The carbon method defines the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light- and dark-bottle method and is preferred for use with unenriched water samples. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

Primary productivity (oxygen method) is expressed as milligrams of oxygen per area per unit time [mg O/(m^2/time)] for periphyton and macrophytes or per volume [mg O/(m^3/time)] for phytoplankton. The oxygen method defines production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light- and dark-bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

Radioisotopes are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

Reach, as used in this report, is a length of stream that is chosen to represent a uniform set of physical, chemical, and biological conditions within a segment. It is the principal sampling unit for collecting physical, chemical, and biological data.

Recoverable from bed (bottom) material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. (See also "Bed material")

Recurrence interval, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or nonexceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day, 10-year low flow ($7Q_{10}$) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the nonexceedances of the $7Q_{10}$ occur less than 10 years after the previous nonexceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous nonexceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the $7Q_{10}$.

Replicate samples are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

Return period (See "Recurrence interval")

Riffle, as used in this report, is a shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

River mileage is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council and typically is used to denote location along a river.

Run, as used in this report, is a relatively shallow part of a stream with moderate velocity and little or no surface turbulence.

Runoff is the quantity of water that is discharged ("runs off") from a drainage basin during a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also "Annual runoff")

Sea level, as used in this report, refers to one of the two commonly used national vertical datums (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums.

Sediment is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as "fluvial sediment." Sediment includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are affected by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of precipitation.

Sensible heat flux (often used interchangeably with latent sensible heat-flux density) is the amount of heat energy that moves by turbulent transport through the air across a specified cross-sectional area per unit time and goes to heating (cooling) the air. Usually expressed in watts per square meter.

Seven-day, 10-year low flow ($7Q_{10}$) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-term average. The recurrence interval of the $7Q_{10}$ is 10 years; the chance that the annual 7-day minimum flow will be less than the $7Q_{10}$ is 10 percent in any given year. (See also "Annual 7-day minimum" and "Recurrence interval")

Shelves, as used in this report, are streambank features extending nearly horizontally from the flood plain to the lower limit of persistent woody vegetation.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the

soil. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

Soil heat flux (often used interchangeably with soil heat-flux density) is the amount of heat energy that moves by conduction across a specified cross-sectional area of soil per unit time and goes to heating (or cooling) the soil. Usually expressed in watts per square meter.

Soil-water content is the water lost from the soil upon drying to constant mass at 105 °C; expressed either as mass of water per unit mass of dry soil or as the volume of water per unit bulk volume of soil.

Specific electrical conductance (conductivity) is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stable isotope ratio (per MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific water, to evaluate mixing of different water, as an aid in determining reaction rates, and other chemical or hydrologic processes.

Stage (See "Gage height")

Stage-discharge relation is the relation between the water-surface elevation, termed stage (gage height), and the volume of water flowing in a channel per unit time.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lives.

Substrate embeddedness class is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2 mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

0	no gravel or larger sub-strate	3	26-50 percent
1	> 75 percent	4	5-25 percent
2	51-75 percent	5	< 5 percent

Surface area of a lake is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

Surficial bed material is the upper surface (0.1 to 0.2 foot) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Surrogate is an analyte that behaves similarly to a target analyte, but that is highly unlikely to occur in a sample. A surrogate is added to a sample in known amounts before extraction and is measured with the same laboratory procedures used to measure the target analyte. Its purpose is to monitor method performance for an individual sample.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is defined operationally as the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative suspended water-sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment, and, thus, the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. Determinations of "suspended, recoverable" constituents are made either by directly analyzing the suspended mate-rial collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total recoverable concentrations of the constituent. (See also "Suspended")

Suspended sediment is the sediment maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid. (See also "Sediment")

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also "Sediment" and "Suspended sediment")

Suspended-sediment discharge (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027. (See also "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

Suspended-sediment load is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also "Sediment")

Suspended solids, total residue at 105 °C concentration is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total." Determinations of "suspended, total" constituents are made either by directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also "Suspended")

Synoptic studies are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

Taxa (Species) richness is the number of species (taxa) present in a defined area or sampling unit.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchial scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata,* is the following:

Kingdom:	Animal
Phylum:	Arthropeda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	Hexagenia
Species:	Hexagenia limbata

Thalweg is the line formed by connecting points of minimum streambed elevation (deepest part of the channel).

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table descriptions and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water resulting from the mixing of flow proportionally to the duration of the concentration.

Tons per acre-foot (T/acre-ft) is the dry mass (tons) of a constituent per unit volume (acre-foot) of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY, tons/d) is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric ton per day.

Total is the amount of a given constituent in a representative whole-water (unfiltered) sample, regardless of the constituent's physical or chemical form. This term is used

only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined at least 95 percent of the constituent in the sample.)

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warmblooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory, these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C plus or minus 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters of sample. (See also "Bacteria")

Total discharge is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total in bottom material is the amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

Total length (fish) is the straight-line distance from the anterior point of a fish specimen's snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

Total load refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

Total organism count is the number of organisms collected and enumerated in any particular sample. (See also "Organism count/volume")

Total recoverable is the amount of a given constituent in a whole-water sample after a sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

Total sediment discharge is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross section in a given time. It is a rate and is reported as tons per day. (See also "Bedload," "Bedload discharge," "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

Total sediment load or **total load** is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It differs from total sediment discharge in that load refers to the material, whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also "Sediment," "Suspended-sediment load," and "Total load")

Transect, as used in this report, is a line across a stream perpendicular to the flow and along which measurements are taken, so that morphological and flow characteristics along the line are described from bank to bank. Unlike a cross section, no attempt is made to determine known elevation points along the line.

Turbidity is the reduction in the transparency of a solution because of the presence of suspended and some dissolved substances. The measurement technique records the collective optical properties of the solution that cause light to be scattered and attenuated rather than transmitted in straight lines; the higher the intensity of scattered or attenuated light, the higher the value of the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU). Depending on the method used, the turbidity units as NTU can be defined as the intensity of light of a specified wavelength scattered or attenuated by suspended particles or absorbed at a method specified angle, usually 90 degrees, from the path of the incident light. Currently approved methods for the measurement of turbidity in the USGS include those that conform to USEPA Method 180.1, ASTM D1889-00, and ISO 7027. Measurements of turbidity by these different methods and different instruments are unlikely to yield equivalent values.

Ultraviolet (UV) absorbance (absorption) at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of path length of UV light through a sample.

Unconfined aquifer is an aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure. (See "Water-table aquifer")

Vertical datum (See "Datum")

Volatile organic compounds (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and, subsequently, analyzed by gas chromatography. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They often are components of fuels, solvents, hydraulic fluids, paint thinners, and dry-cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human-health concern because many are toxic and are known or suspected human carcinogens.

Water table is that surface in a ground-water body at which the water pressure is equal to the atmospheric pressure.

Water-table aquifer is an unconfined aquifer within which the water table is found.

Water year in USGS reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 2002, is called the "2002 water year."

Watershed (See "Drainage basin")

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports. (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976.)

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

Wet mass is the mass of living matter plus contained water. (See also "Biomass" and "Dry mass")

Wet weight refers to the weight of animal tissue or other substance including its contained water. (See also "Dry weight")

WSP is used as an acronym for "Water-Supply Paper" in reference to previously published reports.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and often are large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers. (See also "Plankton")

TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

The USGS publishes a series of manuals, the Techniques of Water-Resources Investigations, describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, section A of book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

Reports in the Techniques of Water-Resources Investigations series, which are listed below, are online at *http://water.usgs.gov/pubs/twri/*. Printed copies are for sale by the USGS, Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office), telephone 1-888-ASK-USGS. Please telephone 1-888-ASK-USGS for current prices, and refer to the title, book number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations." Products can then be ordered by telephone, or online at http://www.usgs.gov/sales.html, or by FAX to (303)236-469 of an order form available online at *http://mac.usgs.gov/isb/pubs/forms/*. Prepayment by major credit card or by a check or money order payable to the "U.S. Geological Survey" is required.

Book 1. Collection of Water Data by Direct Measurement

Section D. Water Quality

1–D1. *Water temperature—Influential factors, field measurement, and data presentation*, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS–TWRI book 1, chap. D1. 1975. 65 p.

1–D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS–TWRI book 1, chap. D2. 1976. 24 p.

Book 2. Collection of Environmental Data

Section D. Surface Geophysical Methods

2–D1. *Application of surface geophysics to ground-water investigations,* by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS–TWRI book 2, chap. D1. 1974. 116 p.

2–D2. *Application of seismic-refraction techniques to hydrologic studies,* by F.P. Haeni: USGS–TWRI book 2, chap. D2. 1988. 86 p.

Section E. Subsurface Geophysical Methods

2–E1. *Application of borehole geophysics to water-resources investigations,* by W.S. Keys and L.M. MacCary: USGS–TWRI book 2, chap. E1. 1971. 126 p.

2–E2. *Borehole geophysics applied to ground-water investigations,* by W.S. Keys: USGS–TWRI book 2, chap. E2. 1990. 150 p.

Section F. Drilling and Sampling Methods

2–F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS–TWRI book 2, chap. F1. 1989. 97 p.

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

Book 3. Applications of Hydraulics

Section A. Surface-Water Techniques

3–A1. *General field and office procedures for indirect discharge measurements,* by M.A. Benson and Tate Dalrymple: USGS–TWRI book 3, chap. A1. 1967. 30 p.

3–A2. *Measurement of peak discharge by the slope-area method,* by Tate Dalrymple and M.A. Benson: USGS–TWRI book 3, chap. A2. 1967. 12 p.

3–A3. *Measurement of peak discharge at culverts by indirect methods,* by G.L. Bodhaine: USGS–TWRI book 3, chap. A3. 1968. 60 p.

3–A4. *Measurement of peak discharge at width contractions by indirect methods,* by H.F. Matthai: USGS-TWRI book 3, chap. A4. 1967. 44 p.

3–A5. *Measurement of peak discharge at dams by indirect methods,* by Harry Hulsing: USGS–TWRI book 3, chap. A5. 1967. 29 p.

3–A6. *General procedure for gaging streams,* by R.W. Carter and Jacob Davidian: USGS–TWRI book 3, chap. A6. 1968. 13 p.

3–A7. *Stage measurement at gaging stations,* by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A7. 1968. 28 p.

3–A8. *Discharge measurements at gaging stations,* by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A8. 1969. 65 p.

3–A9. *Measurement of time of travel in streams by dye tracing,* by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS–TWRI book 3, chap. A9. 1989. 27 p.

3–Al0. *Discharge ratings at gaging stations,* by E.J. Kennedy: USGS–TWRI book 3, chap. A10. 1984. 59 p.

3–A11. *Measurement of discharge by the moving-boat method,* by G.F. Smoot and C.E. Novak: USGS–TWRI book 3, chap. A11. 1969. 22 p.

3–A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS–TWRI book 3, chap. A12. 1986. 34 p.

3–A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS–TWRI book 3, chap. A13. 1983. 53 p.

3–A14. *Use of flumes in measuring discharge,* by F.A. Kilpatrick and V.R. Schneider: USGS–TWRI book 3, chap. A14. 1983. 46 p.

3–A15. *Computation of water-surface profiles in open channels,* by Jacob Davidian: USGS–TWRI book 3, chap. A15. 1984. 48 p.

3–A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS–TWRI book 3, chap. A16. 1985. 52 p.

3–A17. *Acoustic velocity meter systems,* by Antonius Laenen: USGS–TWRI book 3, chap. A17. 1985. 38 p.

3–A18. *Determination of stream reaeration coefficients by use of tracers,* by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS–TWRI book 3, chap. A18. 1989. 52 p.

3–A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS–TWRI book 3, chap. A19. 1990. 31 p.

3–A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS–TWRI book 3, chap. A20. 1993. 38 p.

3–A21 *Stream-gaging cableways,* by C. Russell Wagner: USGS–TWRI book 3, chap. A21. 1995. 56 p.

Section B. Ground-Water Techniques

3–B1. *Aquifer-test design, observation, and data analysis,* by R.W. Stallman: USGS–TWRI book 3, chap. B1. 1971. 26 p.

3–B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G.D. Bennett: USGS–TWRI book 3, chap. B2. 1976. 172 p.

3–B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS–TWRI book 3, chap. B3. 1980. 106 p.

3–B4. *Regression modeling of ground-water flow,* by R.L. Cooley and R.L. Naff: USGS–TWRI book 3, chap. B4. 1990. 232 p.

3–B4. *Supplement 1. Regression modeling of ground-water flow—Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems,* by R.L. Cooley: USGS–TWRI book 3, chap. B4. 1993. 8 p.

3–B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS–TWRI book 3, chap. B5. 1987. 15 p.

3–B6. *The principle of superposition and its application in ground-water hydraulics,* by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS–TWRI book 3, chap. B6. 1987. 28 p.

3–B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow,* by E.J. Wexler: USGS–TWRI book 3, chap. B7. 1992. 190 p.

3–B8. *System and boundary conceptualization in ground-water flow simulation,* by T.E. Reilly: USGS–TWRI book 3, chap. B8. 2001. 29 p.

Section C. Sedimentation and Erosion Techniques

3–C1. *Fluvial sediment concepts,* by H.P. Guy: USGS–TWRI book 3, chap. C1. 1970. 55 p.

3–C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS–TWRI book 3, chap. C2. 1999. 89 p.

3–C3. *Computation of fluvial-sediment discharge,* by George Porterfield: USGS–TWRI book 3, chap. C3. 1972. 66 p.

Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

4–A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS–TWRI book 4, chap. A1. 1968. 39 p.

4–A2. *Frequency curves,* by H.C. Riggs: USGS–TWRI book 4, chap. A2. 1968. 15 p.

4–A3. *Statistical methods in water resources*, by D.R. Helsel and R.M. Hirsch: USGS–TWRI book 4, chap. A3. 1991. Available only online at http://water.usgs.gov/pubs/twri/twri4a3/. (Accessed August 30, 2002.)

Section B. Surface Water

4–B1. *Low-flow investigations,* by H.C. Riggs: USGS–TWRI book 4, chap. B1. 1972. 18 p.

4–B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS–TWRI book 4, chap. B2. 1973. 20 p.

4–B3. *Regional analyses of streamflow characteristics,* by H.C. Riggs: USGS–TWRI book 4, chap. B3. 1973. 15 p.

Section D. Interrelated Phases of the Hydrologic Cycle

4–D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS–TWRI book 4, chap. D1. 1970. 17 p.

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

Book 5. Laboratory Analysis

Section A. Water Analysis

5–A1. *Methods for determination of inorganic substances in water and fluvial sediments,* by M.J. Fishman and L.C. Friedman, editors: USGS–TWRI book 5, chap. A1. 1989. 545 p.

5–A2. *Determination of minor elements in water by emission spectroscopy,* by P.R. Barnett and E.C. Mallory, Jr.: USGS–TWRI book 5, chap. A2. 1971. 31 p.

5–A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS–TWRI book 5, chap. A3. 1987. 80 p.

5–A4. *Methods for collection and analysis of aquatic biological and microbiological samples,* by L.J. Britton and P.E. Greeson, editors: USGS–TWRI book 5, chap. A4. 1989. 363 p.

5–A5. *Methods for determination of radioactive substances in water and fluvial sediments,* by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS–TWRI book 5, chap. A5. 1977. 95 p.

5–A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments,* by L.C. Friedman and D.E. Erdmann: USGS–TWRI book 5, chap. A6. 1982. 181 p.

Section C. Sediment Analysis

5–C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS–TWRI book 5, chap. C1. 1969. 58 p.

Book 6. Modeling Techniques

Section A. Ground Water

6–A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS–TWRI book 6, chap. A1. 1988. 586 p.

6–A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model,* by S.A. Leake and D.E. Prudic: USGS–TWRI book 6, chap. A2. 1991. 68 p.

6–A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual,* by L.J. Torak: USGS–TWRI book 6, chap. A3. 1993. 136 p.

6–A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions,* by R.L. Cooley: USGS–TWRI book 6, chap. A4. 1992. 108 p.

6–A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details,* by L.J. Torak: USGS–TWRI book 6, chap. A5. 1993. 243 p.

6–A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler: USGS–TWRI book 6, chap. A6. 1996. 125 p.

6–A7. *User's guide to SEAWAT: A computer program for simulation of three-dimensional variable-density ground-water flow*, by Weixing Guo and Christian D. Langevin: USGS–TWRI book 6, chap. A7. 2002. 77 p.

Book 7. Automated Data Processing and Computations

Section C. Computer Programs

7–C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments,* by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS–TWRI book 7, chap. C1. 1976. 116 p.

7–C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS–TWRI book 7, chap. C2. 1978. 90 p.

7–C3. *A model for simulation of flow in singular and interconnected channels,* by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS–TWRI book 7, chap. C3. 1981. 110 p.

Book 8. Instrumentation

Section A. Instruments for Measurement of Water Level

8–A1. *Methods of measuring water levels in deep wells,* by M.S. Garber and F.C. Koopman: USGS–TWRI book 8, chap. A1. 1968. 23 p.

8–A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS–TWRI book 8, chap. A2. 1983. 57 p.

Section B. Instruments for Measurement of Discharge

8–B2. *Calibration and maintenance of vertical-axis type current meters,* by G.F. Smoot and C.E. Novak: USGS–TWRI book 8, chap. B2. 1968. 15 p.

Book 9. Handbooks for Water-Resources Investigations

Section A. National Field Manual for the Collection of Water-Quality Data

9–A1. *National field manual for the collection of water-quality data: Preparations for water sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A1. 1998. 47 p.

9–A2. *National field manual for the collection of water-quality data: Selection of equipment for water sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A2. 1998. 94 p.

9–A3. *National field manual for the collection of water-quality data: Cleaning of equipment for water sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A3. 1998. 75 p.

9–A4. *National field manual for the collection of water-quality data: Collection of water samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A4. 1999. 156 p.

9–A5. *National field manual for the collection of water-quality data: Processing of water samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999, 149 p.

9–A6. *National field manual for the collection of water-quality data: Field measurements*, edited by F.D. Wilde and D.B. Radtke: USGS–TWRI book 9, chap. A6. 1998. Variously paginated.

9–A7. *National field manual for the collection of water-quality data: Biological indicators*, edited by D.N. Myers and F.D. Wilde: USGS–TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.

9–A8. *National field manual for the collection of water-quality data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 p.

9–A9. *National field manual for the collection of water-quality data: Safety in field activities*, by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 p.

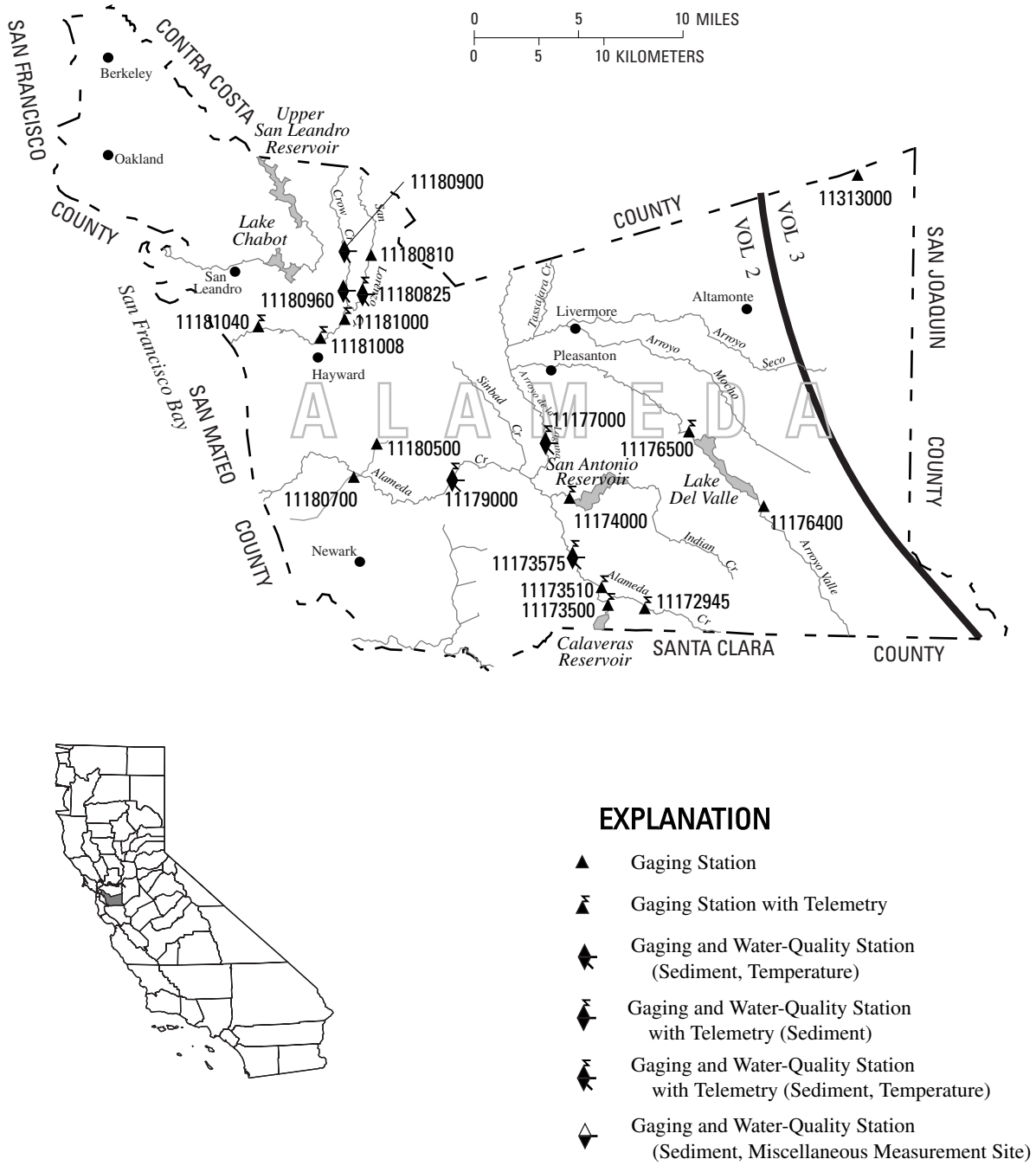
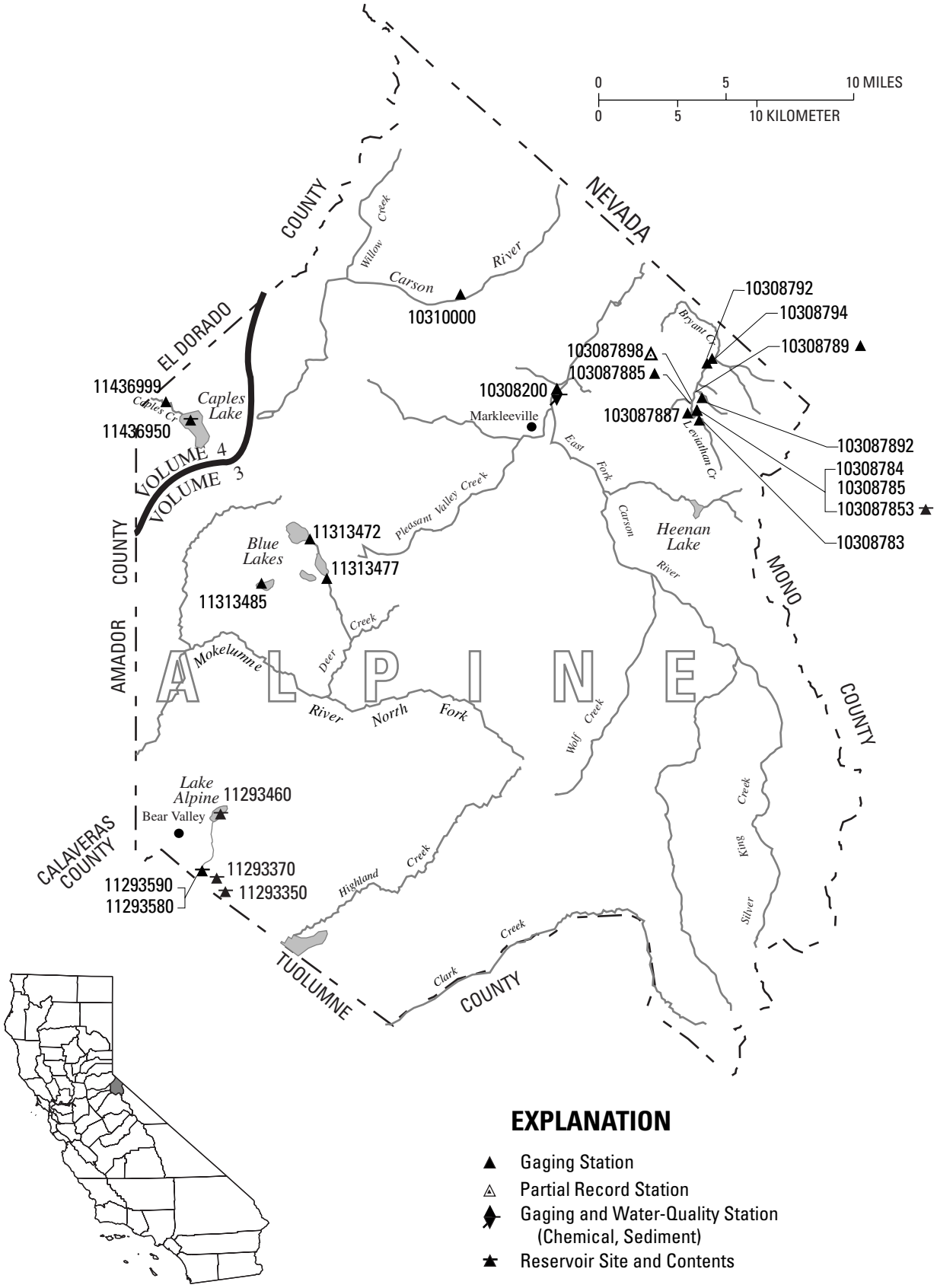


Figure 2. Location of discharge and water-quality stations in Alameda County.
(NOTE: Records for stations 11172945 through 11181040 published in volume 2.)



EXPLANATION

- ▲ Gaging Station
- △ Partial Record Station
- ⧫ Gaging and Water-Quality Station (Chemical, Sediment)
- ★ Reservoir Site and Contents

Figure 3. Location of discharge stations in Alpine County.
(NOTE: Station 10297000 in Douglas County, Nevada, shown on Mono County map.
Record for stations 11436950 and 11436999 published in volume 4.)

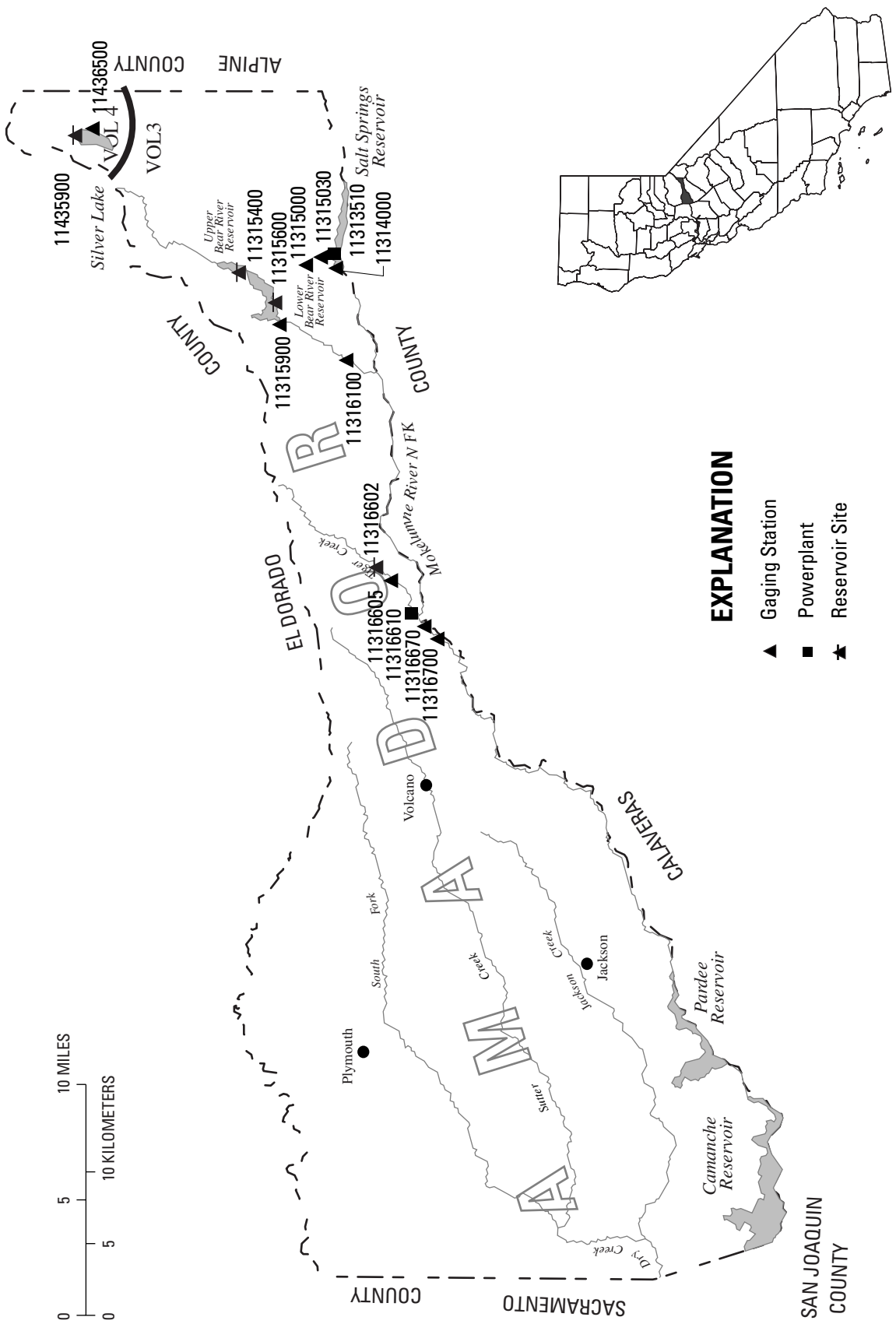


Figure 4. Location of discharge stations in Amador County. (NOTE: Record for station 11435900 published in volume 4.)

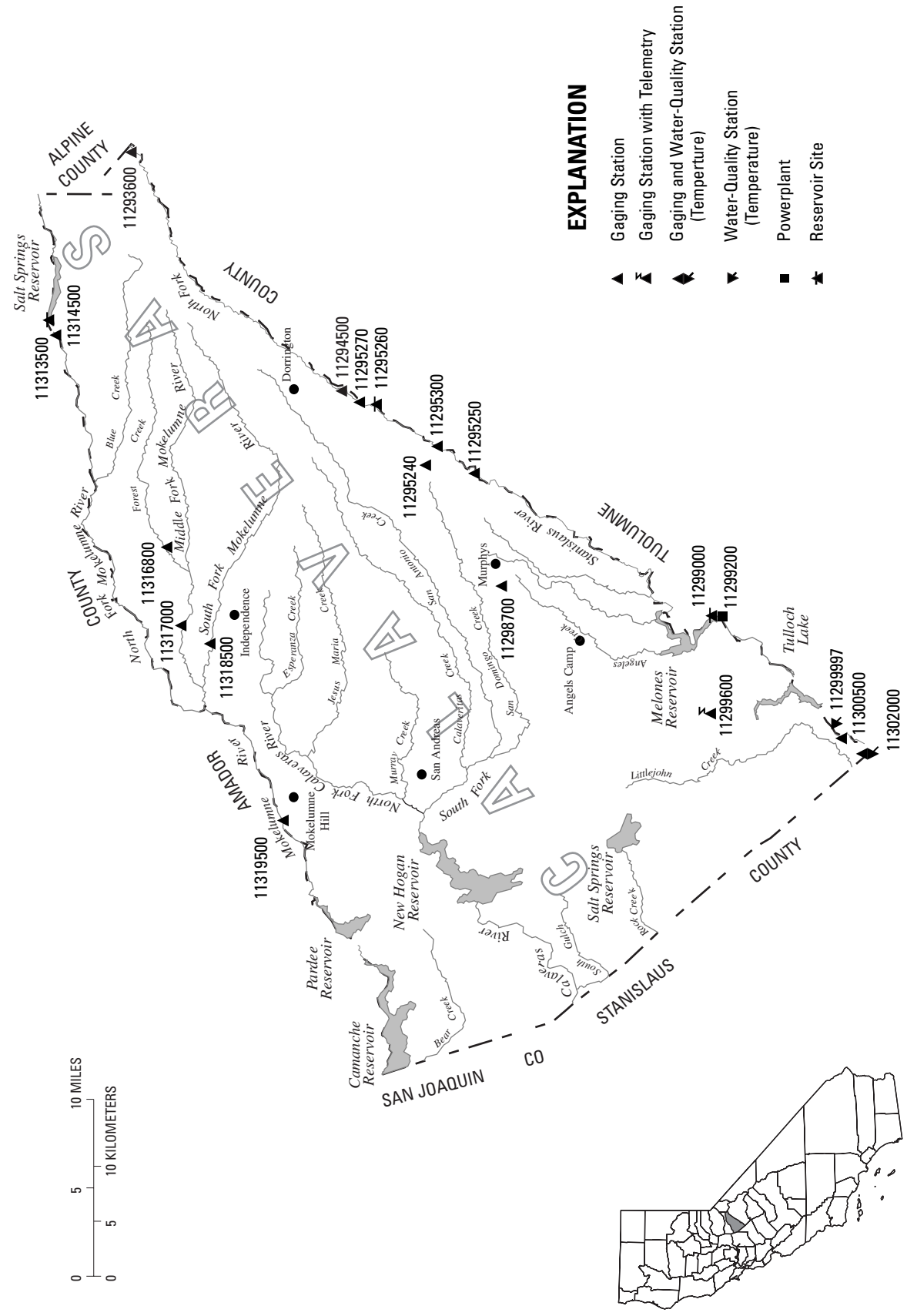


Figure 5. Location of discharge and water-quality stations in Calaveras County.

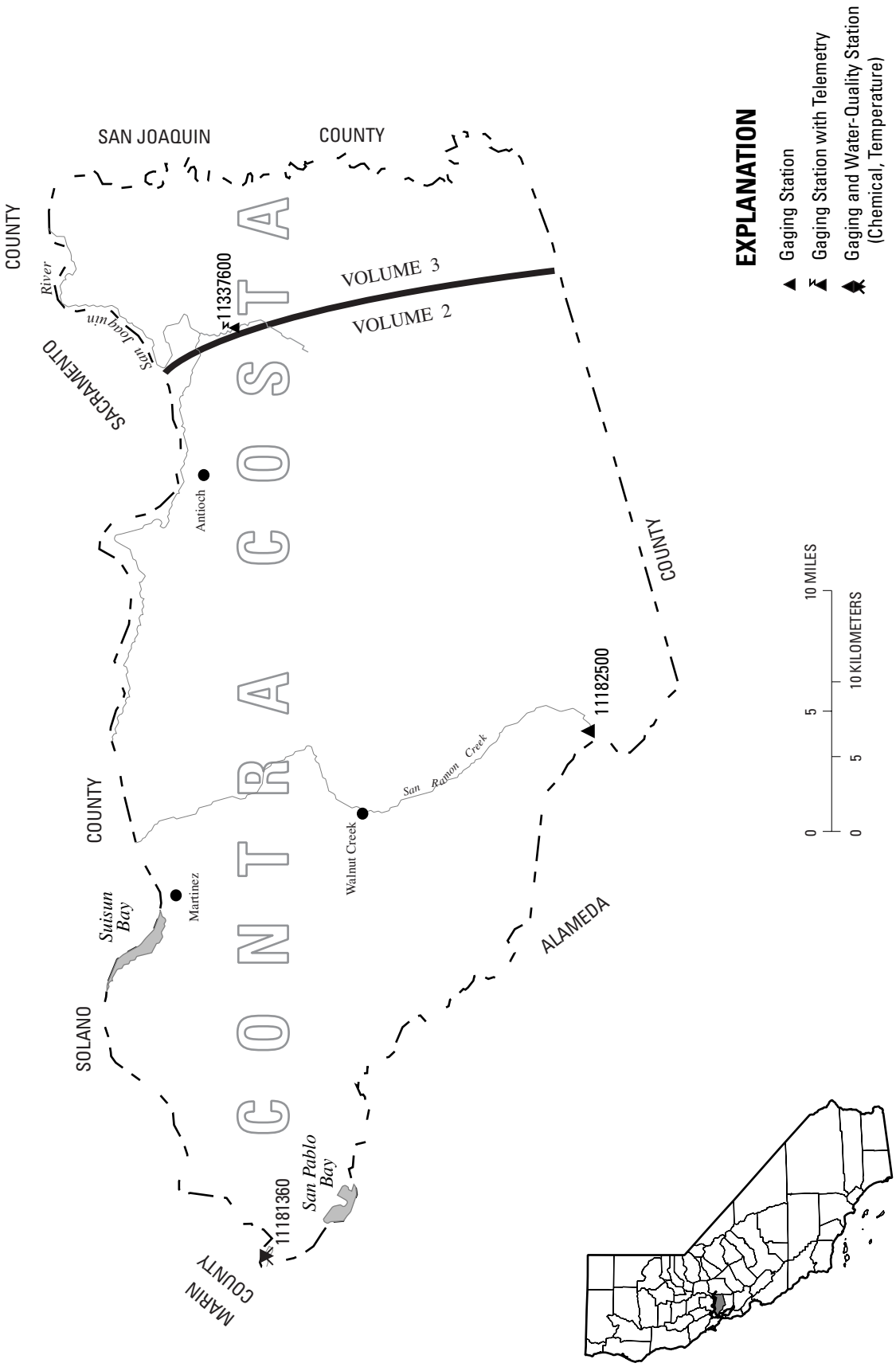


Figure 6. Location of discharge and water-quality stations in Contra Costa County. (NOTE: Records for stations 11181360 and 11182500 published in volume 2.)

Figure 7. Location of discharge and water-quality stations in El Dorado County.
(NOTE: Records for stations 11427800 through 11446030 published in volume 4.)

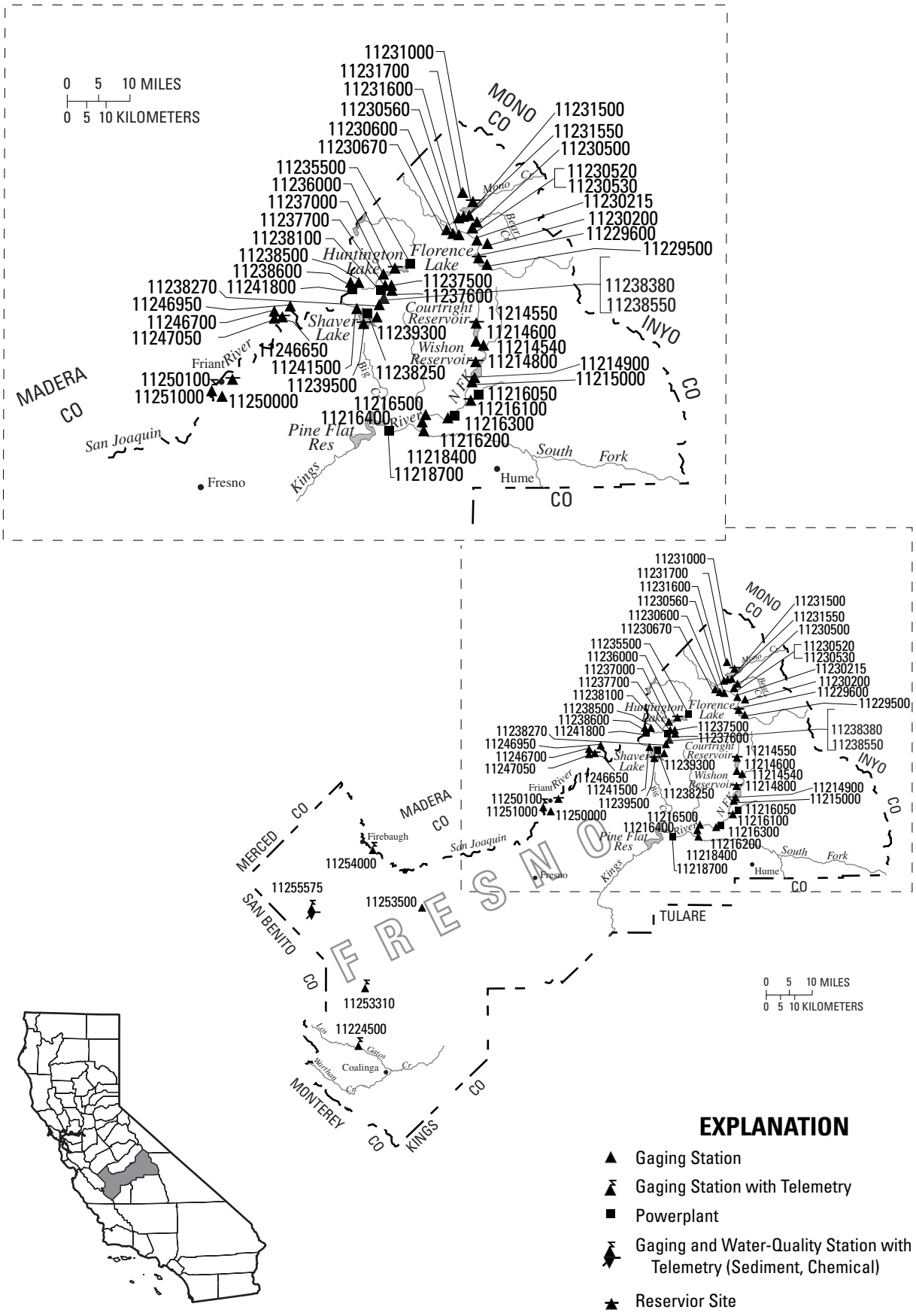


Figure 8. Location of discharge and water-quality stations in Fresno County.

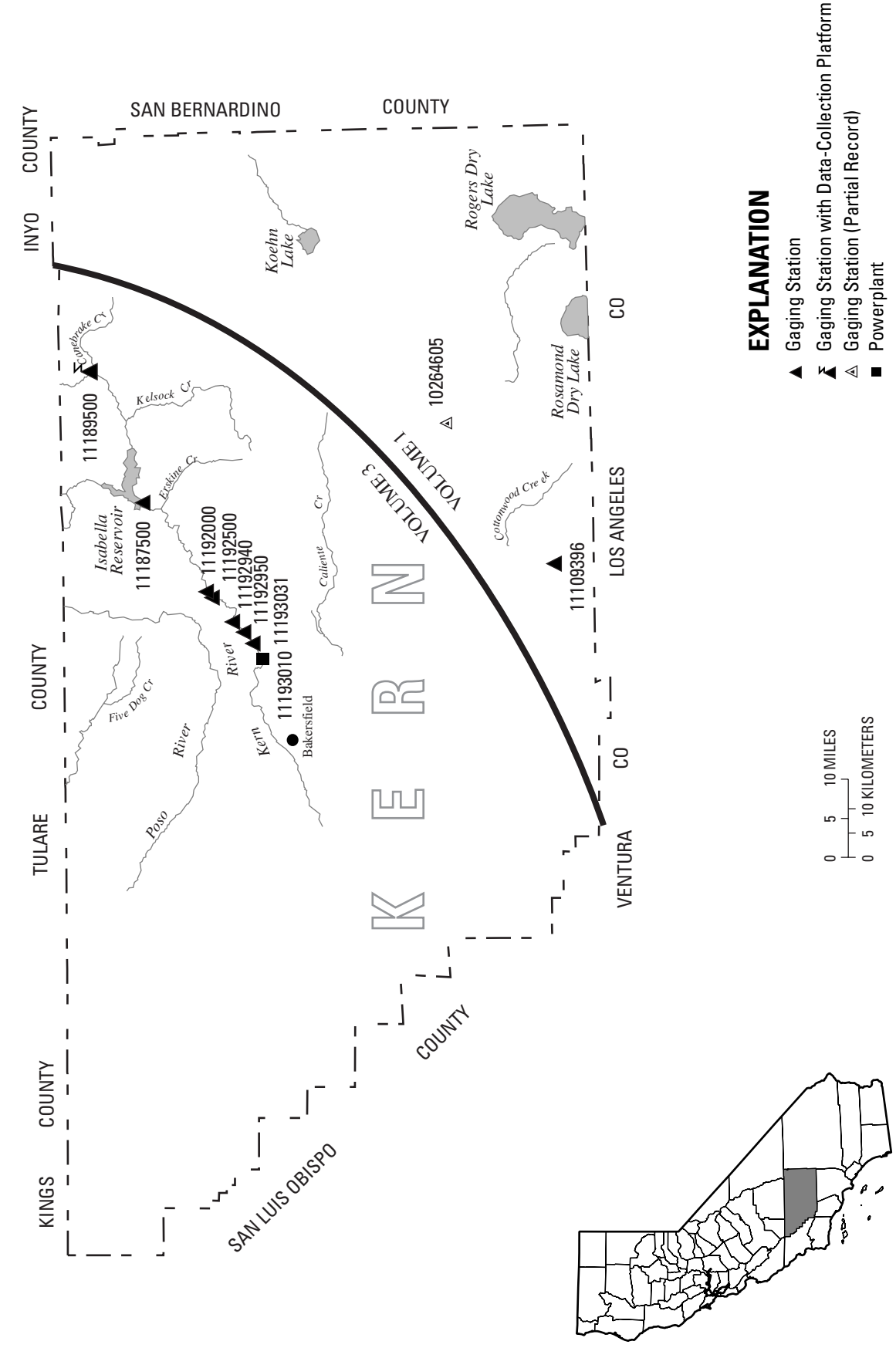


Figure 9. Location of discharge stations in Kern County.
(NOTE: Records for stations10264640 through 10264675, and 11109396 published in volume 1.)

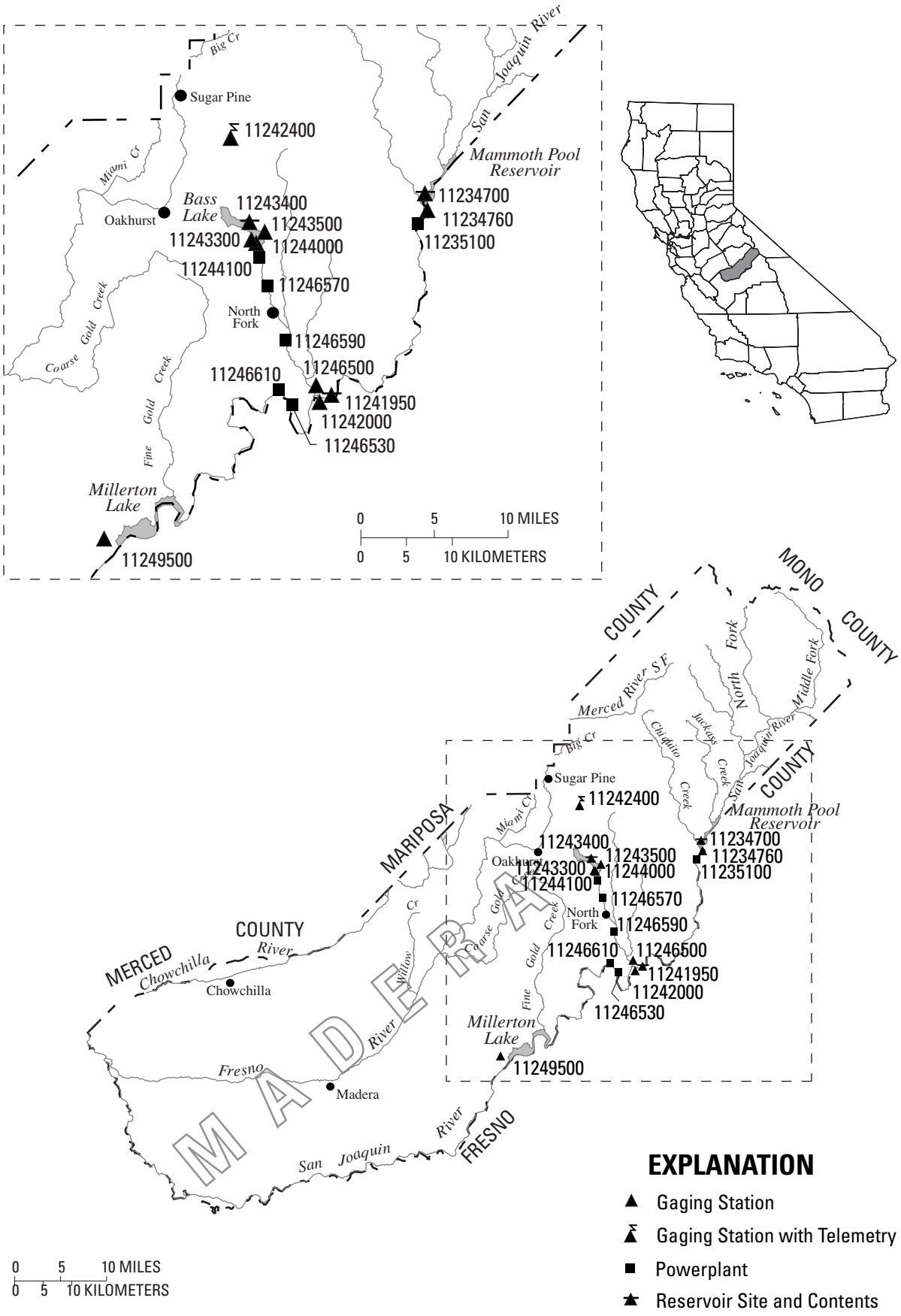


Figure 10. Location of discharge stations in Madera County.

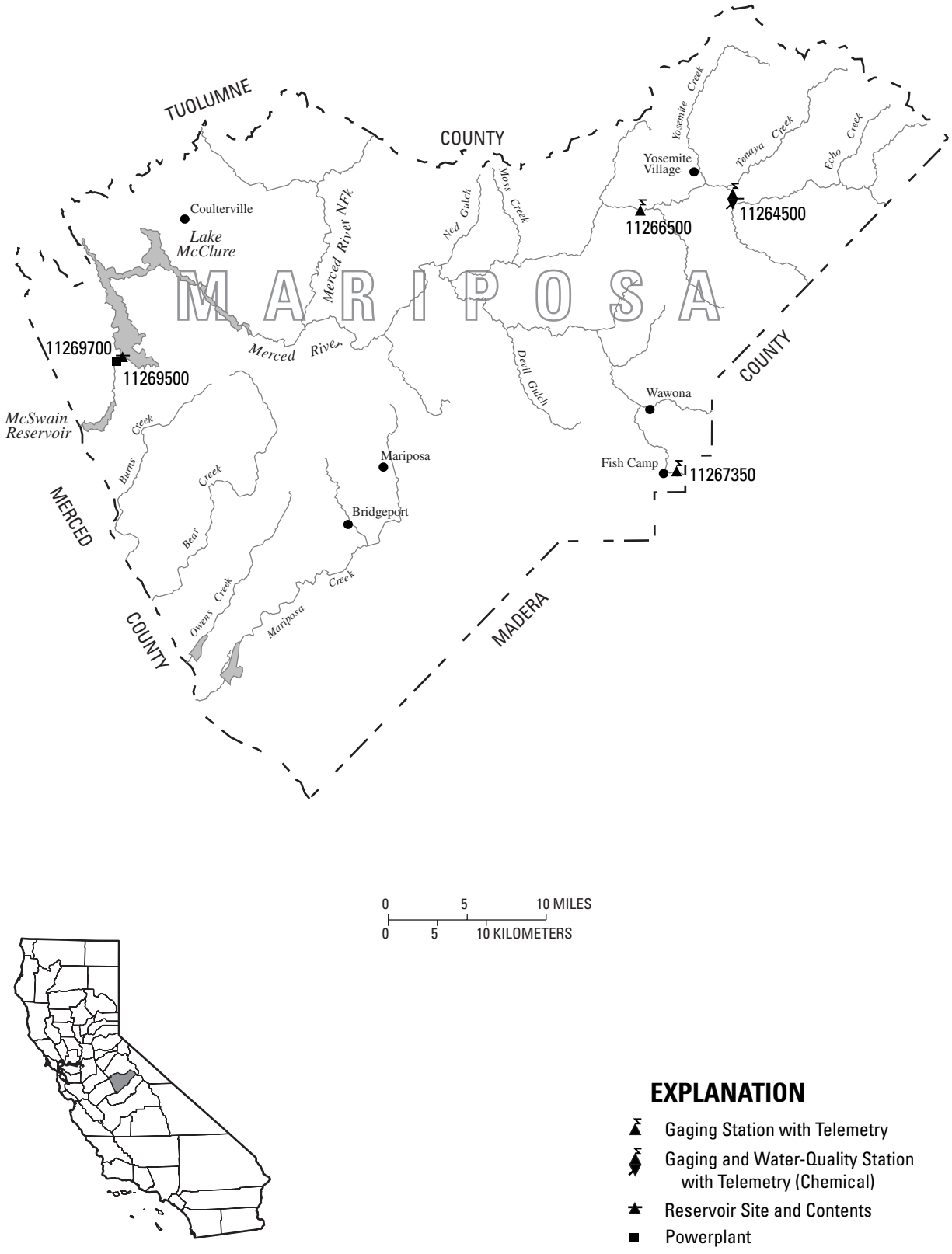
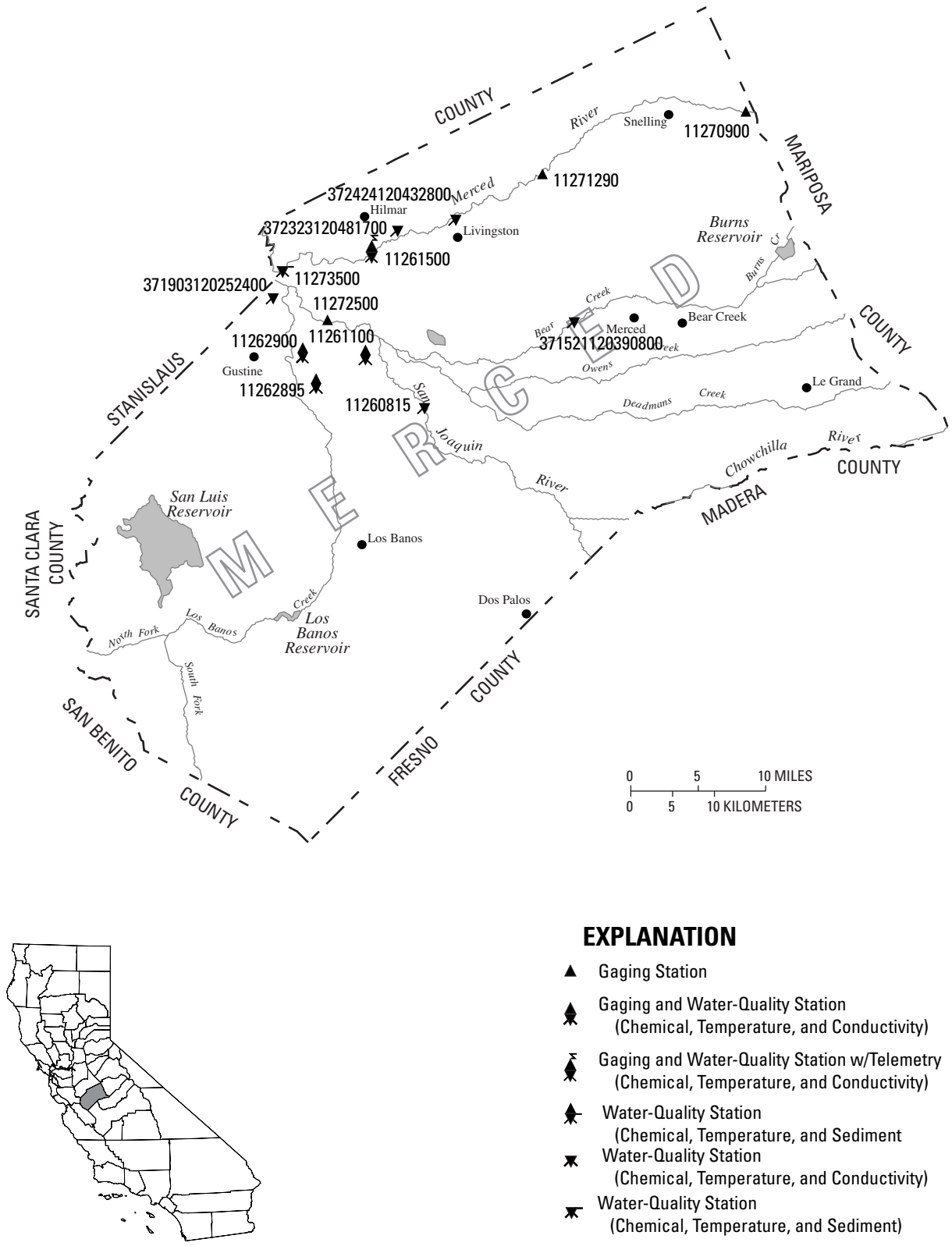


Figure 11. Location of discharge stations in Mariposa County.



EXPLANATION

- Gaging Station
- Gaging and Water-Quality Station (Chemical, Temperature, and Conductivity)
- Gaging and Water-Quality Station w/Telemetry (Chemical, Temperature, and Conductivity)
- Water-Quality Station (Chemical, Temperature, and Sediment
- Water-Quality Station (Chemical, Temperature, and Conductivity)
- Water-Quality Station (Chemical, Temperature, and Sediment)

Figure 12. Location of discharge and water-quality stations in Merced County.

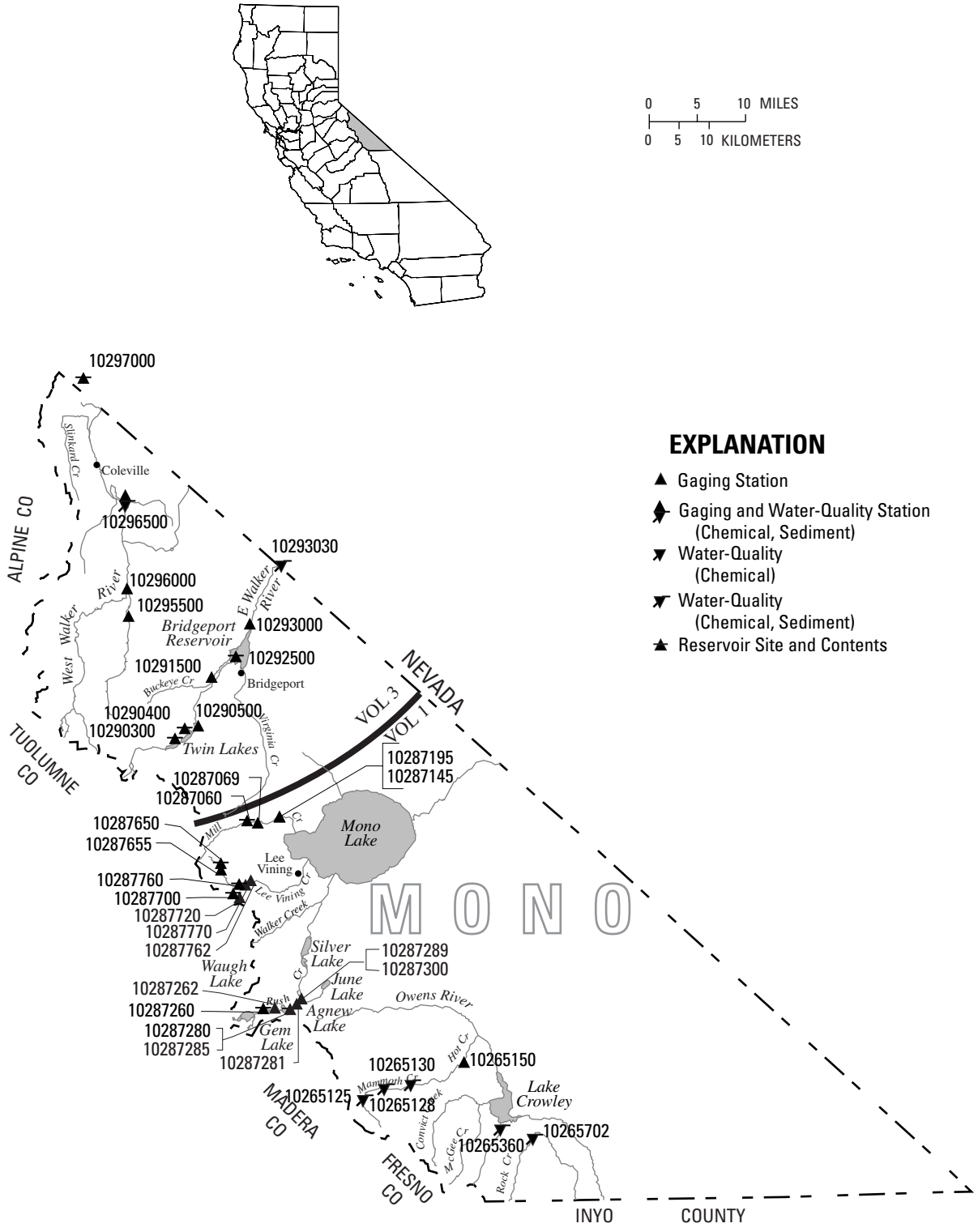
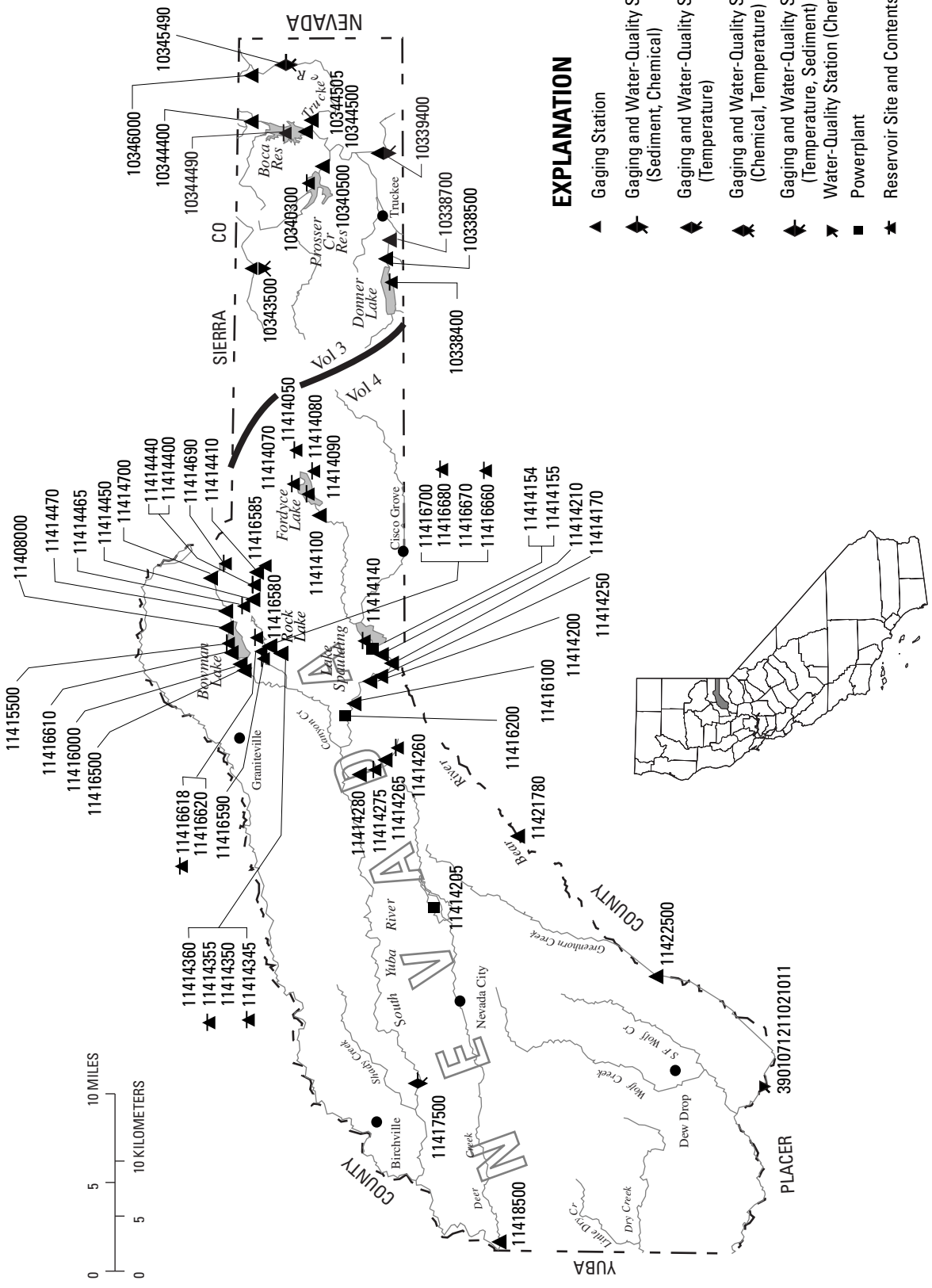


Figure 13. Location of discharge stations in Mono County.
(NOTE: Records for stations 10265150 through 10287780 published in volume 1. Station 10297000 is located in Douglas County, Nevada.)



0 5 10 KILOMETERS
0 5 10 MILES

Figure 14. Location of discharge and water-quality stations in Nevada County.
(NOTE: Records for stations 11408000 through 11422500 published in volume 4.)

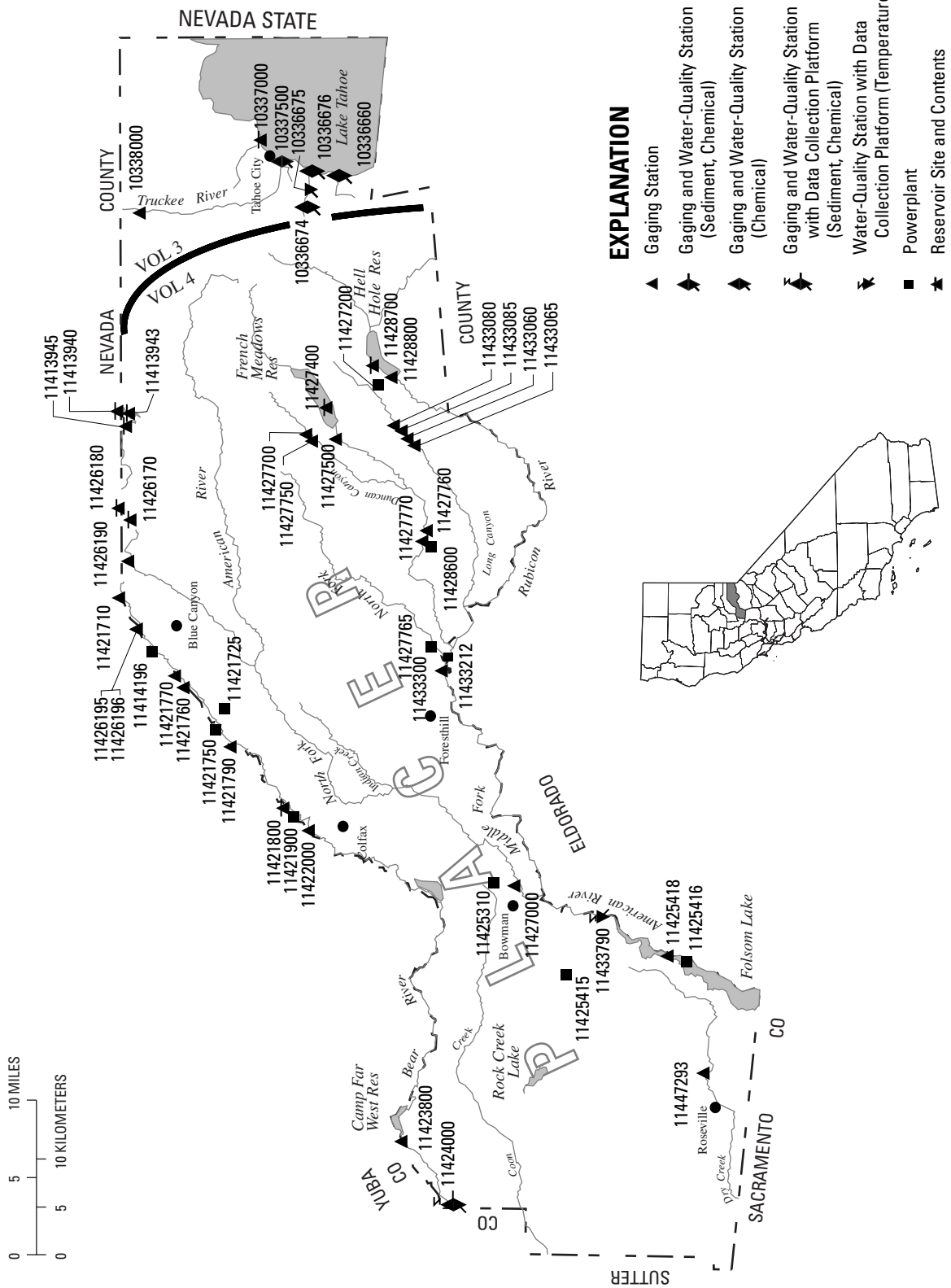


Figure 15. Location of discharge and water-quality stations in Placer County.
(NOTE: Records for stations 11413940 through 11447293 published in volume 4.)

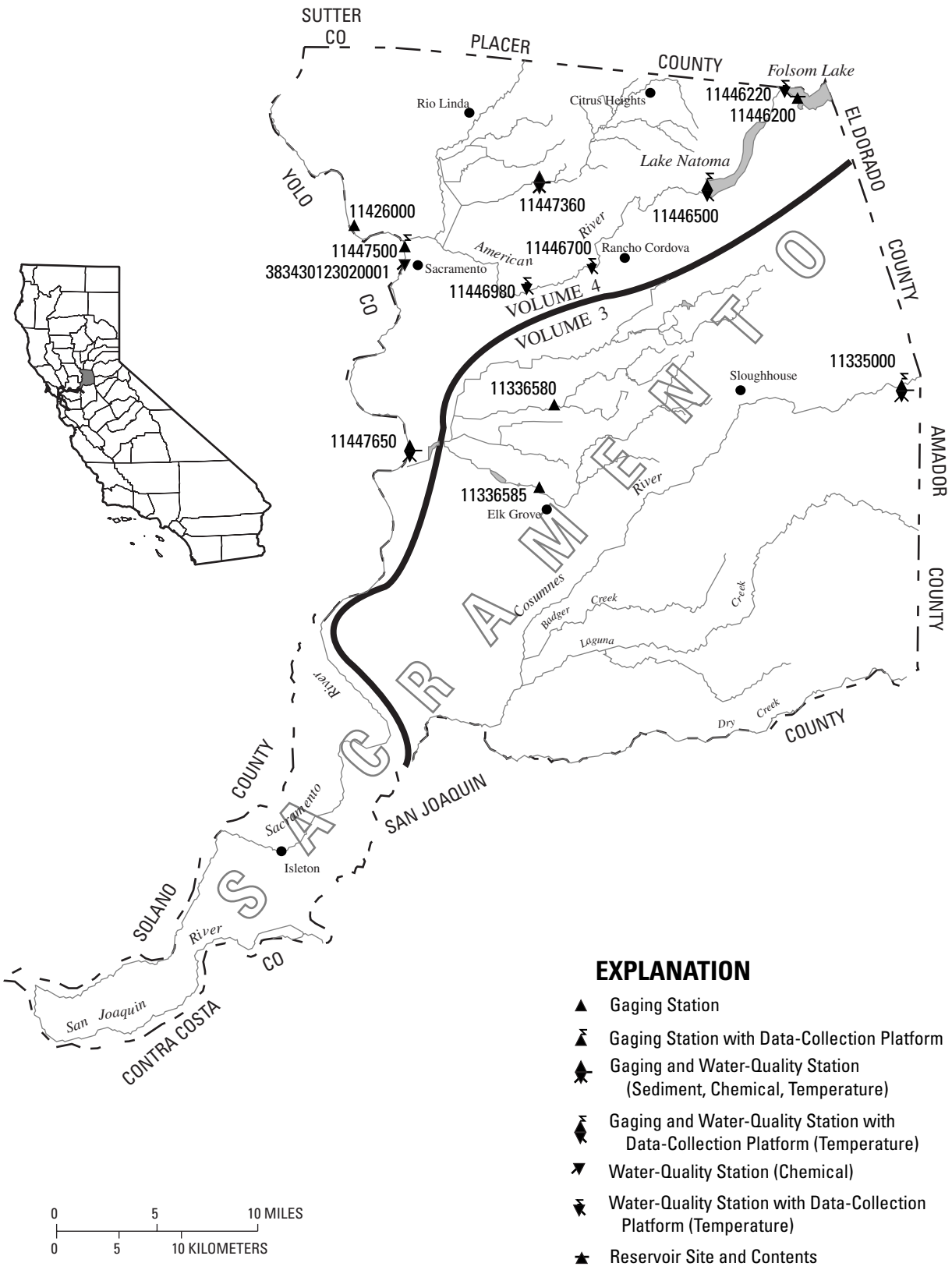


Figure 16. Location of discharge and water-quality stations in Sacramento County.
(NOTE: Records for stations 11426000 through 11447650 published in volume 4.)

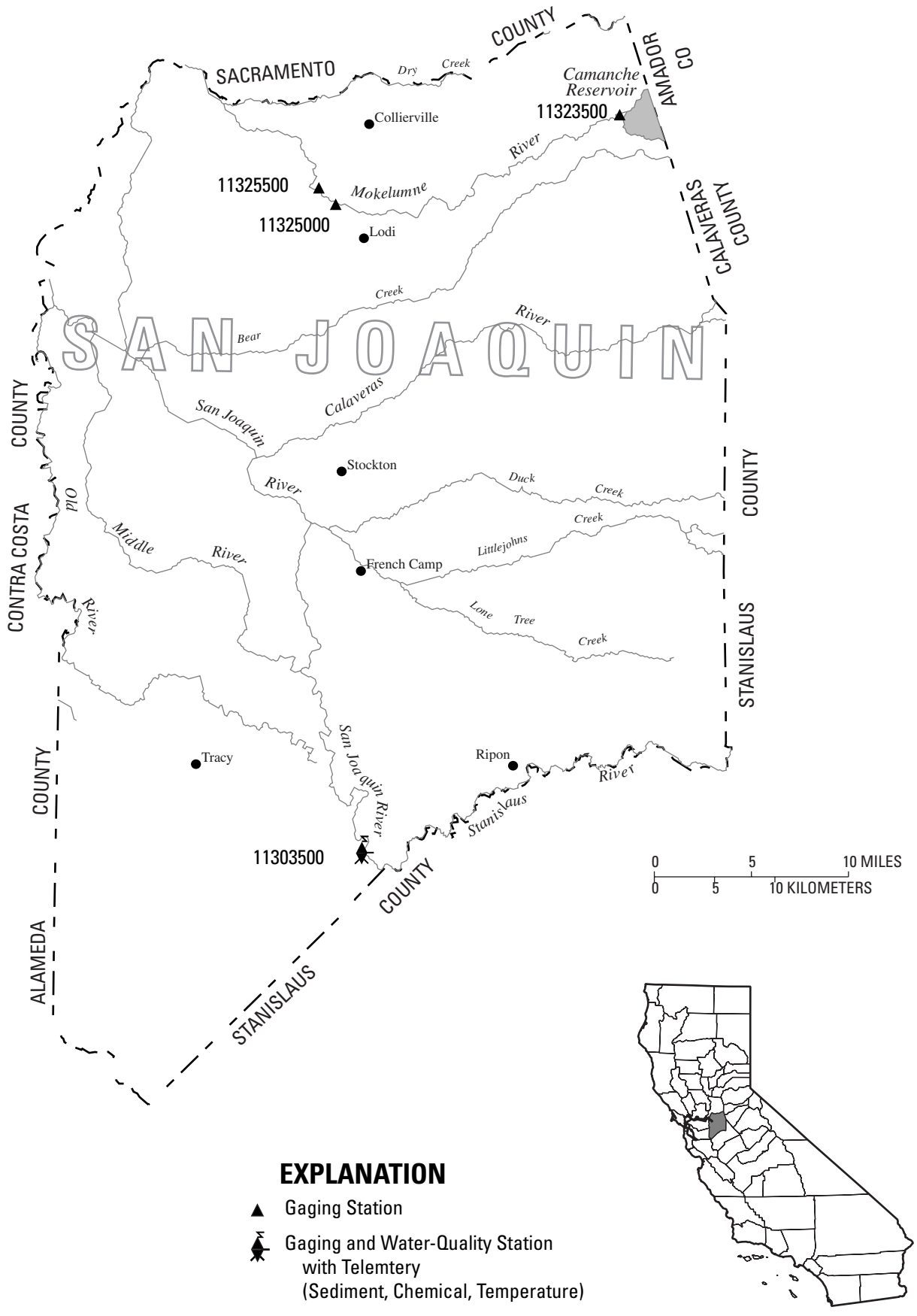


Figure 17. Location of discharge and water-quality stations in San Joaquin County.

Figure 18. Location of discharge stations in Sierra County.
(NOTE: Records for stations 11407800 through 11413000 published in volume 4.)

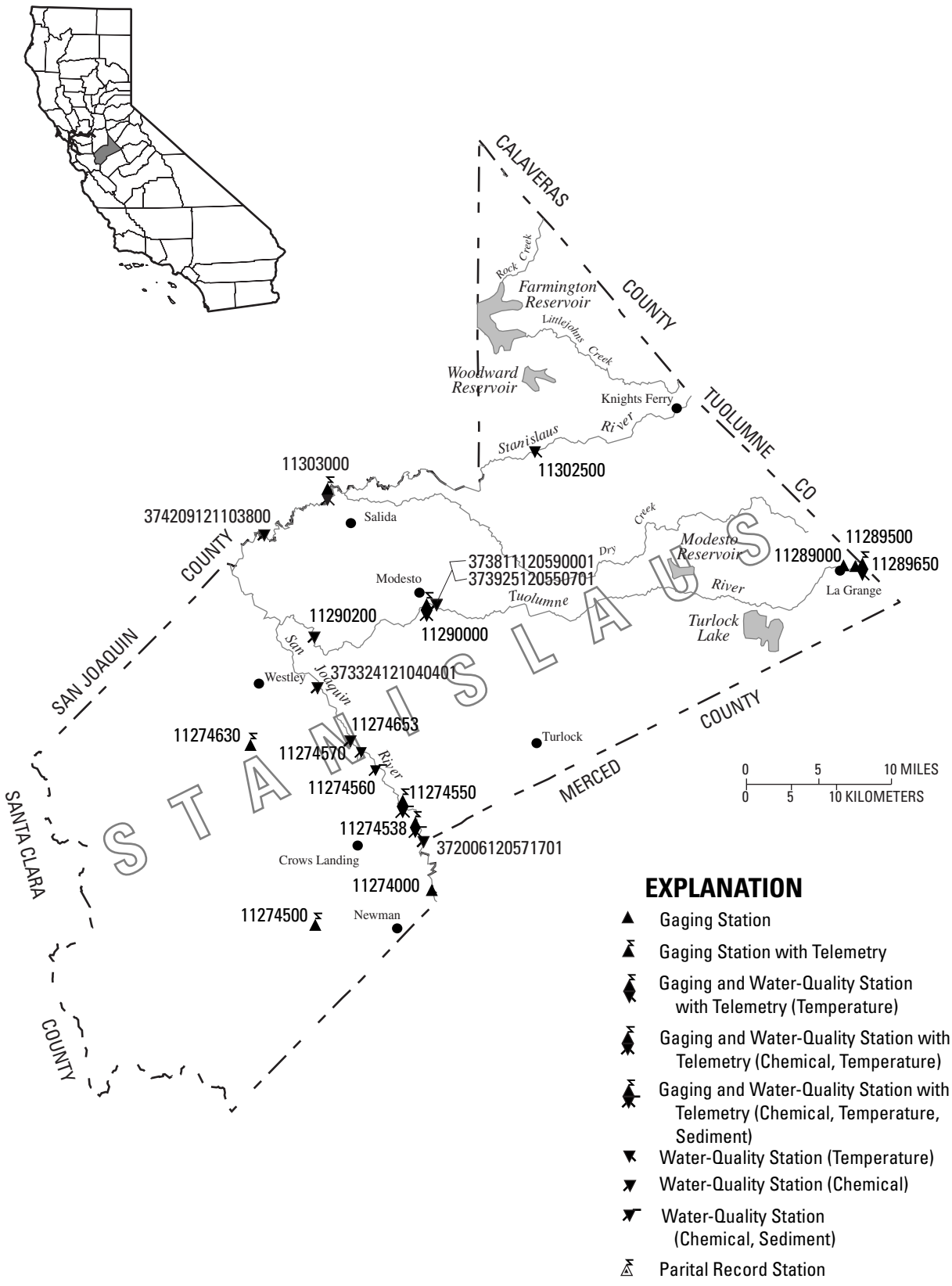


Figure 19. Location of discharge and water-quality stations in Stanislaus County.

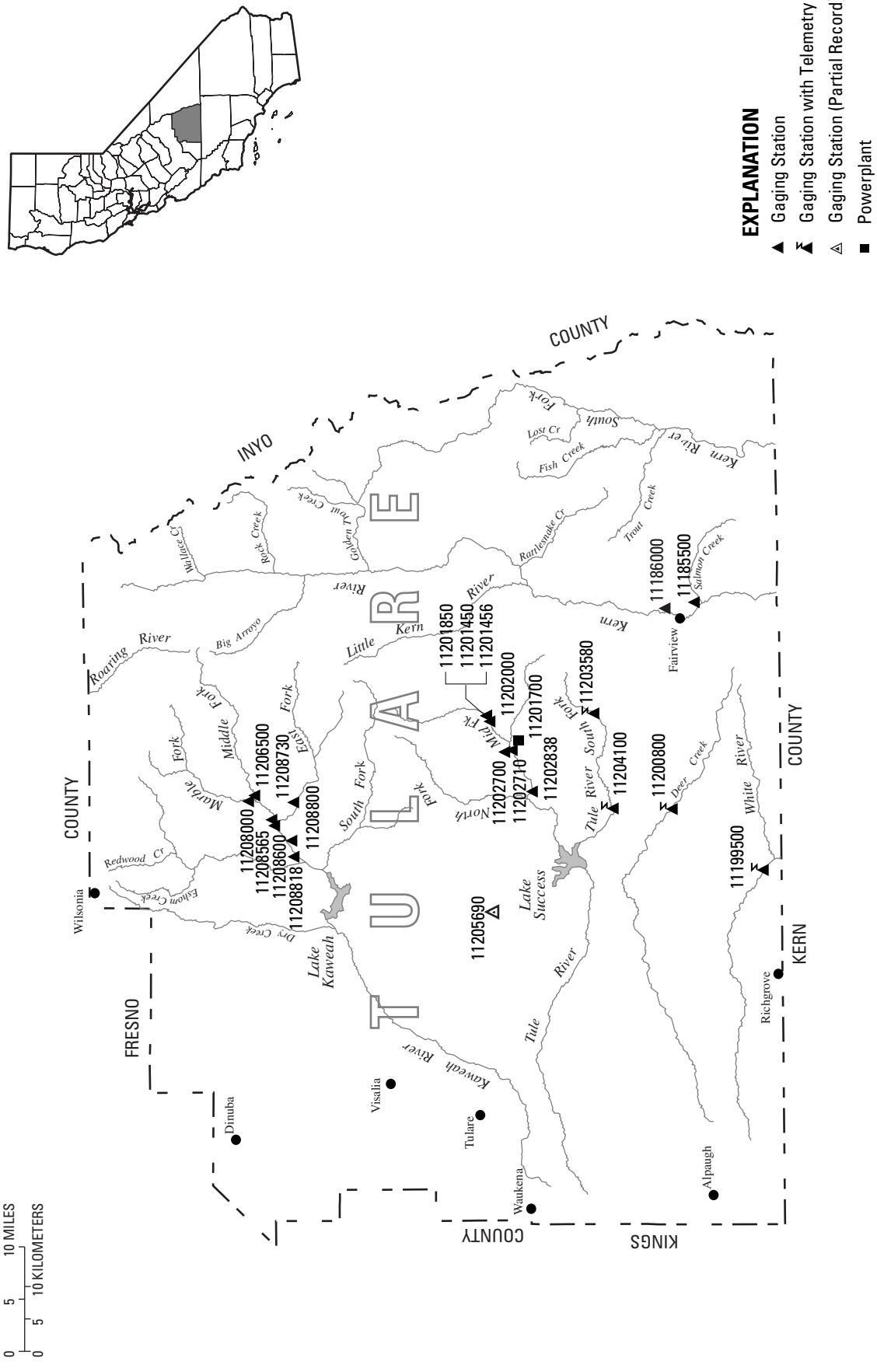


Figure 20. Location of discharge stations in Tulare County.

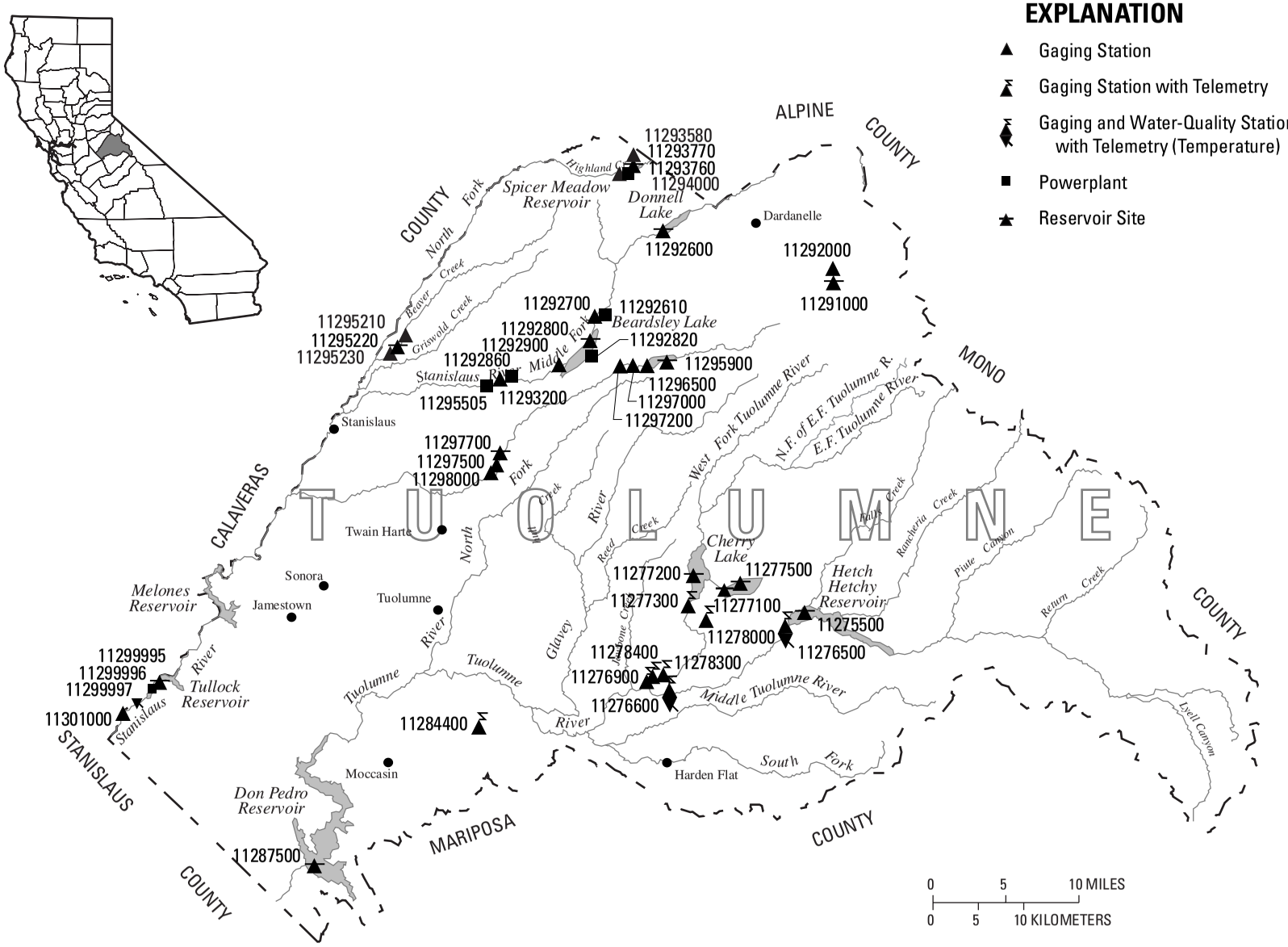


Figure 21. Location of discharge and water-quality stations in Tuolumne County.

Remark Codes

The following additional remark codes may appear with the water-quality data in this section:

PRINTED OUTPUT	REMARK
e	Estimated value.
>	Actual value is known to be greater than value shown.
<	Actual value is known to be less than value shown.
A	Value is an average.
D	Biological organism count equal to or greater than 15 percent (dominant).
K	Results based on colony count outside the acceptance range (non-ideal colony count).
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted).
M	Presence of material verified, but not quantified.
N	Presumptive evidence of presence of material.
ND	Not detected.
S	Most probable value.
SS	Suspended-sediment data determined from a sample collected and processed according to National Water-Quality Assessment (NAWQA) program protocol.
U	Material specifically analyzed for, but not detected.
V	Analyte was detected in both the environmental sample and the associated blanks.
&	Biological organism estimated as dominant.
*	Instantaneous discharge at the time of cross-sectional measurements.
**	Partial sampled width.
1	Laboratory value.
2	Laboratory fixed-end point titration.
†	Sample collected using an automatic sampler.

Dissolved Trace-Element Concentrations

NOTE: Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter (µg/L) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ng/L). Data above the µg/L level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994.

Data Precision

NOTE: Precision varies for different analytical methods used to determine the same constituent. The presence of trailing zeroes after the decimal in values printed in this report does not necessarily indicate that the method used for the determination is as precise as the level implied by the rightmost zero.

THIS PAGE INTENTIONALLY LEFT BLANK

10290300 UPPER TWIN LAKE NEAR BRIDGEPORT, CA

LOCATION.—Lat 38° 09'15", long 119° 20'58", in NW 1/4 NE 1/4 sec.5, T.3 N., R.24 E., Mono County, Hydrologic Unit 16050301, in Toiyabe National Forest, at outlet of upper lake dam on Robinson Creek, and 10 mi southwest of Bridgeport.

DRAINAGE AREA.—29.5 mi^2.

PERIOD OF RECORD.—December 1961 to February 1964, September 1964 to current year.

GAGE.—Nonrecording gage. Datum of gage is 7,212.86 ft above NGVD of 1929 (project datum of U.S. Indian Irrigation Service).

REMARKS.—Contents regulated by dam at outlet. Figures given herein represent usable contents. Usable contents, 2,070 acre-ft, between elevations 7,200 ft, natural rim, and 7,207 ft, spillway crest. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents observed, 2,990 acre-ft, July 7, 1983, elevation, 7,209.85 ft; minimum observed, 30 acre-ft, Nov. 1, 1990, elevation, 7,200.11 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.—No usable contents observed Oct. 17, 1961.

EXTREMES FOR CURRENT YEAR.—Maximum contents observed, 2,820 acre-ft, May 30, elevation, 7,209.32 ft; minimum observed, 1,470 acre-ft, Oct. 30, elevation, 7,205.10 ft.

MONTHEND ELEVATION, IN FEET ABOVE NGVD OF 1929, AND TOTAL CONTENTS

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
September 30	7,205.60	1,630	—
October 31	7,205.16	1,490	-140
November 30	7,206.75	1,990	+500
December 31	7,207.18	2,130	+140
CALENDAR YEAR 2002	—	—	+90
January 31	7,207.28	2,160	-30
February 28	7,206.46	1,900	-260
March 31	7,207.48	2,220	+320
April 30	7,207.49	2,230	+10
May 31	7,209.28	2,800	+570
June 30	7,208.29	2,480	-320
July 31	7,207.93	2,370	-110
August 31	7,205.30	1,530	-840
September 30	7,204.77	1,370	-160
WATER YEAR 2003	—	—	-260

NOTE.—Monthend elevations are interpolated from readings made during the year.

10290400 LOWER TWIN LAKE NEAR BRIDGEPORT, CA

LOCATION.—Lat 38° 10'05", long 119° 19'33", in NE 1/4 NE 1/4 sec.33, T.4 N., R.24 E., Mono County, Hydrologic Unit 16050301, in Toiyabe National Forest, at outlet of lower lake dam on Robinson Creek, and 8 mi southwest of Bridgeport.

DRAINAGE AREA.—38.9 mi^2.

PERIOD OF RECORD.—December 1961 to current year.

GAGE.—Non-recording gage. Datum of gage is 7,205.45 ft above NGVD of 1929 (project datum of U.S. Indian Irrigation Service).

REMARKS.—Contents regulated by dam at outlet and by Upper Twin Lake. Figures given herein represent usable contents. Usable contents, 4,010 acre-ft, between elevations 7,190 ft, natural rim, and 7,200 ft, spillway crest. One transarea diversion out of Tamarack Creek into Summers Creek. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 5,560 acre-ft, June 19, 1983, elevation, 7,203.58 ft; no contents, Nov. 17, 1966.

EXTREMES FOR CURRENT YEAR.—Maximum contents observed, 5,000 acre-ft, May 30, elevation, 7,202.32 ft; minimum observed, 2,770 acre-ft, Sept. 2, elevation 7,196.92 ft.

MONTHEND ELEVATION AND CONTENTS, IN FEET ABOVE NGVD OF 1929

WATER YEAR OCTOBER 2002 TO SEPTEMBER 20023

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
September 30	7,196.95	2,780	—
October 31	7,197.44	2,980	+200
November 30	7,198.80	3,520	+540
December 31	7,200.34	4,150	+630
CALENDAR YEAR 2002	—	—	-30
January 31	7,200.48	4,210	+60
February 28	7,200.44	4,200	-10
March 31	7,200.15	4,070	-130
April 30	7,199.98	4,000	-70
May 31	7,202.27	4,980	+980
June 30	7,201.31	4,560	-420
July 31	7,201.02	4,440	-120
August 31	7,197.12	2,850	-1,590
September 30	7,196.72	2,690	-160
WATER YEAR 2003	—	—	-90

NOTE.—Monthend elevations are interpolated from readings made during the year.

10290500 ROBINSON CREEK AT TWIN LAKES OUTLET, NEAR BRIDGEPORT, CA

LOCATION.—Lat 38° 10'20", long 119° 19'25", in SE 1/4 SE 1/4 sec.28, T.4 N., R.24 E., Mono County, Hydrologic Unit 16050301, on left bank, 0.2 mi downstream from Lower Twin Lake, and 8 mi southwest of Bridgeport.

DRAINAGE AREA.—39.1 mi^2.

PERIOD OF RECORD.—October 1953 to September 1975, May 1992 to September 1994 (irrigation season only), October 1994 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 7,050 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good except for estimated daily discharges, which are fair. Flow regulated by Upper and Lower Twin Lakes. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

REVISIONS.—WSP 1927: Drainage area.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,170 ft^3/s, Jan. 3, 1997, gage height, 5.44 ft; no flow many days, some years.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 332 ft^3/s, May 31, June 1, gage height, 3.44 ft; minimum daily, 2.0 ft^3/s, Dec. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	7.4	3.6	15	16	15	23	22	329	119	80	65
2	11	7.3	3.6	14	15	15	22	22	320	117	78	59
3	11	7.3	3.5	14	15	15	22	22	311	113	74	49
4	11	7.3	3.6	13	15	14	22	23	304	111	70	42
5	11	7.1	3.6	13	15	14	22	22	296	110	69	41
6	10	7.1	3.7	13	15	14	22	22	286	108	70	41
7	10	5.6	3.6	13	15	14	22	23	276	107	75	40
8	10	5.6	3.7	13	15	14	22	24	269	103	74	33
9	10	5.1	3.7	13	15	13	22	23	266	101	72	28
10	10	4.7	3.1	14	15	13	23	23	261	98	73	25
11	10	4.5	2.8	14	15	13	26	24	254	97	71	24
12	10	4.5	2.7	14	15	13	26	44	243	96	70	24
13	10	4.4	e2.5	14	16	15	29	84	231	93	70	24
14	9.9	4.3	e2.2	14	16	14	33	86	219	91	71	23
15	9.8	4.3	e2.1	13	16	15	41	86	212	89	72	22
16	9.7	4.2	e5.6	13	17	16	45	85	212	86	71	19
17	9.5	3.9	e2.1	13	16	15	42	86	210	85	71	16
18	9.6	3.7	e2.0	13	16	15	40	86	207	85	70	15
19	9.5	3.6	e3.1	14	16	15	38	86	203	87	70	14
20	9.2	3.6	5.0	14	15	14	37	86	193	89	78	14
21	8.7	3.6	5.6	14	15	14	34	88	181	92	91	14
22	8.6	3.6	6.6	14	15	15	29	97	168	93	92	14
23	8.4	3.6	7.7	13	15	15	28	119	154	94	90	14
24	8.4	3.7	9.0	13	15	14	29	149	131	92	89	14
25	8.2	3.6	10	13	17	19	28	181	119	91	88	14
26	8.2	3.7	11	14	16	26	26	204	114	90	87	14
27	8.2	3.7	12	14	16	24	24	226	110	87	86	14
28	8.0	3.7	14	14	15	27	25	241	110	87	84	14
29	7.7	3.6	15	14	---	32	23	270	114	90	84	14
30	7.5	3.6	15	15	---	33	22	302	117	87	83	13
31	7.5	---	17	15	---	25	---	325	---	83	75	---
TOTAL	291.6	141.9	188.7	424	433	530	847	3181	6420	2971	2398	757
MEAN	9.41	4.73	6.09	13.7	15.5	17.1	28.2	103	214	95.8	77.4	25.2
MAX	11	7.4	17	15	17	33	45	325	329	119	92	65
MIN	7.5	3.6	2.0	13	15	13	22	22	110	83	69	13
AC-FT	578	281	374	841	859	1050	1680	6310	12730	5890	4760	1500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2003, BY WATER YEAR (WY)

MEAN	20.9	9.13	7.58	16.5	16.7	17.4	45.2	108	190	159	94.4	48.4
MAX	42.4	30.9	36.1	166	63.4	44.8	79.4	187	349	400	199	89.0
(WY)	1999	1999	1997	1997	1963	1997	1959	1997	1969	1995	1995	1974
MIN	7.00	0.67	0.000	0.000	0.000	0.000	22.3	59.1	68.2	62.0	35.1	12.6
(WY)	1995	1958	1954	1954	1954	1955	1975	1955	1992	1992	1992	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1954 - 2003	
ANNUAL TOTAL	14985.2		18583.2			
ANNUAL MEAN	41.1		50.9		62.8	
HIGHEST ANNUAL MEAN					100	1995
LOWEST ANNUAL MEAN					33.8	1961
HIGHEST DAILY MEAN	182	Jun 3	329	Jun 1	998	Jan 3 1997
LOWEST DAILY MEAN	2.0	Dec 18	2.0	Dec 18	0.00	Nov 3 1953
ANNUAL SEVEN-DAY MINIMUM	2.7	Dec 9	2.7	Dec 9	0.00	Nov 3 1953
MAXIMUM PEAK FLOW			332	May 31	1170	Jan 3 1997
MAXIMUM PEAK STAGE			3.44	May 31	5.44	Jan 3 1997
ANNUAL RUNOFF (AC-FT)	29720		36860		45480	
10 PERCENT EXCEEDS	121		117		161	
50 PERCENT EXCEEDS	15		16		28	
90 PERCENT EXCEEDS	4.5		4.5		0.60	

e Estimated.

10291500 BUCKEYE CREEK NEAR BRIDGEPORT, CA

LOCATION.—Lat 38° 14'20", long 119° 19'30", in NE 1/4 NE 1/4 sec.04, T.4 N., R.24 E., Mono County, Hydrologic Unit 16050301, in Toiyabe National Forest, on right bank at Buckeye Hot Springs, 0.6 mi downstream from Eagle Creek, and about 5.5 mi southwest of Bridgeport.

DRAINAGE AREA.—44.1 mi^2.

PERIOD OF RECORD.—November 1910 to September 1914 (fragmentary), October 1953 to September 1979, October 1995 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 6,900 ft above NGVD of 1929, from topographic map. November 1910 to September 1914, non-recording gage at site 0.5 mi downstream at different datum.

REMARKS.—Records good except for estimated daily discharges, which are poor. No regulation or diversion above station. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

REVISIONS.—WSP 1927: Drainage area.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,750 ft^3/s, Jan. 2, 1997, gage height, 7.49 ft; minimum daily, 4.5 ft^3/s, Jan. 12, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of June 21, 1911, reached an observed stage of 4.8 ft, discharge not determined, site and datum then in use.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 28	2330	*373	*3.28

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	12	13	e17	23	16	44	31	247	102	41	20
2	16	14	13	e18	21	17	37	32	248	96	41	19
3	15	13	13	18	e20	16	33	31	253	96	38	23
4	15	13	14	15	e20	16	31	32	251	93	35	32
5	15	12	13	14	e20	16	31	32	236	88	33	23
6	14	13	13	e14	e20	16	29	33	235	87	32	21
7	14	14	12	e14	e19	16	30	34	235	82	30	20
8	14	60	e12	e13	e19	17	34	35	231	78	29	19
9	13	45	e12	13	e19	17	41	33	237	75	27	19
10	13	22	12	13	e18	18	45	34	225	75	26	19
11	13	18	12	12	e18	20	47	35	213	73	25	19
12	13	18	13	12	e17	22	49	41	199	70	25	18
13	13	17	11	12	e17	26	44	56	187	66	24	18
14	13	17	14	13	17	27	40	89	190	63	23	18
15	13	16	10	e13	17	29	37	89	193	60	23	17
16	13	15	e10	e14	17	23	35	105	195	59	22	17
17	13	14	e11	e15	18	22	34	111	189	60	22	17
18	13	14	e11	16	25	20	33	118	185	63	21	17
19	13	14	e11	16	17	19	33	124	173	68	21	17
20	13	15	e12	16	16	21	34	142	158	64	21	16
21	13	15	e12	16	16	21	33	172	145	60	25	16
22	13	15	e12	16	16	24	31	213	133	58	23	16
23	13	15	e13	17	16	28	31	231	123	55	21	15
24	13	15	e13	17	17	29	34	245	112	54	20	15
25	13	14	e13	17	17	29	33	250	106	55	19	15
26	13	13	e14	18	16	36	31	241	107	48	21	15
27	e14	15	e14	19	16	34	33	249	110	47	21	15
28	14	15	e15	19	16	30	34	291	115	48	19	15
29	13	16	e15	19	---	30	32	285	117	46	18	14
30	13	15	e16	20	---	33	31	298	111	43	18	14
31	13	---	e16	21	---	40	---	264	---	41	19	---
TOTAL	419	524	395	487	508	728	1064	3976	5459	2073	783	539
MEAN	13.5	17.5	12.7	15.7	18.1	23.5	35.5	128	182	66.9	25.3	18.0
MAX	16	60	16	21	25	40	49	298	253	102	41	32
MIN	13	12	10	12	16	16	29	31	106	41	18	14
AC-FT	831	1040	783	966	1010	1440	2110	7890	10830	4110	1550	1070

e Estimated.

10291500 BUCKEYE CREEK NEAR BRIDGEPORT, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22.5	21.8	21.6	23.8	21.3	25.7	51.4	140	202	124	50.2	28.7
MAX	41.4	44.4	52.2	158	55.8	70.6	115	322	432	399	115	65.6
WY)	1957	1974	1965	1997	1997	1997	1997	1969	1911	1911	1967	1911
MIN	7.43	11.6	10.2	10.2	10.2	11.7	22.3	32.2	43.4	18.8	9.76	7.55
(WY)	1978	1962	1978	1960	1977	1977	1967	1977	1976	1977	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1911 - 2003	
ANNUAL TOTAL	15260		16955			
ANNUAL MEAN	41.8		46.5		59.9	
HIGHEST ANNUAL MEAN					114	1969
LOWEST ANNUAL MEAN					19.5	1977
HIGHEST DAILY MEAN	218	Jun 1	298	May 30	1050	Jan 2 1997
LOWEST DAILY MEAN	10	Dec 15	10	Dec 15	4.5	Jan 12 1963
ANNUAL SEVEN-DAY MINIMUM	11	Dec 15	11	Dec 15	5.5	Jan 11 1963
MAXIMUM PEAK FLOW			373	May 28	2750	Jan 2 1997
MAXIMUM PEAK STAGE			3.28	May 28	7.49	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	30270		33630		43390	
10 PERCENT EXCEEDS	113		120		164	
50 PERCENT EXCEEDS	17		20		27	
90 PERCENT EXCEEDS	13		13		13	

10292500 BRIDGEPORT RESERVOIR NEAR BRIDGEPORT, CA

LOCATION.—Lat 38° 19'30", long 119° 12'40", in SE 1/4 NE 1/4 sec.34, T.6 N., R.25 E., Mono County, Hydrologic Unit 16050301, in Toiyabe National Forest, at Bridgeport Dam on East Walker River, and 4.5 mi north of Bridgeport.

DRAINAGE AREA.—358 mi^2.

PERIOD OF RECORD.—March 1926 to current year. Month end contents only for some periods, published in WSP 1314.

REVISED RECORDS.—WSP 1180: 1949. WSP 1927: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 6,466.44 ft above NGVD of 1929 (project datum).

REMARKS.—Reservoir is formed by earthfill, rock-faced dam. Storage began Dec. 8, 1923. Dam completed in November 1924. Capacity, 42,460 acre-ft between elevations 6,415 ft, approximate elevation of bottom of reservoir, and 6,461 ft. Crest of spillway is at elevation 6,460.75 ft; however, there are four siphons that become operative prior to reaching this spillway. Elevation of sill of outlet gate, 6,412 ft. No dead storage. Figures given herein represent total contents. Water is used for irrigation by Walker River Irrigation District. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 44,880 acre-ft, June 16, 1974, elevation 6,460.78 ft; no usable contents at times in water years 1929, 1930, 1960, 1977, 1988, and 1989.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 29,640 acre-ft, June 24, elevation, 6,455.20 ft; minimum 5,260 acre-ft, Nov. 1, elevation, 6,438.76 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

6,425	334	6,440	6,240	6,450	18,780	6,460	42,460
6,430	1,130	6,445	11,380	6,455	29,160	6,461	45,490
6,435	2,920						

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6150	5290	8020	10180	13720	17250	19260	18640	21270	28750	24060	16070
2	6150	5310	8080	10320	13940	17370	19180	18610	21930	28580	23910	15840
3	6160	5320	8130	10420	14030	17490	19200	18590	22580	28380	23700	15710
4	6180	5330	8170	10530	14150	17590	19150	18500	23220	28220	23470	15550
5	6150	5330	8220	10650	14270	17710	19090	18470	23830	28060	23220	15310
6	6150	5350	8260	10740	14350	17830	19070	18440	24350	27900	22950	15060
7	6130	5430	8310	10830	14450	17950	19040	18440	24950	27690	22700	14770
8	6080	6150	8350	10930	14510	18090	19040	18330	25430	27570	22400	14490
9	5980	6640	8400	11040	14580	18250	19060	18230	26000	27440	22070	14180
10	5900	6760	8450	11180	14690	18400	19070	18180	26530	27300	21720	13910
11	5830	6860	8510	11270	14800	18540	19130	18130	26980	27180	21330	13690
12	5800	6970	8570	11380	14920	18660	19180	18070	27390	27000	20870	13490
13	5780	7060	8620	11500	15090	18840	19150	18040	27710	26790	20490	13270
14	5780	7140	8740	11600	15200	18780	19180	18020	27990	26570	20120	13070
15	5770	7230	8860	11690	15350	18930	19200	17970	28260	26380	19810	12870
16	5730	7280	8870	11760	15490	18890	19150	17900	28540	26200	19480	12630
17	5720	7340	8910	11840	15630	18780	19130	17830	28820	26070	19220	12390
18	5700	7390	8940	11930	15760	18840	19070	17780	29020	25940	18950	12170
19	5670	7450	9020	11990	15850	18730	19040	17770	29230	25760	18680	11960
20	5620	7500	9040	12120	15980	18800	19060	17680	29430	25560	18470	11740
21	5560	7560	9110	12190	16110	18760	19040	17680	29550	25320	18330	11540
22	5520	7620	9190	12320	16230	18850	19020	17750	29570	25060	18110	11370
23	5490	7700	9270	12420	16360	18850	19020	17850	29620	24810	17920	11210
24	5460	7720	9320	12540	16540	18890	19000	17990	29620	24680	17710	11060
25	5420	7780	9400	12660	16690	18960	19060	18160	29550	24560	17540	10900
26	5400	7830	9470	12780	16790	19020	18870	18280	29430	24470	17280	10740
27	5370	7860	9580	12930	16960	19090	18820	18490	29330	24350	17080	10590
28	5330	7900	9720	13090	17090	19150	18840	18840	29230	24290	16890	10440
29	5300	7930	9860	13240	---	19180	18760	19300	29090	24330	16690	10260
30	5300	7980	9960	13380	---	19220	18710	19900	28950	24310	16540	10110
31	5290	---	10100	13540	---	19410	---	20550	---	24180	16310	---
MAX	6180	7980	10100	13540	17090	19410	19260	20550	29620	28750	24060	16070
MIN	5290	5290	8020	10180	13720	17250	18710	17680	21270	24180	16310	10110
a	6438.80	6441.90	6443.91	6446.67	6449.02	6450.34	6449.96	6450.96	6454.91	6452.77	6448.53	6443.92
b	-890	+2690	+2120	+3440	+3550	+2320	-700	+1840	+8400	-4770	-7870	-6200

CAL YR 2002 MAX 17130 MIN 6180 b -310
WTR YR 2003 MAX 29620 MIN 5290 b +3930

a Elevation, in feet above NGVD 1929, at end of month.
b Change in contents, in acre-feet.

10293000 EAST WALKER RIVER NEAR BRIDGEPORT, CA

LOCATION.—Lat 38° 19'40", long 119° 12'50", in SW 1/4 NE 1/4 sec.34, T.6 N., R.25 E., Mono County, Hydrologic Unit 16050301, in Toiyabe National Forest, on right bank, 1,500 ft downstream from Bridgeport Reservoir, 5 mi north of Bridgeport, and 10 mi upstream from Sweetwater Creek.

DRAINAGE AREA.—359 mi^2.

PERIOD OF RECORD.—July 1911 to September 1914 (gage height only), October and November 1921, May 1922 to September 1924, March to July 1925, October 1925 to current year.

REVISED RECORDS.—WSP 1927: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 6,400 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1921, nonrecording gage at site 0.5 mi upstream at different datum. Oct. 1, 1921, to Feb. 21, 1924, water-stage recorder at site 1 mi downstream at different datum. Feb. 22, 1924, to Sept. 30, 1931, water-stage recorder, and Oct. 1, 1931, to May 25, 1939, nonrecording gage at present site at datum 2.34 ft lower. May 26, 1939, to Nov. 27, 1988, water-stage recorder at datum 2.00 ft higher.

REMARKS.—No estimated daily discharges. Records good. Diversions for irrigation of meadow pasturelands near Bridgeport. Flow regulated by Bridgeport Reservoir (station 10292500). These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,910 ft^3/s, Jan. 4, 1997, gage height, 6.74 ft; minimum daily, 0.20 ft^3/s, Nov. 2, 1955.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 254 ft^3/s, Aug. 11, 12, gage height, 3.78 ft; minimum daily, 23 ft^3/s, Dec. 20, 28, Jan. 9.

DISCHARGE CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	35	29	31	24	25	82	68	213	221	193	162
2	36	35	29	30	26	25	76	64	203	207	198	152
3	36	35	29	30	31	29	77	59	190	208	204	143
4	35	35	29	27	32	36	73	59	191	208	203	154
5	39	35	29	24	32	42	67	55	192	209	191	160
6	44	35	29	27	31	50	67	50	193	210	177	170
7	44	33	29	31	30	62	59	54	194	185	182	182
8	58	27	29	28	32	66	47	58	195	152	199	182
9	76	28	29	23	32	73	42	59	186	155	212	186
10	75	28	29	27	31	90	37	55	185	137	212	178
11	66	28	29	29	28	132	37	49	186	134	230	156
12	48	28	29	24	24	169	41	49	198	160	251	160
13	44	28	29	24	24	199	45	49	207	174	238	166
14	44	28	29	24	24	212	55	53	207	168	220	165
15	43	28	29	27	24	193	73	79	216	167	214	160
16	43	28	29	35	24	164	78	106	222	163	191	158
17	43	28	29	31	24	143	70	101	231	144	168	174
18	43	29	30	31	24	92	60	96	232	148	163	177
19	50	29	28	35	24	87	59	107	227	173	160	162
20	59	29	23	29	24	87	50	131	221	188	167	157
21	59	29	25	24	24	87	50	129	229	193	161	150
22	55	29	30	24	24	79	50	134	238	199	139	140
23	51	29	31	24	25	58	46	161	239	193	124	122
24	51	29	34	24	25	58	41	179	240	169	130	125
25	51	29	34	24	25	51	41	212	230	147	140	132
26	51	29	34	24	25	47	41	234	216	147	142	125
27	51	29	27	24	25	47	41	228	217	147	129	124
28	51	29	23	24	25	47	44	216	218	141	123	123
29	51	29	26	24	---	56	54	209	218	139	116	123
30	40	29	28	24	---	67	63	211	225	166	116	123
31	31	---	26	24	---	75	---	212	---	194	147	---
TOTAL	1513	899	892	831	743	2648	1666	3526	6359	5346	5440	4591
MEAN	48.8	30.0	28.8	26.8	26.5	85.4	55.5	114	212	172	175	153
MAX	76	35	34	35	32	212	82	234	240	221	251	186
MIN	31	27	23	23	24	25	37	49	185	134	116	122
AC-FT	3000	1780	1770	1650	1470	5250	3300	6990	12610	10600	10790	9110

10293000 EAST WALKER RIVER NEAR BRIDGEPORT, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	61.6	29.7	38.0	45.6	51.1	89.3	173	255	309	298	238	154
MAX	301	325	398	804	345	417	721	880	1001	797	638	406
(WY)	1984	1983	1984	1997	1997	1983	1952	1938	1938	1967	1983	1983
MIN	7.35	1.10	2.50	0.50	0.62	5.39	27.5	57.5	36.0	20.4	13.3	17.1
(WY)	1931	1956	1960	1950	1950	1927	1961	1991	1924	1924	1924	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	24295		34454			
ANNUAL MEAN	66.6		94.4		145	
HIGHEST ANNUAL MEAN					443	1983
LOWEST ANNUAL MEAN					37.5	1931
HIGHEST DAILY MEAN	269	Jun 2	251	Aug 12	1880	Jan 4 1997
LOWEST DAILY MEAN	20	Jan 3	23	Dec 20	0.20	Nov 2 1955
ANNUAL SEVEN-DAY MINIMUM	20	Jan 3	24	Jan 21	0.20	Nov 2 1955
MAXIMUM PEAK FLOW			254	Aug 11	1910	Jan 4 1997
MAXIMUM PEAK STAGE			3.78	Aug 11	6.74	Jan 4 1997
ANNUAL RUNOFF (AC-FT)	48190		68340		105300	
10 PERCENT EXCEEDS	155		208		342	
50 PERCENT EXCEEDS	49		58		93	
90 PERCENT EXCEEDS	23		25		7.2	

10293030 EAST WALKER RIVER AT STATELINE, NEAR BRIDGEPORT, CA

LOCATION.—Lat 38° 24'52", long 119° 09'57", in SE 1/4 NW 1/4 sec.31, T.7 N., R.26 E., Mono County, Hydrologic Unit 16050301, 10.5 mi northeast of Bridgeport, and 21.4 mi southeast of Coleville.

DRAINAGE AREA.—400 mi^2.

PERIOD OF RECORD.—August 2001 to current year.
CHEMICAL DATA: August 2001 to current year.
SEDIMENT DATA: August 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JAN									
07...	1400	74	8.3	618	13.0	111	8.2	236	.5
MAY									
12...	1045	62	5.6	614	--	--	8.3	236	10.0
AUG									
13...	1305	243	9.2	620	7.5	106	9.0	167	22.0

Date	Chloride, water, fltrd, mg/L (00940)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
JAN									
07...	2.65	160	.38	.72	.127	.030	.109	28	5.6
MAY									
12...	4.14	160	--	.37	<.022	--	.039	5	.84
AUG									
13...	2.05	122	--	1.1	.070	--	.110	10	6.6

CROSS-SECTION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Depth at sample location, feet (81903)	Sampling depth, feet (00003)	Barometric pressure, mm Hg (00025)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
MAY								
12...*	1046	.95	.50	614	8.3	236	10.0	6.00
12...*	1047	1.10	.50	614	8.3	236	10.0	10.0
12...*	1048	1.80	.90	614	8.3	236	10.0	14.0
12...*	1049	2.00	1.00	614	8.3	236	10.0	18.0
12...*	1050	1.90	1.00	614	8.3	236	10.0	22.0
12...*	1051	1.60	.80	614	8.3	236	10.0	26.0

< Actual value is known to be less than the value shown.
* Instantaneous discharge at the time of cross-sectional measurements: May 12, 62 ft^3/s.

10295500 LITTLE WALKER RIVER NEAR BRIDGEPORT, CA

LOCATION.—Lat 38° 21'39", long 119° 26'38", in NW 1/4 NW 1/4 sec.22, T.6 N., R.23 E., Mono County, Hydrologic Unit 16050302, in Toiyabe National Forest, on right bank, 0.8 mi North of Sonora Junction, 1.5 mi upstream from mouth, and 14 mi northwest of Bridgeport.

DRAINAGE AREA.—63.1 mi^2.

PERIOD OF RECORD.—April to August 1910, October 1944 to September 1986, October 1995 to current year. Prior to October 1958, published as "East Fork Walker River near Bridgeport."

REVISED RECORDS.—WDR 82-1: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 6,790 ft above NVGD of 1929, from topographic map. April to August 1910, nonrecording gage at site 1 mi upstream at different datum. Prior to Jan. 2, 1997, at same site, at datum 1.0 ft higher.

REMARKS.—Records good except for daily discharges greater than 150 cfs, which are fair, and estimated daily discharges, which are poor. Small diversions above station. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,540 ft^3/s, Jan. 2, 1997, gage height, 5.70 ft; minimum daily, 2.6 ft^3/s, Aug. 16, 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 29	2315	*380	*2.93

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	13	13	e13	21	13	35	29	267	86	38	17
2	11	16	14	e14	20	15	30	30	266	79	38	16
3	11	14	14	14	21	15	29	30	262	78	34	20
4	11	14	14	12	e21	13	26	30	261	74	31	24
5	11	15	15	12	e21	14	25	30	250	71	30	17
6	10	14	12	e12	e20	14	23	31	249	67	28	16
7	10	15	12	e12	20	15	24	33	247	63	27	15
8	10	63	e11	e12	e20	15	27	33	244	59	29	14
9	10	32	e10	e12	e20	15	31	31	245	57	27	14
10	9.9	18	9.5	12	20	17	35	31	234	61	26	14
11	9.7	16	13	12	15	19	37	32	221	58	24	14
12	10	16	15	12	14	20	37	37	206	55	24	13
13	10	15	10	12	14	24	36	46	193	54	24	13
14	10	15	11	13	14	24	36	59	194	50	18	13
15	10	15	8.4	e13	14	29	36	64	198	48	18	13
16	10	14	e8.6	e13	14	23	34	70	197	46	18	13
17	10	13	e9.0	e14	18	20	32	71	191	45	19	13
18	10	14	e9.2	14	20	19	30	77	187	46	18	13
19	10	13	e9.5	14	16	18	29	89	175	46	19	13
20	10	12	e9.7	14	13	18	29	93	163	47	19	12
21	10	13	e10	13	15	20	29	111	154	43	24	12
22	10	13	e10	14	15	24	28	146	135	42	22	12
23	10	13	e11	15	15	26	27	162	124	40	21	12
24	10	13	e11	15	14	28	29	194	113	41	18	11
25	10	11	e11	15	14	28	29	214	104	41	17	11
26	11	14	e11	16	14	41	29	218	102	37	19	11
27	13	17	e12	18	13	35	30	231	99	38	17	11
28	12	18	e12	18	14	29	32	271	101	39	16	11
29	12	16	e12	18	---	28	29	304	100	36	16	11
30	11	16	e13	17	---	32	28	328	94	34	15	11
31	12	---	e13	18	---	36	---	295	---	37	18	---
TOTAL	324.6	501	353.9	433	470	687	911	3420	5576	1618	712	410
MEAN	10.5	16.7	11.4	14.0	16.8	22.2	30.4	110	186	52.2	23.0	13.7
MAX	13	63	15	18	21	41	37	328	267	86	38	24
MIN	9.7	11	8.4	12	13	13	23	29	94	34	15	11
AC-FT	644	994	702	859	932	1360	1810	6780	11060	3210	1410	813

e Estimated.

10295500 LITTLE WALKER RIVER NEAR BRIDGEPORT, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	20.0	21.4	21.6	22.3	22.5	27.2	50.6	126	173	101	38.4	22.8
MAX	47.7	65.3	98.4	101	58.9	85.7	97.0	323	388	297	137	55.5
(WY)	1983	1951	1951	1997	1986	1986	1986	1969	1983	1967	1983	1983
MIN	6.79	9.84	9.10	9.26	11.0	10.8	20.9	16.5	36.6	9.48	5.41	4.95
(WY)	1978	1949	1949	1949	1977	1977	1976	1977	1976	1977	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1945 - 2003	
ANNUAL TOTAL	12035.5		15416.5			
ANNUAL MEAN	33.0		42.2		54.0	
HIGHEST ANNUAL MEAN					113	1983
LOWEST ANNUAL MEAN					13.9	1977
HIGHEST DAILY MEAN	208	Jun 1	328	May 30	730	May 16 1996
LOWEST DAILY MEAN	8.2	Sep 15	8.4	Dec 15	2.6	Aug 16 1977
ANNUAL SEVEN-DAY MINIMUM	8.5	Sep 13	9.2	Dec 15	3.0	Aug 11 1977
MAXIMUM PEAK FLOW			380	May 29	2540	Jan 2 1997
MAXIMUM PEAK STAGE			2.93	May 29	5.70	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	23870		30580		39150	
10 PERCENT EXCEEDS	84		103		143	
50 PERCENT EXCEEDS	17		18		25	
90 PERCENT EXCEEDS	10		11		13	

10296000 WEST WALKER RIVER BELOW LITTLE WALKER RIVER, NEAR COLEVILLE, CA

LOCATION.—Lat 38° 22'47", long 119° 26'57", in NE 1/4 SE 1/4 sec.9, T.6 N., R.23 E., Mono County, Hydrologic Unit 16050302, in Toiyabe National Forest, on left bank, 10 ft upstream from bridge on U.S. Highway 395, and 13 mi southeast of Coleville.

DRAINAGE AREA.—181 mi^2.

PERIOD OF RECORD.—April 1938 to current year. Prior to October 1958, published as "below East Fork."

REVISED RECORDS.—WDR NV-79-1: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 6,591.39 ft above NGVD of 1929. Prior to Oct. 1, 1939, at site, 125 ft downstream at datum 1.00 ft higher. Oct. 1, 1939, to Sept. 30, 1969, at present site and datum. Oct. 1, 1969, to July 10, 1987, at site 100 ft downstream at same datum. July 10, 1987, to Mar. 5, 1997, at site upstream 100 ft at same datum. Mar. 6, 1997, at site 150 ft downstream at datum 2.00 ft lower.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Station is above diversions except for a few small ranch ditches. Flow slightly regulated by Poore Lake, capacity, 1,200 acre-ft, 7 mi upstream. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge observed prior to 1938, 5,800 ft^3/s, Dec. 11, 1937, on basis of slope-area measurement of peak flow.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 12,300 ft^3/s, Jan. 2, 1997, gage height, 10.11 ft; minimum daily, 9.7 ft^3/s, Sept. 11, 1997.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharges of 1,120 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 30	0145	*3,010	*5.93

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	19	37	55	e80	e29	230	159	1980	571	213	67
2	30	23	34	58	e86	e32	198	166	1950	527	204	63
3	29	25	e33	59	e68	e38	180	164	1950	530	186	70
4	30	24	e33	55	e69	e45	167	169	1950	512	163	93
5	28	22	e32	55	e64	e49	153	171	1790	459	144	77
6	26	23	32	e54	e61	58	143	174	1720	452	126	70
7	25	33	32	e53	e64	57	136	187	1810	412	115	67
8	25	160	e31	e52	e50	59	150	184	1680	384	104	64
9	24	153	e30	51	e52	65	177	177	1750	363	95	63
10	23	83	29	52	e51	72	202	178	1620	370	83	62
11	23	64	e29	e51	e48	80	226	190	1430	360	81	59
12	23	60	e29	49	e45	89	255	235	1320	337	76	58
13	23	60	29	49	e45	105	228	340	1220	315	80	55
14	23	55	e30	e50	e44	117	220	504	1250	295	82	52
15	23	50	e31	e51	e42	150	214	527	1300	277	80	48
16	23	47	33	e52	e43	127	190	595	1300	278	80	47
17	23	43	35	e53	e38	118	179	618	1300	279	79	46
18	22	41	e36	54	e38	109	172	675	1270	283	74	46
19	23	40	e38	e55	e40	98	165	714	1160	333	71	43
20	23	42	e41	e56	e38	101	165	826	1000	336	66	40
21	22	44	e43	56	e34	96	164	1040	884	294	80	34
22	22	46	e45	56	e35	91	160	1330	786	277	84	33
23	23	45	e48	e58	e34	120	153	1590	705	314	73	30
24	23	42	50	e61	e35	126	167	1760	615	309	74	28
25	24	41	51	e61	e35	127	168	1860	585	255	65	29
26	23	33	e52	e64	e31	168	163	1760	617	225	65	26
27	26	e34	e52	e68	e31	180	164	1810	661	227	69	27
28	26	e34	e53	e76	e31	158	166	2240	710	240	64	25
29	25	e35	e53	e72	---	151	158	2500	729	244	66	25
30	24	35	e54	e72	---	164	148	2550	672	216	64	24
31	23	---	e54	e73	---	198	---	2250	---	212	67	---
TOTAL	757	1456	1209	1781	1332	3177	5361	27643	37714	10486	2973	1471
MEAN	24.4	48.5	39.0	57.5	47.6	102	179	892	1257	338	95.9	49.0
MAX	30	160	54	76	86	198	255	2550	1980	571	213	93
MIN	22	19	29	49	31	29	136	159	585	212	64	24
MED	23	41	35	55	44	101	167	595	1280	314	80	48
AC-FT	1500	2890	2400	3530	2640	6300	10630	54830	74810	20800	5900	2920

e Estimated.

10296000 WEST WALKER RIVER BELOW LITTLE WALKER RIVER, NEAR COLEVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	54.5	67.2	70.8	78.0	74.7	110	301	783	959	490	150	73.4
MAX	219	539	448	854	246	369	609	1655	2066	1864	663	246
(WY)	1983	1951	1951	1997	1963	1986	1997	1969	1983	1995	1983	1983
MIN	16.6	22.2	20.0	18.1	26.0	32.1	108	139	188	41.1	18.5	12.3
(WY)	1978	1978	1991	1977	1991	1977	1975	1977	1976	1977	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1938 - 2003	
ANNUAL TOTAL	77377		95360			
ANNUAL MEAN	212		261		265	
HIGHEST ANNUAL MEAN					537	1983
LOWEST ANNUAL MEAN					65.3	1977
HIGHEST DAILY MEAN	1500	Jun 1	2550	May 30	8660	Jan 2 1997
LOWEST DAILY MEAN	19	Nov 1	19	Nov 1	9.7	Sep 11 1977
ANNUAL SEVEN-DAY MINIMUM	23	Oct 16	23	Oct 16	10	Sep 5 1977
MAXIMUM PEAK FLOW			3010	May 30	12300	Jan 2 1997
MAXIMUM PEAK STAGE			5.93	May 30	10.11	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	153500		189100		192300	
10 PERCENT EXCEEDS	673		712		803	
50 PERCENT EXCEEDS	66		68		87	
90 PERCENT EXCEEDS	26		27		34	

10296500 WEST WALKER RIVER NEAR COLEVILLE, CA

LOCATION.—Lat 38° 30'48", long 119° 26'56", in NE 1/4 NE 1/4 sec.28, T.8 N., R.23 E., Mono County, Hydrologic Unit 16050302, in Toiyabe National Forest, on left bank, 250 ft downstream from Rock Creek, and 5 mi southeast of Coleville.

DRAINAGE AREA.—250 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1902 to July 1908 (published as "West Fork of Walker River near Coleville", 1903, 1905–08 and as "Walker River (West Fork) near Coleville", 1904), March 1909 to September 1910, June 1915 to March 1938, May 1957 to current year.

REVISED RECORDS.—WSP 880: 1917 (runoff in acre-ft). WSP 1514: 1918, 1923. WDR NV-80-1: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 5,520 ft above NGVD of 1929, from topographic map. See WSP 1927 for history of changes prior to July 25, 1964. July 26, 1964, to Jan. 2, 1997, (gage destroyed by flood) at several sites and datums 2,000 ft downstream from present location, when reestablished Oct. 28, 1997, at new datum.

REMARKS.—No estimated daily discharges. Records fair except for daily discharges greater than 700 ft^3/s, which are poor. Station is above diversions except for a few small ranch ditches. Flow slightly regulated by Poore Lake, capacity, 1,200 acre-ft, 17 mi upstream. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 12,500 ft^3/s, Jan. 2, 1997, gage height, 10.23 ft; minimum daily, 14 ft^3/s, several days July–September 1924 and Sept. 12, 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,120 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 29	0045	*3,400	*8.67

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	30	40	53	92	40	243	185	2000	602	240	81
2	42	30	37	62	95	36	234	188	1950	557	224	76
3	40	33	35	64	76	41	217	187	1970	549	203	79
4	40	32	36	63	77	46	204	192	1980	534	174	99
5	39	31	38	64	72	49	175	190	1860	479	155	85
6	38	31	40	61	69	56	136	197	1720	467	140	77
7	37	38	38	61	72	61	143	210	1850	427	126	70
8	36	131	40	61	57	57	152	214	1680	401	114	67
9	36	142	49	63	61	64	183	200	1770	380	103	67
10	35	83	49	62	59	70	214	206	1660	384	93	66
11	34	67	46	60	56	80	236	221	1460	381	86	64
12	35	61	49	61	53	84	264	265	1340	362	80	62
13	35	61	49	61	53	114	258	356	1220	344	81	60
14	34	55	54	60	52	129	233	455	1230	327	82	58
15	34	50	43	57	50	179	230	494	1290	308	82	56
16	34	50	38	58	52	166	220	599	1310	307	81	54
17	33	47	23	59	46	146	206	639	1300	313	80	53
18	33	43	32	60	46	135	195	709	1260	312	80	53
19	33	45	48	60	48	121	190	767	1170	360	78	52
20	33	48	41	62	46	132	195	875	1020	364	80	47
21	33	53	48	62	42	123	189	1050	899	330	90	44
22	33	54	54	61	43	145	177	1330	809	314	102	42
23	33	54	53	66	41	171	170	1590	736	342	93	37
24	33	51	52	69	43	180	179	1810	645	349	87	35
25	33	51	57	68	43	177	188	2020	611	300	83	34
26	33	41	54	70	39	215	184	1780	630	269	85	33
27	34	42	60	77	40	216	188	1810	665	255	89	33
28	34	42	64	85	39	188	195	2380	707	278	82	32
29	34	42	54	81	---	175	192	2650	730	271	78	31
30	33	41	57	80	---	183	183	2670	694	252	75	31
31	32	---	57	82	---	225	---	2340	---	238	77	---
TOTAL	1086	1579	1435	2013	1562	3804	5973	28779	38166	11356	3323	1678
MEAN	35.0	52.6	46.3	64.9	55.8	123	199	928	1272	366	107	55.9
MAX	42	142	64	85	95	225	264	2670	2000	602	240	99
MIN	32	30	23	53	39	36	136	185	611	238	75	31
AC-FT	2150	3130	2850	3990	3100	7550	11850	57080	75700	22520	6590	3330

10296500 WEST WALKER RIVER NEAR COLEVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	69.4	70.4	67.4	78.7	81.2	127	306	793	994	524	165	83.0
MAX	299	214	270	905	280	403	636	1756	2055	2492	721	269
(WY)	1905	1974	1965	1997	1963	1986	1910	1969	1983	1907	1995	1907
MIN	21.5	25.4	28.7	26.9	32.0	42.1	118	149	106	26.9	17.4	16.1
(WY)	1978	1930	1960	1930	1929	1933	1975	1977	1924	1924	1924	1924

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1903 - 2003	
ANNUAL TOTAL	76035		100754			
ANNUAL MEAN	208		276		280	
HIGHEST ANNUAL MEAN					669	1907
LOWEST ANNUAL MEAN					74.5	1977
HIGHEST DAILY MEAN	1340	Jun 1	2670	May 30	9000	Jan 2 1997
LOWEST DAILY MEAN	23	Dec 17	23	Dec 17	14	Jul 24 1924
ANNUAL SEVEN-DAY MINIMUM	31	Oct 31	31	Oct 31	14	Aug 28 1924
MAXIMUM PEAK FLOW			3400	May 29	12500	Jan 2 1997
MAXIMUM PEAK STAGE			8.67	May 29	10.23	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	150800		199800		202600	
10 PERCENT EXCEEDS	641		732		838	
50 PERCENT EXCEEDS	69		79		95	
90 PERCENT EXCEEDS	38		35		37	

10296500 WEST WALKER RIVER NEAR COLEVILLE, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—May 1994 to June 1995, August 2002 to current year.
CHEMICAL DATA: May 1994 to June 1995, August 2002 to current year.
SEDIMENT DATA: August 2002 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)
JAN										
07...	1115	56	2.5	629	--	--	8.2	154	1.5	3.90
MAY										
12...	1315	264	8.2	626	--	--	7.7	98	10.5	1.72
AUG										
13...	1000	85	1.9	628	8.8	102	7.8	113	13.0	2.42

Date	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Phosphorus, water, unfltrd mg/L (00665)	Arsenic water, fltrd, ug/L (01000)	Boron, water, fltrd, ug/L (01020)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
JAN									
07...	9.8	99	.10	.067	.025	--	--	20	3.0
MAY									
12...	4.9	69	.13	<.022	.037	6	60	22	16
AUG									
13...	6.0	76	.07	e.014	.036	--	--	28	6.4

< Actual value is known to be less than the value shown.
e Estimated.

10297000 TOPAZ LAKE NEAR TOPAZ, CA

LOCATION.—Lat 38° 41'35", long 119° 31'10", in NW 1/4 NE 1/4 sec.33, T.10 N., R.22 E., Douglas County, Nevada, Hydrologic Unit 16050301, at outlet works of Topaz Lake on West Walker River, and 5.5 mi north of Topaz.

PERIOD OF RECORD.—December 1921 to September 1931 (monthly contents only published in WSP 1734), October 1931 to current year.

GAGE.—Water-stage recorder. Datum of gage is 5011.02 ft (levels by USGS) above NGVD of 1929. Prior to Oct. 1, 1978, at datum 4.62 ft higher.

REMARKS.—Topaz Lake, formerly known as Alkali Lake and Topaz Reservoir, was formed by the diversion of water from West Walker River through a feeder canal and the construction of an outlet tunnel through a low saddle in rim of lake. Storage began about December 1921. Usable capacity, 59,440 acre-ft, between elevations 4,967.68 ft (lowest practical elevation for diversion through tunnel) and 5,000.38 ft (3 ft below top of levee). Usable capacity of reservoir was increased from about 45,000 acre-ft to 59,440 acre-ft in October 1937 by an earthfill, rock-faced levee at south end. Figures given herein represent usable contents. There is 65,000 acre-ft of lake volume below the point of controllable storage. Water is used for irrigation in Walker River Irrigation District. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 60,680 acre-ft, July 3, 1980, July 10, 1995, elevation, 5,000.92 ft, present datum; no usable contents at times in some years.

EXTREMES FOR CURRENT YEAR.—Maximum contents 57,840 acre-ft, June 21, elevation, 4999.68 ft; minimum contents, 4,860 acre-ft, Nov. 1, 2, elevation, 4,970.82 ft, present datum.

Capacity table, (elevation, in feet, and contents, in acre-feet)

4,968	490	4,980	19,760	4,990	37,360	5,000	58,570
4,970	3,580	4,985	28,310	4,995	47,540	5,001	60,870
4,975	11,520						

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7260	4880	7830	10470	14810	18970	19650	19250	37260	55470	38960	25410
2	7180	4880	7880	10660	15000	19070	19700	19180	39110	54980	38540	24930
3	7100	4900	7940	10850	15170	19150	19650	19170	40910	54460	38150	24450
4	7020	4930	7990	10920	15350	19220	19640	19050	42670	53950	37750	23940
5	6960	4960	8050	11130	15500	19270	19570	19000	44300	53400	37360	23430
6	6850	5010	8120	11290	15660	19280	19520	18920	45760	52780	37050	22900
7	6800	5150	8180	11350	15830	19330	19490	18830	47260	52140	36690	22370
8	6700	5440	8240	11520	15980	19330	19490	18680	48520	51260	36310	21850
9	6630	5920	8240	11680	16110	19350	19520	18550	49920	50760	35800	21370
10	6480	6170	8370	11840	16270	19370	19550	18430	51240	50070	35300	20880
11	6400	6310	8370	11990	16440	19380	19590	18320	52290	49380	34650	20460
12	6310	6470	8370	12100	16590	19380	19700	18200	53110	48690	34010	20060
13	6250	6580	8510	12210	16750	19400	19910	18150	53680	47980	33400	19620
14	6170	6700	8530	12310	16900	19350	19960	18330	54200	47370	32840	19200
15	6100	6850	8550	12450	17100	19450	19920	18450	54820	46750	32370	18780
16	6040	6780	9200	12570	17250	19440	19870	18620	55470	46180	31900	18370
17	5960	6930	9220	12700	17400	19440	19800	18850	56140	45640	31460	18030
18	5850	7050	9310	12810	17530	19450	19790	19120	56770	45180	31010	17760
19	5740	7150	9420	12930	17700	19440	19750	19370	57320	44860	30550	17520
20	5650	7230	9460	13060	17830	19420	19690	19620	57700	44590	30060	17230
21	5550	7290	9490	13170	17960	19380	19640	20020	57820	44220	29640	16900
22	5490	7340	9540	13290	18080	19350	19570	20590	57770	43700	29270	16570
23	5410	7450	9600	13400	18200	19420	19550	21420	57730	43270	28950	16240
24	5350	7460	9650	13530	18350	19450	19470	22560	57520	42860	28600	15890
25	5270	7530	9730	13660	18520	19540	19450	23910	57300	42370	28250	15550
26	5210	7580	9740	13810	18630	19520	19420	25140	57020	41820	27910	15230
27	5130	7620	9870	13950	18770	19590	19400	26500	56800	41330	27540	14900
28	5050	7650	9990	14120	18880	19620	19380	28360	56550	40830	27120	14530
29	5020	7700	10160	14280	---	19620	19370	30660	56280	40320	26730	14150
30	4960	7750	10260	14430	---	19640	19320	33050	55960	39890	26310	13810
31	4900	---	10400	14610	---	19690	---	35320	---	39390	25860	---
MAX	7260	7750	10400	14610	18880	19690	19960	35320	57820	55470	38960	25410
MIN	4900	4880	7830	10470	14810	18970	19320	18150	37260	39390	25860	13810
a	4970.84	4972.65	4974.31	4976.90	4979.48	4979.96	4979.74	4988.92	4998.85	4991.04	4983.59	4976.41
b	-2410	+2850	+2650	+4210	+4270	+810	-370	+16000	+20640	-16570	-13530	-12050

CAL YR 2002 MAX 34670 MIN 4880 b -4110
WTR YR 2003 MAX 57890 MIN 4680 b +6500

a Elevation, in feet above NGVD 1929, at end of month, present datum.
b Change in contents, in acre-feet.

10308200 EAST FORK CARSON RIVER BELOW MARKLEEVILLE CREEK, NEAR MARKLEEVILLE, CA

LOCATION.—Lat 38° 42'50", long 119° 45'50", in SW 1/4 NE 1/4 sec.15, T.10 N., R.20 E., Alpine County, Hydrologic Unit 16050201, on right bank, 0.5 mi downstream from Markleeville Creek, 1.5 mi northeast of Markleeville, and at mi 114.75 upstream from Lahontan Dam.

DRAINAGE AREA.—276 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—August 1960 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 5,400 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1967, at present site at datum 2.00 ft higher.

REMARKS.—No estimated daily discharges. Records fair. A few small diversions for irrigation above station. Flow slightly regulated by several small reservoirs, total capacity, about 5,000 acre-ft. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 18,900 ft^3/s, Jan. 2, 1997, gage height, 11.78 ft; minimum daily, 12 ft^3/s, Sept. 10–13, 23, 1997.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 29	2215	*3,110	*5.60

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	38	66	95	300	108	479	286	2030	361	182	67
2	52	37	65	111	263	99	398	286	2000	337	167	63
3	46	43	63	119	213	107	349	289	1950	323	137	65
4	45	43	66	126	205	110	321	305	1980	310	114	87
5	45	40	65	133	180	105	292	290	1820	291	100	73
6	43	41	68	123	166	111	281	315	1730	275	95	73
7	41	52	64	113	171	111	271	329	1690	259	96	72
8	40	368	58	118	145	115	310	342	1650	244	90	71
9	39	364	69	121	153	124	368	323	1660	230	84	67
10	38	150	67	124	152	136	412	321	1500	219	75	68
11	38	112	61	120	148	157	458	362	1380	210	70	63
12	38	104	62	118	139	178	504	464	1230	198	67	60
13	39	115	68	122	143	227	481	678	1130	188	73	58
14	39	109	93	119	139	269	430	857	1070	183	81	57
15	40	105	75	110	134	359	402	846	1050	168	79	56
16	40	86	51	109	139	253	381	994	1030	160	83	52
17	40	81	82	113	126	217	380	999	1020	151	93	50
18	40	77	68	115	121	195	371	1020	939	143	94	54
19	39	79	65	119	126	183	349	1020	843	155	96	57
20	39	84	84	125	123	189	358	1100	751	146	95	56
21	40	82	105	130	116	189	342	1380	672	145	112	55
22	40	85	104	140	120	228	318	1670	599	150	136	56
23	41	82	105	209	118	283	303	1800	545	162	98	56
24	41	76	122	242	122	285	336	1910	497	165	88	55
25	43	79	119	216	121	284	337	1920	461	136	79	54
26	43	65	119	227	111	452	320	1810	443	131	81	53
27	43	61	114	287	113	483	317	1990	436	126	78	52
28	44	61	122	303	107	368	317	2270	436	153	74	51
29	43	64	104	255	---	332	298	2410	422	169	73	48
30	43	67	101	246	---	354	279	2480	399	137	72	46
31	41	---	100	262	---	433	---	2190	---	140	63	---
TOTAL	1284	2850	2575	4870	4214	7044	10762	33256	33363	6165	2925	1795
MEAN	41.4	95.0	83.1	157	150	227	359	1073	1112	199	94.4	59.8
MAX	52	368	122	303	300	483	504	2480	2030	361	182	87
MIN	38	37	51	95	107	99	271	286	399	126	63	46
AC-FT	2550	5650	5110	9660	8360	13970	21350	65960	66180	12230	5800	3560

10308200 EAST FORK CARSON RIVER BELOW MARKLEEVILLE CREEK, NEAR MARKLEEVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	78.8	108	131	194	205	284	547	1130	991	390	143	87.5
MAX	346	476	718	1722	917	983	1121	2447	2996	1721	477	239
(WY)	1983	1984	1965	1997	1986	1986	1982	1969	1983	1995	1983	1983
MIN	24.0	32.6	41.4	44.2	43.9	58.7	183	197	135	58.0	33.0	18.0
(WY)	1978	1977	1991	1977	1991	1977	1977	1977	1992	1977	1977	1987

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1960 - 2003	
ANNUAL TOTAL	92277		111103			
ANNUAL MEAN	253		304		358	
HIGHEST ANNUAL MEAN					809	1983
LOWEST ANNUAL MEAN					83.7	1977
HIGHEST DAILY MEAN	1460	May 18	2480	May 30	12500	Jan 2 1997
LOWEST DAILY MEAN	35	Sep 28	37	Nov 2	12	Sep 10 1987
ANNUAL SEVEN-DAY MINIMUM	38	Sep 24	39	Oct 8	12	Sep 7 1987
MAXIMUM PEAK FLOW			3110	May 29	18900	Jan 2 1997
MAXIMUM PEAK STAGE			5.60	May 29	11.78	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	183000		220400		259200	
10 PERCENT EXCEEDS	771		844		959	
50 PERCENT EXCEEDS	103		125		143	
90 PERCENT EXCEEDS	43		46		51	

10308200 EAST FORK CARSON RIVER BELOW MARKLEEVILLE CREEK, NEAR MARKLEEVILLE, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—October 2001 to current year.
CHEMICAL DATA: October 2001 to current year.
SEDIMENT DATA: October 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC									
12...	1120	61	2.3	626	12.4	106	8.1	162	1.0
APR									
07...	1145	258	3.0	628	11.0	102	7.9	108	4.0
AUG									
11...	1215	72	1.8	630	8.4	106	7.1	115	17.0

Date	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
DEC								
12...	4.34	10.3	113	.04	<.06	.018	2	.33
APR								
07...	1.72	5.0	77	.08	<.06	.020	4	2.8
AUG								
11...	2.11	3.7	83	.07	<.06	.032	7	1.4

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Depth at sample location, feet (81903)	Sampling depth, feet (00003)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR										
07...*	1112	.75	.40	628	11.8	109	7.8	108	4.0	4.00
07...*	1113	1.20	.60	628	11.7	108	7.8	108	4.0	8.00
07...*	1114	1.50	.80	628	11.5	107	7.7	108	4.0	12.0
07...*	1115	2.00	1.00	628	11.4	105	7.8	108	4.0	16.0
07...*	1116	2.50	1.30	628	11.1	103	7.9	108	4.0	20.0
07...*	1117	3.00	1.50	628	10.9	102	7.9	108	4.0	24.0
07...*	1118	3.20	1.60	628	10.8	100	7.9	108	4.0	28.0
07...*	1119	2.70	1.40	628	10.4	96	7.9	108	4.0	32.0
07...*	1120	2.00	1.00	628	10.7	99	7.9	108	4.0	36.0
07...*	1121	1.40	.70	628	10.3	95	7.9	108	4.0	40.0
07...*	1122	.80	.40	628	10.6	98	7.9	108	4.0	44.0

< Actual value is known to be less than the value shown.
* Instantaneous discharge at time of cross-sectional measurement: Apr. 7, 258 ft^3/s.

10308783 LEVIATHAN CREEK ABOVE LEVIATHAN MINE, NEAR MARKLEEVILLE, CA

LOCATION.—Lat 38° 42'05", long 119° 39'20", in SW 1/4 NE 1/4 sec.22, T.10 N., R.21 E., Alpine County, Hydrologic Unit 16050201, on right bank, 2 mi north of Highway 89, and 6.5 mi east of Markleeville.

DRAINAGE AREA.—4.16 mi^2.

PERIOD OF RECORD.—October 1998 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 7,200 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair except those below 0.2 ft^3/s and estimated values, which are poor.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 21 ft^3/s, May 7, 1999, gage height, 4.40 ft, maximum gage height, 4.67 ft, Jan. 7, 2001, backwater from ice; minimum daily, 0.02 ft^3/s, several days in 2001 and 2002.

EXTREMES FOR CURRENT YEAR.—Peak discharges above base discharge of 10 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 25	0700	6.0	4.17

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.08	0.13	0.06	0.11	0.21	0.15	1.8	1.0	0.55	0.16	0.09	0.05
2	0.08	0.15	0.04	0.09	0.21	0.16	1.4	1.1	0.57	0.17	0.09	0.04
3	0.08	0.13	0.06	0.07	0.20	0.15	1.2	1.4	0.50	0.18	0.06	0.06
4	0.08	0.11	0.07	0.07	0.19	0.15	0.99	1.4	0.48	0.16	0.05	0.17
5	0.07	0.10	0.05	0.06	0.18	0.17	0.77	1.1	0.47	0.14	0.04	0.14
6	0.08	0.10	0.06	0.06	0.18	0.16	0.63	1.5	0.47	0.14	0.04	0.06
7	0.08	0.11	0.05	0.07	0.17	0.16	0.62	1.8	0.40	0.13	0.04	0.06
8	0.08	0.38	e0.05	0.07	0.17	0.18	0.92	1.6	0.39	0.13	0.03	0.05
9	0.09	0.18	e0.05	0.07	0.16	0.17	1.4	1.5	0.37	0.13	0.03	0.05
10	0.09	0.11	0.04	0.08	0.16	0.18	2.1	1.4	0.35	0.12	0.03	0.07
11	0.10	0.10	e0.04	0.07	0.16	0.22	2.3	1.7	0.33	0.11	0.03	0.05
12	0.10	0.10	0.06	0.08	0.14	0.23	2.5	1.6	0.31	0.11	0.03	0.05
13	0.10	0.09	0.04	0.09	0.14	0.30	1.5	1.9	0.32	0.10	0.03	0.05
14	0.09	0.08	0.06	0.09	0.14	0.36	1.5	2.0	0.29	0.08	0.03	0.05
15	0.10	0.08	0.05	0.09	0.14	0.35	1.3	1.8	0.27	0.08	0.03	0.04
16	0.11	0.09	0.06	0.09	0.14	0.28	1.1	1.8	0.25	0.08	0.03	0.04
17	0.11	0.09	0.06	0.10	0.14	0.30	1.2	1.6	0.25	0.08	0.03	0.04
18	0.10	0.09	0.07	0.10	0.14	0.28	1.3	1.5	0.26	0.08	0.03	0.05
19	0.10	0.09	0.07	0.11	0.14	0.26	1.8	1.4	0.26	0.09	0.03	0.05
20	0.10	0.08	0.07	0.12	0.14	0.29	1.6	1.2	0.23	0.09	0.03	0.05
21	0.10	0.07	0.07	0.12	0.14	0.32	1.5	1.4	0.23	0.11	0.31	0.05
22	0.10	0.08	0.08	0.13	0.14	0.41	1.2	1.4	0.21	0.08	0.09	0.04
23	0.11	0.09	0.08	0.15	0.15	0.57	1.4	1.3	0.24	0.07	0.06	0.04
24	0.12	0.07	0.08	0.16	0.15	0.69	1.8	1.1	0.25	0.08	0.06	0.04
25	0.12	e0.05	0.09	0.15	0.15	0.88	1.9	1.1	0.24	0.08	0.05	0.04
26	0.12	e0.06	0.09	0.18	0.15	1.4	1.3	1.0	0.25	0.08	e0.06	0.05
27	0.13	e0.07	0.09	0.19	0.15	1.2	1.1	0.89	0.22	0.07	e0.07	0.06
28	0.14	e0.08	0.10	0.20	0.15	1.2	1.1	0.72	0.18	0.08	0.06	0.06
29	0.13	e0.08	0.10	0.18	---	1.1	1.2	0.65	0.18	0.07	0.05	0.06
30	0.13	e0.07	0.10	0.18	---	1.3	1.3	0.72	0.17	0.06	0.04	0.06
31	0.11	---	0.12	0.19	---	1.8	---	0.56	---	0.06	0.05	---
TOTAL	3.13	3.11	2.11	3.52	4.43	15.37	41.73	41.14	9.49	3.20	1.70	1.72
MEAN	0.10	0.10	0.068	0.11	0.16	0.50	1.39	1.33	0.32	0.10	0.055	0.057
MAX	0.14	0.38	0.12	0.20	0.21	1.8	2.5	2.0	0.57	0.18	0.31	0.17
MIN	0.07	0.05	0.04	0.06	0.14	0.15	0.62	0.56	0.17	0.06	0.03	0.04
AC-FT	6.2	6.2	4.2	7.0	8.8	30	83	82	19	6.3	3.4	3.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

MEAN	0.081	0.12	0.13	0.17	0.16	0.46	1.38	1.66	0.30	0.095	0.056	0.064
MAX	0.11	0.20	0.24	0.27	0.29	0.83	2.56	6.17	0.80	0.19	0.10	0.11
(WY)	2000	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	0.042	0.091	0.068	0.088	0.080	0.29	0.47	0.18	0.079	0.048	0.029	0.031
(WY)	2002	2001	2003	2001	2001	2002	2001	2001	2001	2001	2001	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1999 - 2003	
ANNUAL TOTAL	88.13		130.65			
ANNUAL MEAN	0.24		0.36		0.24	
HIGHEST ANNUAL MEAN					0.36	2003
LOWEST ANNUAL MEAN					0.13	2001
HIGHEST DAILY MEAN	3.4	Apr 14	2.5	Apr 12	15	May 7 1999
LOWEST DAILY MEAN	0.03	Jul 31	0.03	Aug 8	0.02	Aug 17 2001
ANNUAL SEVEN-DAY MINIMUM	0.04	Aug 13	0.03	Aug 8	0.02	Aug 24 2001
MAXIMUM PEAK FLOW			6.0	Apr 25	21	May 7 1999
MAXIMUM PEAK STAGE			4.17	Apr 25	4.67	Jan 7 2001
ANNUAL RUNOFF (AC-FT)	175		259		174	
10 PERCENT EXCEEDS	0.40		1.3		0.57	
50 PERCENT EXCEEDS	0.10		0.12		0.10	
90 PERCENT EXCEEDS	0.05		0.05		0.04	

e Estimated.

10308784 LEVIATHAN MINE ADIT DRAIN NEAR MARKLEEVILLE, CA

LOCATION.—Lat 38° 42'15", long 119° 39'28", in NW 1/4 NE 1/4 sec.22, T.10 N., R.21 E., Alpine County, Hydrologic Unit 16050201, 2.2 mi north of State Highway 89, and 6.5 mi southeast of Markleeville.

PERIOD OF RECORD.—November 1998 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 7,100 ft above NGVD of 1929, from topographic map.

REMARKS.—Records excellent.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 0.09 ft^3/s, May 15–18, 1999; minimum daily, 0.0219 ft^3/s, Feb. 19, 20, 2002.

EXTREMES FOR CURRENT YEAR.—Maximum daily discharge, 0.0394 ft^3/s, May 18; minimum daily, 0.0263 ft^3/s, Nov. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0284	0.0284	0.0286	0.0292	0.0307	0.0290	0.0312	0.0363	0.0374	0.0319	0.0288	e0.0276
2	0.0281	0.0277	0.0288	0.0284	0.0312	0.0289	0.0323	0.0369	0.0374	0.0314	0.0289	e0.0276
3	0.0278	0.0280	0.0283	0.0283	0.0310	0.0295	0.0322	0.0369	0.0376	0.0313	0.0284	e0.0276
4	0.0279	0.0274	0.0283	0.0283	0.0311	0.0285	0.0327	0.0371	0.0370	0.0310	0.0281	e0.0286
5	0.0276	0.0273	0.0283	0.0292	0.0312	0.0284	0.0325	0.0376	0.0373	0.0312	0.0281	e0.0286
6	0.0273	0.0273	0.0284	0.0294	0.0304	0.0280	0.0324	0.0380	0.0368	0.0310	0.0285	e0.0286
7	0.0275	0.0275	0.0282	0.0296	0.0309	0.0286	0.0320	0.0382	0.0369	0.0308	0.0279	e0.0296
8	0.0276	0.0283	0.0285	0.0294	0.0304	0.0283	0.0321	0.0393	0.0366	0.0307	0.0278	e0.0296
9	0.0273	0.0274	0.0286	0.0289	0.0303	0.0280	0.0320	0.0393	0.0363	0.0300	0.0279	e0.0300
10	0.0272	0.0274	0.0285	0.0292	0.0301	0.0280	0.0326	0.0390	0.0362	0.0301	0.0274	0.0305
11	0.0273	0.0270	0.0284	0.0289	0.0302	0.0284	0.0325	0.0392	0.0362	0.0302	0.0276	0.0305
12	0.0278	0.0269	0.0281	0.0285	0.0302	0.0282	0.0330	0.0386	0.0362	0.0300	0.0273	0.0301
13	0.0276	0.0268	0.0283	0.0294	0.0295	0.0282	0.0338	0.0384	0.0360	0.0300	0.0275	0.0303
14	0.0274	0.0267	0.0286	0.0295	0.0300	0.0286	0.0344	0.0392	0.0354	0.0300	0.0268	0.0302
15	0.0277	0.0270	0.0286	0.0294	0.0296	0.0293	0.0341	0.0390	0.0356	0.0299	0.0270	0.0302
16	0.0279	0.0266	0.0289	0.0295	0.0295	0.0290	0.0346	0.0392	0.0346	0.0295	0.0271	0.0310
17	0.0276	0.0263	0.0285	0.0293	0.0304	0.0281	0.0344	0.0391	0.0343	0.0293	0.0272	0.0322
18	0.0274	0.0265	0.0281	0.0294	0.0298	0.0281	0.0349	0.0394	0.0344	0.0299	0.0267	0.0321
19	0.0276	0.0265	0.0287	0.0295	0.0298	0.0281	0.0350	0.0393	0.0343	0.0295	0.0269	0.0317
20	0.0275	0.0273	0.0284	0.0299	0.0295	0.0278	0.0356	0.0391	0.0331	0.0285	0.0270	0.0316
21	0.0281	0.0273	0.0285	0.0292	0.0298	0.0277	0.0358	0.0386	0.0335	0.0288	0.0272	0.0315
22	0.0278	0.0281	0.0286	0.0290	0.0296	0.0275	0.0354	0.0387	0.0335	0.0288	0.0274	0.0308
23	0.0278	0.0277	0.0286	0.0299	0.0299	0.0283	0.0352	0.0385	0.0339	0.0289	0.0266	0.0311
24	0.0280	0.0279	0.0288	0.0298	0.0294	0.0273	0.0355	0.0384	0.0333	0.0288	0.0268	0.0311
25	0.0276	0.0279	0.0286	0.0296	0.0295	0.0276	0.0360	0.0383	0.0327	0.0292	0.0264	0.0306
26	0.0280	0.0289	0.0281	0.0299	0.0298	0.0277	0.0359	0.0378	0.0326	0.0289	0.0265	0.0310
27	0.0277	0.0285	0.0284	0.0302	0.0299	0.0292	0.0360	0.0375	0.0318	0.0283	0.0266	0.0306
28	0.0277	0.0284	0.0289	0.0302	0.0293	0.0302	0.0361	0.0376	0.0322	0.0286	0.0264	0.0303
29	0.0275	0.0283	0.0290	0.0302	---	0.0304	0.0360	0.0378	0.0320	0.0283	0.0266	0.0308
30	0.0268	0.0282	0.0289	0.0297	---	0.0300	0.0363	0.0379	0.0317	0.0283	e0.0266	0.0302
31	0.0276	---	0.0286	0.0298	---	0.0307	---	0.0378	---	0.0282	e0.0266	---
TOTAL	0.8571	0.8255	0.8841	0.9107	0.8430	0.8856	1.0225	1.1880	1.0468	0.9213	0.8466	0.9062
MEAN	0.028	0.028	0.029	0.029	0.030	0.029	0.034	0.038	0.035	0.030	0.027	0.030
MAX	0.0284	0.0289	0.0290	0.0302	0.0312	0.0307	0.0363	0.0394	0.0376	0.0319	0.0289	0.0322
MIN	0.0268	0.0263	0.0281	0.0283	0.0293	0.0273	0.0312	0.0363	0.0317	0.0282	0.0264	0.0276
AC-FT	1.7	1.6	1.8	1.8	1.7	1.8	2.0	2.4	2.1	1.8	1.7	1.8

e Estimated.

10308785 LEVIATHAN MINE PIT DRAIN NEAR MARKLEEVILLE, CA

LOCATION.—Lat 38° 42'15", long 119° 39'28", in NW 1/4 NE 1/4 sec.22, T.10 N., R.21 E., Alpine County, Hydrologic Unit 16050201, 2.2 mi north of Highway 89, and 6.5 mi southeast of Markleeville.

PERIOD OF RECORD.—February 2000 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 7,100 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 0.0111 ft^3/s, May 14, 17, 2003; minimum daily, 0.0001 ft^3/s, Dec. 27, 2002.

EXTREMES FOR CURRENT YEAR.—Maximum daily discharge, 0.0111 ft^3/s, May 14, 17; minimum daily, 0.0001 ft^3/s, Dec. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0004	0.0004	0.0003	0.0002	0.0013	0.0010	0.0034	0.0101	0.0086	0.0027	0.0008	e0.0006
2	0.0004	0.0004	0.0003	0.0002	0.0013	0.0009	0.0033	0.0109	0.0087	0.0026	0.0008	e0.0005
3	0.0004	0.0004	0.0003	0.0002	0.0014	0.0011	0.0027	0.0110	0.0084	0.0023	0.0008	e0.0005
4	0.0004	0.0004	0.0003	0.0003	0.0013	0.0011	0.0028	0.0095	0.0084	0.0021	0.0008	e0.0005
5	0.0004	0.0004	0.0003	0.0003	0.0012	0.0009	0.0021	0.0105	0.0084	0.0022	0.0008	e0.0005
6	0.0004	0.0004	0.0003	0.0003	0.0010	0.0009	0.0020	0.0105	0.0079	0.0023	0.0008	e0.0005
7	0.0004	0.0004	0.0003	0.0003	0.0010	0.0011	0.0019	0.0105	0.0079	0.0021	0.0008	e0.0004
8	0.0004	0.0004	0.0003	0.0003	0.0010	0.0010	0.0020	0.0110	0.0081	0.0018	0.0007	e0.0004
9	0.0004	0.0004	0.0003	0.0003	0.0010	0.0012	0.0023	0.0107	0.0079	0.0018	0.0007	e0.0004
10	0.0004	0.0004	0.0003	0.0003	0.0010	0.0015	0.0029	0.0105	0.0078	0.0017	0.0007	e0.0004
11	0.0004	0.0004	0.0003	0.0003	0.0010	0.0017	0.0038	0.0107	0.0076	0.0016	0.0007	0.0004
12	0.0004	0.0004	0.0003	0.0005	0.0010	0.0018	0.0047	0.0106	0.0075	0.0016	0.0007	0.0004
13	0.0004	0.0004	0.0003	0.0003	0.0011	0.0034	0.0047	0.0108	0.0070	0.0015	0.0007	0.0004
14	0.0004	0.0004	0.0003	0.0003	0.0011	0.0045	0.0048	0.0111	0.0069	0.0016	0.0006	0.0004
15	0.0004	0.0004	0.0002	0.0002	0.0010	0.0046	0.0049	0.0107	0.0068	0.0016	0.0006	0.0004
16	0.0004	0.0004	0.0003	0.0003	0.0011	0.0032	0.0055	0.0107	0.0056	0.0014	0.0006	0.0004
17	0.0004	0.0004	0.0002	0.0003	0.0010	0.0023	0.0057	0.0111	0.0046	0.0013	0.0006	0.0004
18	0.0004	0.0004	0.0002	0.0003	0.0009	0.0019	0.0060	0.0104	0.0059	0.0013	0.0006	0.0004
19	0.0004	0.0004	0.0002	0.0003	0.0011	0.0017	0.0061	0.0096	0.0065	0.0013	0.0006	0.0003
20	0.0004	0.0004	0.0002	0.0003	0.0008	0.0017	0.0070	0.0100	0.0054	0.0012	0.0006	0.0003
21	0.0004	0.0004	0.0002	0.0002	0.0009	0.0024	0.0081	0.0101	0.0044	0.0012	0.0006	0.0003
22	0.0004	0.0004	0.0002	0.0002	0.0010	0.0041	0.0081	0.0100	0.0043	0.0012	0.0006	0.0003
23	0.0004	0.0004	0.0002	0.0003	0.0011	0.0049	0.0082	0.0100	0.0044	0.0012	0.0006	0.0003
24	0.0004	0.0004	0.0002	0.0003	0.0011	0.0046	0.0091	0.0108	0.0034	0.0013	0.0006	0.0003
25	0.0004	0.0004	0.0002	0.0004	0.0012	0.0046	0.0092	0.0106	0.0027	0.0011	0.0006	0.0003
26	0.0004	0.0004	0.0002	0.0004	0.0011	0.0051	0.0086	0.0093	0.0027	0.0008	0.0006	0.0003
27	0.0004	0.0004	0.0001	0.0004	0.0011	0.0044	0.0093	0.0092	0.0027	0.0008	0.0006	0.0003
28	0.0004	0.0004	0.0002	0.0008	0.0011	0.0034	0.0097	0.0091	0.0027	0.0008	0.0006	0.0003
29	0.0004	0.0003	0.0002	0.0008	---	0.0033	0.0097	0.0090	0.0027	0.0008	0.0006	0.0003
30	0.0004	0.0003	0.0002	0.0009	---	0.0033	0.0099	0.0096	0.0027	0.0008	0.0006	0.0003
31	0.0004	---	0.0002	0.0010	---	0.0034	---	0.0091	---	0.0008	e0.0006	---
TOTAL	0.0124	0.0118	0.0076	0.0115	0.0302	0.0810	0.1685	0.3177	0.1786	0.0468	0.0206	0.0115
MEAN	0.000	0.000	0.000	0.000	0.001	0.003	0.006	0.010	0.006	0.002	0.001	0.000
MAX	0.0004	0.0004	0.0003	0.0010	0.0014	0.0051	0.0099	0.0111	0.0087	0.0027	0.0008	0.0006
MIN	0.0004	0.0003	0.0001	0.0002	0.0008	0.0009	0.0019	0.0090	0.0027	0.0008	0.0006	0.0003
AC-FT	0.02	0.02	0.02	0.02	0.06	0.2	0.3	0.6	0.4	0.09	0.04	0.02

e Estimated.

103087853 LEVIATHAN MINE POND 1 NEAR MARKLEEVILLE, CA

LOCATION.—Lat 38° 42'15", long 119° 39'28", in NW 1/4 NE 1/4 sec.22, T.10 N., R.21 E., Alpine County, Hydrologic Unit 16050201, 2.2 mi north of Highway 89 and 6.5 mi southeast of Markleeville.

PERIOD OF RECORD.—November 1999 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 7,100 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good.

EXTREMES FOR PERIOD OF RECORD.—Maximum elevation, 7.88 ft, Apr. 19, 20, 2000; minimum, 4.34 ft, Sept. 27, 2001.

EXTREMES FOR CURRENT YEAR.—Maximum elevation, 7.05 ft, May 28; minimum, 4.37 ft, Nov. 21.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.48	4.48	4.41	5.14	5.54	5.90	6.39	6.87	7.02	6.72	5.82	e5.44
2	4.48	4.48	4.41	5.10	5.55	5.91	6.45	6.88	7.01	6.69	5.83	e5.45
3	4.48	4.48	4.41	5.12	5.56	5.94	6.44	6.91	7.01	6.67	5.67	e5.46
4	4.48	4.48	4.41	5.13	5.58	5.95	6.46	6.91	7.01	6.65	5.50	e5.47
5	4.48	4.49	4.42	5.14	5.58	5.96	6.47	6.92	7.00	6.63	5.40	e5.48
6	4.48	4.48	4.42	5.15	5.60	5.97	6.47	6.92	6.99	6.60	5.24	e5.49
7	4.48	4.48	4.42	5.16	5.60	5.98	6.48	6.93	6.98	6.57	5.12	e5.50
8	4.49	4.48	4.42	5.18	5.62	5.99	6.49	6.96	6.98	6.55	4.95	e5.51
9	4.50	4.48	4.42	5.19	5.63	5.99	6.49	6.97	6.97	6.53	4.84	e5.52
10	4.50	4.49	4.42	5.21	5.65	6.01	6.49	6.98	6.96	6.50	4.72	5.52
11	4.49	4.52	4.42	5.22	5.65	6.02	6.49	6.99	6.95	6.48	4.84	5.51
12	4.50	4.54	4.42	5.23	5.67	6.03	6.52	6.99	6.95	6.45	5.01	5.50
13	4.50	4.58	4.43	5.24	5.69	6.05	6.65	6.99	6.94	6.42	4.97	5.49
14	4.50	4.41	4.46	5.25	5.70	6.07	6.68	7.01	6.94	6.40	4.96	5.47
15	4.50	4.39	4.51	5.26	5.71	6.13	6.69	7.01	6.93	6.37	4.99	5.48
16	4.50	4.39	4.76	5.27	5.75	6.14	6.72	7.01	6.93	6.35	5.01	5.44
17	4.50	4.39	4.82	5.28	5.76	6.15	6.74	7.01	6.92	6.33	5.03	5.42
18	4.50	4.38	4.83	5.30	5.77	6.16	6.74	7.01	6.91	6.31	5.06	5.40
19	4.50	4.39	4.91	5.31	5.78	6.18	6.75	7.01	6.89	6.30	5.07	5.38
20	4.50	4.39	4.96	5.32	5.79	6.19	6.76	7.01	6.87	6.29	5.10	5.34
21	4.50	4.37	4.97	5.34	5.80	6.21	6.78	7.02	6.85	6.29	5.21	5.33
22	4.49	4.38	4.99	5.35	5.81	6.22	6.79	7.03	6.84	6.29	5.24	5.31
23	4.50	4.38	4.95	5.38	5.82	6.26	6.80	7.03	6.85	6.28	5.27	5.29
24	4.54	4.39	4.95	5.40	5.85	6.27	6.81	7.03	6.84	6.28	5.29	5.28
25	4.49	4.39	4.96	5.41	5.85	6.29	6.82	7.03	6.83	6.26	5.31	5.26
26	4.49	4.39	4.96	5.43	5.86	6.32	6.83	7.03	6.82	6.26	5.34	5.22
27	4.49	4.39	4.95	5.46	5.87	6.35	6.83	7.03	6.80	6.25	5.37	5.20
28	4.49	4.40	5.02	5.47	5.89	6.34	6.86	7.05	6.78	6.14	5.40	5.17
29	4.49	4.40	5.05	5.48	---	6.35	6.84	7.03	6.76	6.00	5.42	5.17
30	4.48	4.40	5.07	5.50	---	6.36	6.85	7.03	6.74	5.87	e5.42	5.19
31	4.48	---	5.13	5.51	---	6.38	---	7.02	---	5.74	e5.43	---
MEAN	4.49	4.44	4.70	5.29	5.71	6.13	6.65	6.99	6.91	6.37	5.22	5.39
MAX	4.54	4.58	5.13	5.51	5.89	6.38	6.86	7.05	7.02	6.72	5.83	5.52
MIN	4.48	4.37	4.41	5.10	5.54	5.90	6.39	6.87	6.74	5.74	4.72	5.17

CAL YR 2002 MEAN 5.51 MAX 6.71 MIN 4.37
WTR YR 2003 MEAN 5.69 MAX 7.05 MIN 4.37

e Estimated.

103087885 LEVIATHAN CREEK CHANNEL UNDERDRAIN NEAR MARKLEEVILLE, CA

LOCATION.—Lat 38° 42'34", long 119° 39'41", in SE 1/4 SW 1/4 sec.15, T.10 N., R.21 E., Alpine County, Hydrologic Unit 16050201, 2.9 mi north of State Highway 89, and 6.5 mi east of Markleeville.

PERIOD OF RECORD.—November 1999 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 6,800 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 0.09 ft^3/s, Apr. 20, 21, 2000; minimum, no flow on many days in most years.

EXTREMES FOR CURRENT YEAR.—Maximum daily discharge, 0.0896 ft^3/s, May 12; no flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0000	0.0259	0.0349	0.0519	0.0446	0.0538	e0.0570	0.0768	0.0740	0.0000	0.0000	0.0000
2	0.0000	0.0475	0.0349	0.0509	0.0465	0.0556	e0.0570	0.0779	0.0740	0.0000	0.0000	0.0000
3	0.0000	0.0477	0.0349	0.0526	0.0518	0.0560	e0.0580	0.0791	0.0740	0.0000	0.0000	0.0000
4	0.0000	0.0472	0.0349	0.0518	0.0513	0.0578	e0.0580	0.0793	0.0740	0.0000	0.0000	0.0000
5	0.0000	0.0472	0.0349	0.0496	0.0499	0.0578	e0.0590	0.0806	0.0737	0.0000	0.0000	0.0000
6	0.0000	0.0456	0.0349	0.0479	0.0487	0.0578	e0.0590	0.0828	0.0736	0.0000	0.0000	0.0000
7	0.0000	0.0444	0.0349	0.0478	0.0478	e0.0580	e0.0600	0.0834	0.0731	0.0000	0.0000	0.0000
8	0.0000	0.0450	0.0349	0.0478	0.0467	e0.0615	e0.0600	0.0830	0.0735	0.0000	0.0000	0.0000
9	0.0000	0.0446	0.0349	0.0478	0.0457	0.0613	e0.0610	0.0857	0.0729	0.0000	0.0000	0.0000
10	0.0000	0.0418	0.0350	0.0471	0.0448	0.0632	e0.0610	0.0869	0.0722	0.0000	0.0000	0.0000
11	0.0000	0.0429	0.0352	0.0441	0.0467	0.0632	0.0626	0.0876	0.0717	0.0000	0.0000	0.0000
12	0.0000	0.0458	0.0354	0.0432	0.0473	0.0632	0.0645	0.0896	0.0712	0.0000	0.0000	0.0000
13	0.0000	0.0429	0.0355	0.0413	0.0470	0.0633	0.0674	e0.0890	0.0517	0.0000	0.0000	0.0000
14	0.0000	0.0375	0.0356	0.0403	0.0499	0.0660	0.0684	e0.0860	0.0689	0.0000	0.0000	0.0000
15	0.0000	0.0364	0.0377	0.0429	0.0507	0.0638	0.0730	e0.0820	0.0381	0.0000	0.0000	0.0000
16	0.0000	0.0185	0.0385	e0.0429	0.0524	0.0640	0.0728	e0.0788	0.0323	0.0000	0.0000	0.0000
17	0.0000	0.0115	0.0389	e0.0430	0.0527	0.0621	0.0772	0.0788	0.0150	0.0000	0.0000	0.0000
18	0.0000	0.0288	0.0389	e0.0432	0.0555	0.0618	0.0701	0.0777	0.0000	0.0000	0.0000	0.0000
19	0.0000	0.0204	0.0390	e0.0433	0.0544	0.0594	0.0745	0.0764	0.0000	0.0000	0.0000	0.0000
20	0.0000	0.0302	0.0365	e0.0434	0.0537	0.0583	0.0751	0.0767	0.0000	0.0000	0.0000	0.0000
21	0.0000	0.0349	0.0389	e0.0436	0.0544	0.0568	0.0750	0.0761	0.0000	0.0000	0.0000	0.0000
22	0.0000	0.0349	0.0400	e0.0437	0.0528	0.0566	0.0754	0.0762	0.0000	0.0000	0.0000	0.0000
23	0.0000	0.0349	0.0432	e0.0438	0.0518	0.0558	0.0750	0.0759	0.0000	0.0000	0.0000	0.0000
24	0.0000	0.0349	0.0432	e0.0440	0.0514	e0.0560	0.0750	0.0755	0.0000	0.0000	0.0000	0.0000
25	0.0000	0.0349	0.0432	e0.0441	0.0529	e0.0560	0.0757	0.0758	0.0000	0.0000	0.0000	0.0000
26	0.0000	0.0338	0.0443	e0.0442	0.0554	e0.0560	0.0765	0.0755	0.0000	0.0000	0.0000	0.0000
27	0.0000	0.0331	0.0516	e0.0444	0.0544	e0.0560	0.0766	0.0757	0.0000	0.0000	0.0000	0.0000
28	0.0000	0.0333	0.0527	e0.0445	0.0546	e0.0560	0.0763	0.0752	0.0000	0.0000	0.0000	0.0000
29	0.0000	0.0340	0.0527	e0.0445	---	e0.0560	0.0760	0.0749	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0342	0.0515	0.0423	---	e0.0560	0.0756	0.0743	0.0033	0.0000	0.0000	0.0000
31	0.0000	---	0.0523	0.0438	---	e0.0560	---	0.0742	---	0.0000	0.0000	---
TOTAL	0.0000	1.0947	1.2339	1.4057	1.4158	1.8251	2.0527	2.4674	1.0872	0.0000	0.0000	0.0000
MEAN	0.000	0.036	0.040	0.045	0.051	0.059	0.068	0.080	0.036	0.000	0.000	0.000
MAX	0.0000	0.0477	0.0527	0.0526	0.0555	0.0660	0.0772	0.0896	0.0740	0.0000	0.0000	0.0000
MIN	0.0000	0.0115	0.0349	0.0403	0.0446	0.0538	0.0570	0.0742	0.0000	0.0000	0.0000	0.0000
AC-FT	0.00	2.2	2.4	2.8	2.8	3.6	4.1	4.9	2.2	0.00	0.00	0.00

e Estimated.

103087887 LEVIATHAN MINE POND 4 NEAR MARKLEEVILLE, CA

LOCATION.—Lat 38° 42'34", long 119° 39'41", in SE 1/4 SW 1/4 sec.15, T.10 N., R.21 E., Alpine County, Hydrologic Unit 16050201, 2.9 mi north of State Highway 89, and 6.5 mi east of Markleeville.

PERIOD OF RECORD.—October 1998 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 6,800 ft above NGVD of 1929, from topographic map.

REMARKS.—Records excellent.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 0.3431 ft^3/s, Feb. 10, 1999; no flow on many days in each year.

EXTREMES FOR CURRENT YEAR.—There was no flow during the entire water year.

10308789 LEVIATHAN CREEK ABOVE ASPEN CREEK, NEAR MARKLEEVILLE, CA

LOCATION.—Lat 38° 43'01", long 119° 39'33", in NE 1/4 NW 1/4 sec.15, T.10 N., R.21 E., Alpine County, Hydrologic Unit 16050201, on right bank, 3.2 mi north of State Highway 89, and 6.5 mi east of Markleeville.

DRAINAGE AREA.—7.07 mi^2.

PERIOD OF RECORD.—October 1998 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 6,700 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair except those below 0.5 ft^3/s and estimated values, which are poor.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 24 ft^3/s, Apr. 28, 1999, gage height, 5.14 ft; no flow on some days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 10 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 4	1900	13	4.80

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.09	0.09	0.12	0.15	1.2	0.24	2.7	1.8	e0.80	0.27	0.03	0.07
2	0.09	0.12	0.22	0.18	0.93	0.33	1.8	e1.9	e0.60	0.15	0.01	0.02
3	0.08	0.10	0.12	0.21	1.2	0.28	e2.1	2.0	0.50	0.14	0.01	0.07
4	0.08	0.10	0.13	0.21	0.77	0.28	e1.7	2.2	0.44	0.12	0.03	0.51
5	0.07	0.09	0.13	0.22	0.74	0.28	e1.4	e2.2	0.38	0.10	0.02	0.14
6	0.06	0.08	0.11	0.20	1.1	0.30	e1.2	e2.2	0.34	0.11	0.02	0.17
7	0.05	0.19	0.14	0.19	0.44	0.35	e1.2	e2.2	0.36	0.10	0.03	0.18
8	0.05	2.4	0.14	0.19	0.55	0.41	e1.4	e2.1	0.34	0.10	0.04	0.36
9	0.05	0.52	0.12	0.20	0.49	0.45	e1.9	2.0	0.33	0.08	0.03	0.32
10	0.04	0.30	0.09	0.20	0.41	0.50	2.4	e1.9	0.32	0.08	0.09	0.08
11	0.06	0.37	0.13	0.20	0.39	0.72	2.8	e2.2	0.31	0.18	0.13	0.08
12	0.07	0.47	0.12	0.20	0.35	1.0	e2.7	e2.5	0.30	0.06	0.17	0.05
13	0.07	0.51	0.11	0.21	0.39	1.6	e2.3	e2.6	0.31	0.06	e0.14	0.04
14	0.07	0.40	0.14	0.21	0.39	1.8	e2.1	e2.6	0.33	0.15	e0.44	0.38
15	0.14	0.39	e0.14	0.20	0.37	1.9	e2.2	e2.4	0.32	0.32	e0.44	0.09
16	0.24	0.30	0.21	0.20	0.48	1.2	e2.1	2.2	0.29	0.30	e0.22	0.04
17	0.26	0.25	e0.26	0.21	0.36	0.89	e2.5	1.9	0.30	0.30	e0.08	0.34
18	0.19	0.25	e0.17	0.21	0.36	e0.89	e2.8	0.95	0.27	0.32	0.10	0.47
19	0.09	0.24	0.15	0.23	0.31	e1.1	e2.8	0.80	0.21	0.32	0.07	0.58
20	0.10	0.20	0.16	0.26	0.31	0.85	2.6	1.3	0.23	0.19	0.00	0.28
21	0.10	0.19	0.15	0.28	0.36	1.1	2.4	1.2	0.23	0.05	0.63	0.08
22	0.11	0.18	0.14	0.35	0.34	1.7	e2.1	0.94	0.22	0.04	0.12	0.06
23	0.11	0.16	0.14	0.63	0.35	2.2	2.4	0.96	0.28	0.05	0.06	0.04
24	0.08	0.13	0.14	0.65	0.29	2.1	3.1	0.94	0.31	0.06	0.19	0.02
25	0.09	0.11	0.14	0.64	0.28	2.2	2.8	0.90	0.37	0.06	0.06	0.00
26	0.09	0.13	0.15	0.90	0.29	5.4	2.0	0.87	0.53	0.06	0.27	0.00
27	0.10	0.15	0.17	1.1	0.27	2.8	1.8	0.94	0.54	0.06	0.43	0.14
28	0.10	0.15	0.16	0.96	0.28	1.5	1.8	0.91	0.56	0.04	0.43	0.14
29	0.09	0.14	0.17	0.76	---	1.5	2.1	0.98	0.59	0.03	0.07	0.13
30	0.08	0.13	0.16	0.83	---	1.8	2.0	1.1	0.53	0.02	0.04	0.10
31	0.07	---	0.16	1.1	---	2.7	---	e1.0	---	0.01	0.04	---
TOTAL	2.97	8.84	4.59	12.28	14.00	40.37	65.2	50.69	11.44	3.93	4.44	4.98
MEAN	0.096	0.29	0.15	0.40	0.50	1.30	2.17	1.64	0.38	0.13	0.14	0.17
MAX	0.26	2.4	0.26	1.1	1.2	5.4	3.1	2.6	0.80	0.32	0.63	0.58
MIN	0.04	0.08	0.09	0.15	0.27	0.24	1.2	0.80	0.21	0.01	0.00	0.00
AC-FT	5.9	18	9.1	24	28	80	129	101	23	7.8	8.8	9.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

MEAN	0.17	0.25	0.23	0.33	0.51	1.16	2.59	2.63	0.66	0.22	0.17	0.20
MAX	0.34	0.36	0.39	0.47	1.10	1.74	5.38	9.69	2.18	0.56	0.31	0.46
(WY)	2000	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	0.085	0.16	0.15	0.16	0.20	0.71	1.30	0.48	0.12	0.069	0.039	0.090
(WY)	2002	2001	2003	2001	2001	2001	2001	2001	2001	2001	2001	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1999 - 2003	
ANNUAL TOTAL	169.49		223.73			
ANNUAL MEAN	0.46		0.61		0.47	
HIGHEST ANNUAL MEAN					0.61	2003
LOWEST ANNUAL MEAN					0.30	2001
HIGHEST DAILY MEAN	3.5	Apr 4	5.4	Mar 26	17	May 7 1999
LOWEST DAILY MEAN	0.00	Jul 11	0.00	Aug 20	0.00	Aug 5 2001
ANNUAL SEVEN-DAY MINIMUM	0.03	Jul 5	0.02	Jul 30	0.00	Aug 5 2001
MAXIMUM PEAK FLOW			13	Sep 4	24	Apr 28 1999
MAXIMUM PEAK STAGE			4.80	Sep 4	5.14	Apr 28 1999
ANNUAL RUNOFF (AC-FT)	336		444		343	
10 PERCENT EXCEEDS	1.2		2.1		1.3	
50 PERCENT EXCEEDS	0.23		0.27		0.21	
90 PERCENT EXCEEDS	0.07		0.06		0.07	

e Estimated.

103087892 ASPEN CREEK OVERBURDEN SEEP NEAR MARKLEEVILLE, CA

LOCATION.—Lat 38° 42'45", long 119° 39'11", in NE 1/4 SE 1/4 sec.15, T.10 N., R.21 E., Alpine County, Hydrologic Unit 16050201, 2.8 mi north of State Highway 89, and 2.1 mi east of Markleeville.

PERIOD OF RECORD.—November 1998 to September 2002 (low-flow records only), April to September 2003.

GAGE.—Water-stage recorder. Elevation of gage is 7,100 ft above NGVD of 1929, from topographic map.

REMARKS.—Records poor. No record October 1 through April 23. The site was shut down during construction of treatment ponds.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	0.0060	0.0113	0.0024	0.0127	e0.0040
2	---	---	---	---	---	---	---	0.0048	0.0101	e0.0030	0.0079	e0.0040
3	---	---	---	---	---	---	---	0.0046	0.0117	e0.0030	e0.0070	e0.0040
4	---	---	---	---	---	---	---	0.0040	0.0130	0.0026	e0.0060	e0.0040
5	---	---	---	---	---	---	---	0.0043	0.0142	0.0027	e0.0060	e0.0050
6	---	---	---	---	---	---	---	0.0045	0.0118	0.0027	e0.0050	e0.0050
7	---	---	---	---	---	---	---	0.0043	0.0107	e0.0030	e0.0040	e0.0050
8	---	---	---	---	---	---	---	0.0040	0.0121	e0.0030	e0.0040	e0.0050
9	---	---	---	---	---	---	---	0.0046	0.0075	0.0035	e0.0030	e0.0050
10	---	---	---	---	---	---	---	0.0050	0.0021	0.0040	0.0025	e0.0050
11	---	---	---	---	---	---	---	0.0054	0.0016	0.0039	0.0026	e0.0050
12	---	---	---	---	---	---	---	0.0058	0.0010	0.0040	0.0026	e0.0050
13	---	---	---	---	---	---	---	0.0061	0.0037	0.0041	0.0025	e0.0050
14	---	---	---	---	---	---	---	0.0062	0.0040	0.0039	0.0026	e0.0050
15	---	---	---	---	---	---	---	0.0060	0.0018	0.0043	0.0027	e0.0050
16	---	---	---	---	---	---	---	0.0061	0.0066	0.0058	0.0028	e0.0050
17	---	---	---	---	---	---	---	0.0065	0.0058	0.0050	0.0029	e0.0050
18	---	---	---	---	---	---	---	0.0056	0.0024	0.0055	0.0027	e0.0050
19	---	---	---	---	---	---	---	0.0055	0.0039	0.0053	0.0023	e0.0050
20	---	---	---	---	---	---	---	0.0070	0.0076	0.0052	0.0022	e0.0050
21	---	---	---	---	---	---	---	0.0079	0.0088	0.0057	0.0026	e0.0050
22	---	---	---	---	---	---	---	0.0097	0.0080	0.0060	e0.0030	e0.0050
23	---	---	---	---	---	---	---	0.0097	e0.0050	0.0075	e0.0040	e0.0050
24	---	---	---	---	---	---	0.0040	0.0111	e0.0050	0.0089	0.0045	0.0167
25	---	---	---	---	---	---	0.0036	0.0121	e0.0050	0.0093	0.0043	0.0141
26	---	---	---	---	---	---	0.0026	0.0152	0.0053	0.0076	0.0043	0.0209
27	---	---	---	---	---	---	0.0021	0.0055	e0.0050	0.0081	0.0046	0.0132
28	---	---	---	---	---	---	0.0031	0.0102	0.0034	0.0096	e0.0040	0.0162
29	---	---	---	---	---	---	0.0050	0.0119	0.0024	0.0134	e0.0040	0.0182
30	---	---	---	---	---	---	0.0065	0.0125	0.0024	0.0196	e0.0040	0.0185
31	---	---	---	---	---	---	---	0.0113	---	0.0185	e0.0040	---
TOTAL	---	---	---	---	---	---	---	0.2234	0.1932	0.1911	0.1273	0.2288
MEAN	---	---	---	---	---	---	---	0.007	0.006	0.006	0.004	0.008
MAX	---	---	---	---	---	---	---	0.0152	0.0142	0.0196	0.0127	0.0209
MIN	---	---	---	---	---	---	---	0.0040	0.0010	0.0024	0.0022	0.0040
AC-FT	---	---	---	---	---	---	---	0.4	0.4	0.4	0.3	0.5

e Estimated.

10308792 LEVIATHAN CREEK ABOVE MOUNTAINEER CREEK, NEAR MARKLEEVILLE, CA

LOCATION.—Lat 38° 44'12", long 119° 38'39", in SW 1/4 SW 1/4 sec.2, T.10 N., R.21 E., Alpine County, Hydrologic Unit 16050201, on left bank, 4.4 mi north of State Highway 89, and 7.5 mi northeast of Markleeville.

DRAINAGE AREA.—10.8 mi^2.

PERIOD OF RECORD.—December 1999 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 6,300 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair except estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 16 ft^3/s, Feb. 14, 2000, gage height, 8.05 ft; minimum daily, 0.02 ft^3/s, Aug. 11, 2001.

EXTREMES FOR CURRENT YEAR.—Peak discharges geater than base discharge of 20 ft^3/s and maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept. 4	1945	11	7.90

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.14	0.11	e0.47	1.1	2.8	0.59	3.5	3.0	0.86	0.45	0.56	0.15
2	0.14	0.15	0.47	e1.3	2.3	0.72	2.8	3.0	0.80	0.28	0.36	0.13
3	0.13	0.16	0.46	e1.5	3.0	0.79	2.9	3.1	0.80	0.28	0.30	0.16
4	0.14	0.16	e0.49	1.7	2.7	0.59	2.1	3.1	0.80	0.26	0.46	0.98
5	0.13	0.18	e0.48	1.7	1.9	0.68	2.0	2.9	0.75	0.24	0.39	0.35
6	0.13	0.21	e0.50	1.5	1.8	0.66	1.7	3.0	0.73	0.22	0.35	0.26
7	0.12	0.60	0.50	1.4	1.5	0.78	1.8	2.9	0.77	0.22	0.39	0.25
8	0.12	4.4	0.51	1.4	e1.7	0.89	2.2	2.9	0.73	0.21	0.53	0.37
9	0.11	1.4	e0.57	1.5	e1.8	0.90	2.8	2.8	0.69	0.18	0.35	0.45
10	0.11	0.63	e0.56	1.4	e1.6	1.1	3.3	2.6	0.70	0.16	0.48	0.18
11	0.11	0.63	e0.56	1.3	1.4	1.4	3.6	2.8	0.71	0.25	0.51	0.18
12	0.12	0.75	e0.57	1.3	0.72	1.9	3.3	3.0	0.68	0.14	0.28	0.16
13	0.12	0.75	e0.56	1.3	1.1	2.9	3.2	3.1	0.66	0.13	0.24	0.15
14	0.12	0.58	e0.56	1.3	1.1	3.3	3.1	3.1	0.68	0.18	0.67	0.40
15	0.13	0.65	e0.54	1.2	0.95	4.3	3.3	2.9	0.66	0.41	0.68	0.28
16	0.19	0.45	e0.56	1.2	0.93	2.9	3.2	2.8	0.60	0.38	0.35	0.14
17	0.20	0.34	e0.54	1.2	1.1	2.1	4.3	2.6	0.58	0.42	0.13	0.42
18	0.19	0.36	e0.53	1.2	1.1	2.1	4.5	2.4	0.58	0.48	0.11	0.65
19	0.12	0.38	e0.51	1.2	0.84	2.3	4.6	2.3	0.48	0.52	0.12	0.66
20	0.12	0.36	0.52	1.3	0.73	1.8	4.4	2.1	0.47	0.35	0.13	0.45
21	0.12	0.37	0.52	1.3	0.88	2.2	4.1	2.0	0.48	0.13	0.85	0.17
22	0.13	0.33	0.55	1.6	0.98	3.2	3.6	1.9	0.51	0.12	0.28	0.15
23	0.13	0.33	0.85	2.3	0.96	3.9	3.7	1.8	0.69	0.13	0.16	0.15
24	0.13	0.33	0.97	2.5	0.69	3.7	4.3	1.5	0.75	0.15	0.22	0.14
25	0.13	0.29	0.91	2.3	0.65	4.0	4.1	1.4	0.70	0.13	0.18	0.13
26	0.13	0.22	0.85	2.8	0.74	6.1	3.8	1.3	0.89	0.13	0.36	0.12
27	0.13	0.31	0.95	3.4	0.67	3.8	3.6	1.2	0.88	0.13	0.46	0.20
28	0.13	0.32	1.2	2.7	0.71	2.7	3.7	1.0	0.85	0.13	0.41	0.19
29	0.13	0.40	1.0	2.1	---	2.5	3.3	0.96	0.78	0.13	0.18	0.22
30	0.13	e0.45	0.95	2.1	---	3.0	3.1	0.93	0.71	0.12	0.13	0.13
31	0.11	---	0.98	2.7	---	3.7	---	0.91	---	0.17	0.14	---
TOTAL	4.09	16.60	20.19	52.8	37.35	71.50	99.9	71.30	20.97	7.23	10.76	8.37
MEAN	0.13	0.55	0.65	1.70	1.33	2.31	3.33	2.30	0.70	0.23	0.35	0.28
MAX	0.20	4.4	1.2	3.4	3.0	6.1	4.6	3.1	0.89	0.52	0.85	0.98
MIN	0.11	0.11	0.46	1.1	0.65	0.59	1.7	0.91	0.47	0.12	0.11	0.12
AC-FT	8.1	33	40	105	74	142	198	141	42	14	21	17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

MEAN	0.27	0.57	0.51	0.93	1.01	2.07	3.09	1.23	0.42	0.24	0.27	0.27
MAX	0.34	0.66	0.65	1.70	1.40	2.54	3.83	2.30	0.70	0.39	0.46	0.29
(WY)	2001	2002	2003	2003	2000	2000	2002	2003	2003	2000	2000	2000
MIN	0.13	0.50	0.43	0.43	0.62	1.56	2.23	0.84	0.21	0.13	0.11	0.24
(WY)	2003	2001	2002	2002	2002	2001	2001	2002	2001	2001	2001	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL TOTAL	301.57		421.06			
ANNUAL MEAN	0.83		1.15		0.88	
HIGHEST ANNUAL MEAN					1.15	2003
LOWEST ANNUAL MEAN					0.65	2001
HIGHEST DAILY MEAN	6.7	Apr 4	6.1	Mar 26	7.6	Feb 14 2000
LOWEST DAILY MEAN	0.10	Aug 17	0.11	Oct 9	0.02	Aug 11 2001
ANNUAL SEVEN-DAY MINIMUM	0.12	Oct 7	0.12	Oct 7	0.07	Aug 10 2001
MAXIMUM PEAK FLOW			11	Sep 4	16	Feb 14 2000
MAXIMUM PEAK STAGE			7.90	Sep 4	8.05	Feb 14 2000
ANNUAL RUNOFF (AC-FT)	598		835		636	
10 PERCENT EXCEEDS	2.0		3.1		2.3	
50 PERCENT EXCEEDS	0.41		0.68		0.48	
90 PERCENT EXCEEDS	0.13		0.13		0.13	

e Estimated.

10308794 BRYANT CREEK BELOW CONFLUENCE, NEAR MARKLEEVILLE, CA

LOCATION.—Lat 38° 44'12", long 119° 38'39", in SW 1/4 SW 1/4 sec.2, T.10 N., R.21 E., Alpine County, Hydrologic Unit 16050201, on left bank, 4.4 mi north of State Highway 89, and 7.5 mi northeast of Markleeville.

DRAINAGE AREA.—12.4 mi^2.

PERIOD OF RECORD.—November 1998 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 6,300 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 44 ft^3/s, Apr. 19, 1999, gage height, 5.35 ft, maximum gage height, 7.39 ft, Nov. 12, 2000, backwater from ice; minimum daily, 0.54 ft^3/s, Aug. 18, 2003.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 40 ft^3/s or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept 4	1945	25.0	5.04

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.3	1.2	1.5	5.6	2.0	6.9	5.9	2.4	1.3	1.2	1.2
2	1.2	1.7	1.1	1.7	4.0	2.1	5.9	5.9	2.5	1.2	1.2	1.2
3	1.1	1.6	1.0	2.1	4.6	2.1	5.3	5.8	2.4	1.1	1.0	1.4
4	1.2	1.6	1.1	2.6	4.1	2.2	4.6	6.0	2.4	1.1	1.1	3.1
5	1.1	1.6	1.1	2.8	3.3	2.2	4.3	5.8	2.4	1.1	0.97	1.7
6	1.0	1.6	1.2	2.5	2.6	2.3	4.1	5.8	2.1	1.1	1.0	1.3
7	0.99	2.3	1.1	2.1	2.2	2.4	4.1	5.7	2.0	1.1	1.1	1.5
8	0.98	11	0.99	2.1	2.4	2.6	4.7	5.5	1.9	1.1	1.1	1.5
9	0.96	3.4	1.2	2.1	2.4	2.4	5.9	5.2	1.9	1.0	0.90	1.5
10	0.93	1.6	1.2	2.0	2.3	2.6	6.6	5.0	1.8	0.86	1.0	1.4
11	0.98	1.5	1.0	1.9	2.1	3.1	7.1	5.0	1.6	1.0	1.2	1.1
12	1.0	1.6	1.0	1.9	1.9	3.9	6.7	5.3	1.6	0.77	0.94	0.92
13	1.1	1.6	1.1	2.0	2.0	5.6	6.7	5.5	1.6	0.65	0.75	0.95
14	1.1	1.4	1.2	2.0	1.9	5.6	6.6	5.4	1.7	0.65	0.99	1.1
15	1.1	1.4	e1.2	1.8	1.8	7.6	6.8	5.1	1.8	0.91	1.1	1.1
16	1.3	1.3	e1.2	1.8	2.0	4.5	6.7	4.9	1.6	0.89	0.78	1.2
17	1.4	1.2	e1.3	1.8	2.0	3.6	8.4	4.7	1.4	0.93	0.56	0.98
18	1.3	1.1	e1.3	1.9	2.2	3.2	8.3	4.5	1.4	1.1	0.54	1.4
19	1.1	1.2	e1.4	2.1	1.9	3.1	8.2	4.3	1.4	1.2	0.63	1.4
20	1.1	1.2	e1.4	2.2	1.9	3.2	8.0	3.9	1.4	1.0	0.64	1.1
21	1.2	1.2	1.4	2.2	2.0	4.0	7.6	3.8	1.4	0.74	1.5	0.78
22	1.2	1.2	1.4	2.8	2.0	5.7	7.0	3.7	1.4	0.71	0.93	0.75
23	1.4	1.2	1.5	5.0	2.1	6.8	7.1	3.5	1.6	0.78	0.83	0.71
24	1.3	1.2	1.6	5.5	2.1	6.5	8.0	3.3	1.7	0.85	0.89	0.68
25	1.4	0.98	1.4	5.0	2.2	6.9	7.8	3.1	1.5	0.83	0.81	0.70
26	1.4	1.1	1.4	6.5	2.2	11	7.4	2.9	1.7	0.80	0.90	0.70
27	1.4	1.2	1.6	8.6	2.0	7.4	7.0	2.8	1.7	0.67	1.1	0.74
28	1.4	1.0	1.6	6.4	2.1	5.6	7.2	2.6	1.7	0.67	1.2	0.77
29	1.4	1.1	1.5	4.2	---	5.1	6.5	2.6	1.6	0.61	0.87	0.83
30	1.4	1.2	1.5	4.2	---	5.9	6.1	2.5	1.6	0.63	0.83	0.73
31	1.2	---	1.5	5.4	---	7.1	---	2.4	---	0.74	0.92	---
TOTAL	36.84	52.58	39.69	96.7	69.9	138.3	197.6	138.4	53.2	28.09	29.48	34.44
MEAN	1.19	1.75	1.28	3.12	2.50	4.46	6.59	4.46	1.77	0.91	0.95	1.15
MAX	1.4	11	1.6	8.6	5.6	11	8.4	6.0	2.5	1.3	1.5	3.1
MIN	0.93	0.98	0.99	1.5	1.8	2.0	4.1	2.4	1.4	0.61	0.54	0.68
AC-FT	73	104	79	192	139	274	392	275	106	56	58	68

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

MEAN	1.63	1.94	1.99	2.68	3.02	4.72	7.48	6.18	2.44	1.36	1.31	1.52
MAX	2.47	2.59	2.48	3.26	4.78	6.94	15.6	19.2	6.12	2.61	2.53	2.66
(WY)	2000	2000	2000	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	1.19	1.60	1.28	1.77	2.06	3.53	4.03	1.91	1.09	0.91	0.79	0.84
(WY)	2003	2002	2003	2001	2001	2001	2001	2001	2001	2003	2002	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1999 - 2003	
ANNUAL TOTAL	747.92		915.22			
ANNUAL MEAN	2.05		2.51		2.32	
HIGHEST ANNUAL MEAN					2.79	2000
LOWEST ANNUAL MEAN					1.89	2001
HIGHEST DAILY MEAN	11	Nov 8	11	Nov 8	29	Apr 21 1999
LOWEST DAILY MEAN	0.62	Aug 17	0.54	Aug 18	0.54	Aug 18 2003
ANNUAL SEVEN-DAY MINIMUM	0.69	Aug 16	0.71	Jul 25	0.69	Aug 16 2002
MAXIMUM PEAK FLOW			25	Sep 4	44	Apr 19 1999
MAXIMUM PEAK STAGE			5.04	Sep 4	7.39	Nov 12 2000
ANNUAL RUNOFF (AC-FT)	1480		1820		1680	
10 PERCENT EXCEEDS	3.7		5.9		4.6	
50 PERCENT EXCEEDS	1.5		1.6		1.8	
90 PERCENT EXCEEDS	0.81		0.89		0.93	

e Estimated.

10310000 WEST FORK CARSON RIVER AT WOODFORDS, CA

LOCATION.—Lat 38° 46'11", long 119° 49'58", in NW 1/4 SE 1/4 sec.34, T.11 N., R.19 E., Alpine County, Hydrologic Unit 16050201, in Toiyabe National Forest, on left bank, 0.3 mi downstream from bridge on State Highway 88–89, 0.6 mi southwest of Woodfords, 3.8 mi downstream from Willow Creek, and at mi 21.17 from mouth.

DRAINAGE AREA.—65.4 mi^2.

PERIOD OF RECORD.—October 1900 to May 1907, 1910–11 (fragmentary), October 1938 to current year. January 1890 to March 1892, June 1907 to September 1920 (except parts of 1910–11), at site 0.7 mi downstream; records not equivalent owing to diversions for irrigation.

REVISED RECORDS.—WDR NV-79-1: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 5,754.5 ft above NGVD of 1929. Prior to Oct. 1, 1938, nonrecording gage at about the same site at different datum. Oct. 1, 1938, to Nov. 11, 1958, water-stage recorder at same site at datum 1.02 ft lower. Nov. 13, 1958, to Jan. 30, 1963, water-stage recorder at site 150 ft downstream at datum 3.06 ft lower. January 1997 flood, channel changed course upstream and existing site unusable. Gage moved 200 ft upstream March 1997 at same datum.

REMARKS.—Records fair except for estimated daily discharges, which are poor. One small diversion above station for irrigation. Flow slightly regulated by several small reservoirs, total capacity, about 1,500 acre-ft. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,100 ft^3/s, Jan. 1, 1997, gage height, 15.36 ft (present location); minimum daily, 5.3 ft^3/s, Sept. 2, 1997.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 11, 1937, reached a stage of 8.0 ft, at different datum, from floodmarks, discharge, 3,500 ft^3/s, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge at 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 30	0015	*898	*12.96

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	18	21	27	58	29	182	111	546	90	58	22
2	14	18	22	25	51	28	132	116	516	83	42	21
3	15	18	21	26	45	29	117	128	499	80	36	21
4	14	18	21	26	44	29	108	139	500	77	32	22
5	14	35	21	27	47	29	100	129	450	70	28	22
6	14	41	21	27	44	29	95	142	411	66	26	21
7	14	51	21	26	41	30	96	145	420	62	25	20
8	14	128	20	26	e39	31	122	148	398	58	24	20
9	14	114	21	26	e37	32	145	134	395	55	23	28
10	14	66	21	26	35	34	165	139	351	52	22	21
11	14	55	20	26	34	40	185	162	303	50	21	20
12	14	53	21	26	32	46	197	206	271	47	21	19
13	15	52	22	26	33	61	128	281	248	44	21	19
14	15	45	28	26	33	75	140	339	231	42	20	19
15	15	39	18	26	32	74	131	373	220	39	20	19
16	15	34	20	26	32	61	119	395	211	53	20	18
17	15	29	15	26	32	55	113	389	221	50	19	19
18	15	25	18	26	35	50	113	394	216	39	19	19
19	18	25	20	26	31	48	113	391	199	38	19	19
20	19	25	19	27	31	50	122	415	172	36	19	19
21	19	25	22	27	30	51	117	484	155	42	24	19
22	20	26	23	28	30	66	106	571	140	37	28	18
23	20	26	e24	33	30	88	112	621	130	44	23	18
24	21	25	e24	37	31	95	137	606	119	45	22	18
25	21	24	e24	40	30	101	122	610	111	36	27	18
26	20	22	25	41	29	210	120	550	107	32	32	18
27	21	22	26	50	30	189	125	577	106	30	29	18
28	21	22	27	57	29	140	126	679	108	31	32	18
29	21	21	25	52	---	130	113	732	109	30	23	18
30	20	21	25	48	---	150	105	735	101	35	21	18
31	19	---	22	50	---	186	---	608	---	45	21	---
TOTAL	519	1123	678	986	1005	2266	3806	11449	7964	1538	797	589
MEAN	16.7	37.4	21.9	31.8	35.9	73.1	127	369	265	49.6	25.7	19.6
MAX	21	128	28	57	58	210	197	735	546	90	58	28
MIN	14	18	15	25	29	28	95	111	101	30	19	18
AC-FT	1030	2230	1340	1960	1990	4490	7550	22710	15800	3050	1580	1170

e Estimated.

10310000 WEST FORK CARSON RIVER AT WOODFORDS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1901 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	27.0	39.7	46.4	53.1	56.6	77.9	206	376	258	105	47.9	30.6
MAX	79.1	321	347	621	258	283	502	924	996	525	223	120
(WY)	1983	1951	1951	1997	1963	1986	1907	1906	1983	1907	1907	1983
MIN	8.27	13.1	12.8	13.7	16.3	18.2	46.6	56.4	37.4	18.1	11.1	7.00
(WY)	1989	1991	1991	1961	1977	1977	1975	1977	1992	1977	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1901 - 2003	
ANNUAL TOTAL	27944		32720			
ANNUAL MEAN	76.6		89.6		111	
HIGHEST ANNUAL MEAN					290	1907
LOWEST ANNUAL MEAN					26.1	1977
HIGHEST DAILY MEAN	502	Apr 15	735	May 30	5500	Jan 2 1997
LOWEST DAILY MEAN	12	Sep 2	14	Oct 1	5.3	Sep 2 1977
ANNUAL SEVEN-DAY MINIMUM	12	Sep 15	14	Oct 4	5.4	Sep 5 1977
MAXIMUM PEAK FLOW			898	May 30	8100	Jan 1 1997
MAXIMUM PEAK STAGE			12.96	May 30	15.36	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	55430		64900		80100	
10 PERCENT EXCEEDS	248		213		295	
50 PERCENT EXCEEDS	28		32		45	
90 PERCENT EXCEEDS	15		19		17	

10336580 UPPER TRUCKEE RIVER AT SOUTH UPPER TRUCKEE ROAD, NEAR MEYERS, CA

(Lake Tahoe Interagency Monitoring Program)

LOCATION.—Lat 38° 47'47", long 120° 01'05", in NW 1/4 SW 1/4 sec.17, T.11 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on left bank, 0.25 mi upstream from bridge, 0.5 mi upstream of confluence of Big Meadow and Grass Lake Creeks, 0.5 mi west of State Highway 89, and 4.0 mi south of Meyers.

DRAINAGE AREA.—14.1 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—May 1990 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 6,490 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1991, at site 1,200 ft downstream at datum 2.54 ft higher.

REMARKS.—Records fair. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,010 ft^3/s, Jan. 2, 1997, gage height, 11.31 ft; minimum daily, 0.76 ft^3/s, Sept. 1, 1990.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharges of 150 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 26	1300	157	6.88	May 29	1900	*442	*8.48

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.9	4.0	4.7	24	6.4	50	17	265	37	17	1.9
2	1.5	1.9	3.9	4.7	20	6.2	33	18	257	34	16	1.8
3	1.5	1.9	3.7	5.1	16	6.2	28	21	259	33	11	2.0
4	1.5	1.9	3.9	5.2	14	6.1	24	23	266	30	9.5	4.8
5	1.5	1.8	3.9	5.4	12	5.5	21	23	240	27	8.5	3.5
6	1.5	1.8	3.7	5.5	11	5.4	19	27	231	26	7.3	2.1
7	1.5	3.1	3.6	5.4	10	5.6	19	29	235	24	6.4	1.7
8	1.5	45	3.5	5.8	9.8	5.6	25	25	239	23	5.6	1.9
9	1.5	28	3.7	6.2	9.4	5.6	35	25	231	21	5.0	2.0
10	1.4	10	3.4	6.3	9.0	6.0	44	22	203	20	4.3	3.0
11	1.4	7.4	3.3	6.0	8.7	7.2	48	29	174	19	3.9	3.4
12	1.4	6.6	3.3	5.6	8.3	9.1	48	51	153	18	3.6	3.1
13	1.4	7.7	4.9	5.5	9.0	14	37	91	142	17	3.3	3.1
14	1.3	6.9	e5.0	5.3	8.8	17	33	113	132	16	3.1	2.9
15	1.2	6.1	e5.0	5.0	8.4	20	26	128	125	15	2.9	2.8
16	1.4	5.8	e5.0	4.9	9.1	15	22	114	125	15	2.7	2.8
17	2.0	5.5	e5.3	5.0	8.2	12	21	114	125	14	2.4	2.8
18	2.0	5.2	e5.3	5.3	7.8	10	20	114	120	13	2.3	3.5
19	2.5	5.2	e5.5	5.6	7.6	9.1	19	115	104	13	2.2	2.9
20	2.5	5.7	e5.5	5.8	7.4	9.9	21	132	91	18	2.2	2.7
21	2.6	7.7	e5.7	6.0	7.1	10	21	159	78	17	2.6	2.3
22	2.6	8.7	e5.7	6.2	7.1	14	19	190	69	13	3.4	2.1
23	2.6	7.5	e6.0	20	7.1	25	18	205	60	13	2.9	1.9
24	2.7	6.2	e6.0	25	7.2	26	21	225	54	12	2.5	1.8
25	2.7	5.4	6.5	18	7.2	25	21	225	51	11	2.1	1.8
26	2.6	5.3	6.1	17	6.7	91	20	225	51	9.8	2.3	1.8
27	2.8	4.7	5.2	26	6.9	58	18	269	50	9.9	2.1	1.7
28	2.7	4.4	4.9	28	6.6	36	19	331	50	11	1.8	1.6
29	2.5	4.3	5.2	21	---	30	18	350	47	8.9	1.7	1.6
30	2.1	4.2	4.7	18	---	36	17	349	41	8.0	1.6	1.7
31	1.8	---	5.1	20	---	53	---	282	---	11	1.7	---
TOTAL	59.7	217.8	146.5	313.5	274.4	585.9	785	4041	4268	557.6	143.9	73.0
MEAN	1.93	7.26	4.73	10.1	9.80	18.9	26.2	130	142	18.0	4.64	2.43
MAX	2.8	45	6.5	28	24	91	50	350	266	37	17	4.8
MIN	1.2	1.8	3.3	4.7	6.6	5.4	17	17	41	8.0	1.6	1.6
AC-FT	118	432	291	622	544	1160	1560	8020	8470	1110	285	145

e Estimated.

10336580 UPPER TRUCKEE RIVER AT SOUTH UPPER TRUCKEE ROAD, NEAR MEYERS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.08	6.01	8.44	16.5	11.6	20.3	51.1	135	120	43.1	8.87	3.48
MAX	5.72	20.7	37.4	120	39.2	41.3	102	216	329	220	45.9	10.4
(WY)	1999	1997	1997	1997	1996	1995	1997	1996	1995	1995	1995	1998
MIN	1.62	2.13	1.69	1.57	2.95	6.64	15.1	51.2	12.1	3.40	1.64	1.30
(WY)	2002	1991	1991	1991	2001	1991	1991	1992	1992	1994	1994	1991

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	10743.7		11466.3			
ANNUAL MEAN	29.4		31.4		36.5	
HIGHEST ANNUAL MEAN					72.3	1995
LOWEST ANNUAL MEAN					14.1	1994
HIGHEST DAILY MEAN	208	May 31	350	May 29	1130	Jan 2 1997
LOWEST DAILY MEAN	1.2	Oct 15	1.2	Oct 15	0.76	Sep 1 1990
ANNUAL SEVEN-DAY MINIMUM	1.3	Sep 20	1.4	Oct 10	0.97	Aug 29 1990
MAXIMUM PEAK FLOW			442	May 29	2010	Jan 2 1997
MAXIMUM PEAK STAGE			8.48	May 29	11.31	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	21310		22740		26420	
10 PERCENT EXCEEDS	99		108		117	
50 PERCENT EXCEEDS	8.4		7.4		8.0	
90 PERCENT EXCEEDS	1.7		1.9		2.1	

10336580 UPPER TRUCKEE RIVER AT SOUTH UPPER TRUCKEE ROAD, NEAR MEYERS, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1990 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: September 1997 to current year.

INSTRUMENTATION.—Water temperature recorder since September 1997, two times per hour.

REMARKS.—In November 1989, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. Samples were analyzed by the University of California, Davis, Tahoe Research Group. Water temperature records represent water temperature at probe within 0.5° C. Interruptions in record due to loss of communication between stream and sensor. Water temperature data for September 1997 are unpublished but are available from U.S. Geological Survey, Carson City, NV. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum recorded, 17.0° C, July 2, 3, 2001, July 14, 2002, July 21, 22, 24, 2003; minimum, freezing point on many days.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 17.0° C, July 21, 22, 24; minimum, freezing point, many days November to May.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan-taneous dis-charge, cfs (00061)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, air, deg C (00020)	Temper-ature, water, deg C (00010)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	[1]Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT 2002													
11...	1515	1.6	--	--	--	--	53	15.0	7.3	--	.19	<.003	.002
NOV													
05...	1355	2.4	--	--	--	--	51	15.0	2.0	--	.04	.003	.003
08...	1525	50	--	--	--	--	45	4.0	2.5	.58	.76	.004	.022
DEC													
03...	1540	5.1	600	10.9	96	7.3	42	.5	.5	--	.08	<.003	.013
JAN 2003													
09...	1345	6.5	--	--	--	--	36	3.0	1.6	--	.11	<.003	.015
FEB													
05...	1415	18	--	--	--	--	27	3.0	.3	--	.11	<.003	.009
MAR													
05...	1550	5.6	596	10.6	98	7.4	35	6.0	2.0	--	.09	<.003	.011
26...	1640	132	--	--	--	--	19	3.5	1.2	.19	.36	<.003	.008
APR													
02...	1300	36	--	--	--	--	20	-3.0	.5	--	.12	<.003	.003
09...	1355	30	--	--	--	--	25	15.5	4.5	.06	.06	<.003	.005
MAY													
08...	1325	26	--	--	--	--	24	1.0	1.5	.09	.21	<.003	.006
13...	1645	95	--	--	--	--	21	14.5	5.2	.14	.15	<.003	.006
16...	1440	93	--	--	--	--	20	16.0	5.5	<.04	.34	<.003	.008
21...	1550	153	--	--	--	--	18	21.5	6.5	.04	.14	.004	.011
23...	1445	193	--	--	--	--	17	16.5	5.5	.10	.22	<.003	.017
28...	1715	417	--	--	--	--	16	22.5	4.0	.22	.42	<.003	.024
JUN													
05...	1600	237	601	9.4	103	7.2	18	24.0	8.8	.12	.36	<.003	.010
JUL													
10...	1150	20	--	--	--	--	30	24.0	11.7	--	.08	.003	.005
AUG													
06...	1345	7.6	--	--	--	--	40	18.5	12.4	--	.16	.004	.011
SEP													
02...	1550	1.9	604	8.2	97	7.6	51	23.0	12.1	.06	.08	.005	.024

< Actual value is known to be less than value shown.

10336580 UPPER TRUCKEE RIVER AT SOUTH UPPER TRUCKEE ROAD, NEAR MEYERS, CA—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)	Suspnd. sedi-ment, sieve diametr percent <.063mm (70331)
OCT 2002						
11...	.015	.031	.027	2	.01	--
NOV						
05...	.013	--	.023	<1	<.01	--
08...	.013	.059	.098	36	4.9	66
DEC						
03...	.010	.018	.016	<1	<.01	--
JAN 2003						
09...	.007	.011	.011	1	.02	--
FEB						
05...	.005	.009	.009	1	.05	--
MAR						
05...	.007	.013	.014	1	.02	--
26...	.005	.011	.038	23	8.2	48
APR						
02...	.003	.007	.009	7	.68	--
09...	.004	.010	.010	1	.08	--
MAY						
08...	.003	.007	.009	1	.07	--
13...	.003	.009	.035	7	1.8	--
16...	.004	.013	.015	3	.75	--
21...	.004	.009	.026	11	4.5	--
23...	.005	.018	.028	13	6.8	--
28...	.008	.016	.226	--		--
JUN						
05...	.007	.013	.023	14	9.0	--
JUL						
10...	.014	.025	.032	1	.05	--
AUG						
06...	.016	.033	.032	2	.04	--
SEP						
02...	.024	.031	.031	2	.01	--

< Actual value is known to be less than value shown.

[1] Hydrazine method used to determine nitrate plus nitrite concentrations was found to have interferences caused by other common ions in water samples. Values may be adjusted in the future to correct for these interferences.

10336580 UPPER TRUCKEE RIVER AT SOUTH UPPER TRUCKEE ROAD, NEAR MEYERS, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	6.5	6.0	6.0	2.5	1.5	1.5	1.0	0.5	0.5	0.5	0.0	0.5
2	6.0	4.5	5.0	2.0	1.0	1.5	1.0	0.5	0.5	1.0	0.5	1.0
3	5.5	3.5	4.5	2.0	1.0	1.5	0.5	0.0	0.5	1.5	1.0	1.0
4	6.0	5.0	5.5	2.0	1.5	1.5	1.0	0.0	0.5	1.5	1.0	1.0
5	7.0	5.5	6.0	2.0	1.0	1.5	1.0	0.5	0.5	1.5	1.0	1.0
6	7.0	5.5	6.0	2.0	1.0	1.5	1.5	0.5	1.0	1.5	1.0	1.0
7	7.5	6.0	6.5	2.5	1.5	2.0	1.0	0.5	0.5	1.0	0.5	1.0
8	7.5	6.0	6.5	2.5	1.5	2.0	0.5	0.0	0.5	1.5	0.5	1.0
9	7.5	6.0	6.5	2.0	1.0	1.5	1.0	0.5	0.5	1.5	1.5	1.5
10	8.0	6.5	7.0	1.0	0.0	0.5	1.5	0.5	1.0	1.5	1.5	1.5
11	7.5	6.0	7.0	2.0	1.0	1.0	0.5	0.5	0.5	1.5	1.0	1.5
12	7.0	5.5	6.0	2.5	1.5	2.0	1.0	0.0	0.5	2.0	1.0	1.5
13	6.5	5.0	5.5	3.0	2.0	2.5	1.5	0.5	1.0	2.0	1.5	1.5
14	6.5	5.5	5.5	2.5	1.5	2.0	1.0	0.0	0.5	1.5	1.0	1.0
15	6.5	5.0	5.5	1.5	0.5	1.0	0.0	0.0	0.0	1.0	0.5	0.5
16	6.0	4.5	5.5	2.0	1.0	1.5	0.0	0.0	0.0	1.0	0.5	0.5
17	6.0	4.5	5.0	2.0	1.5	1.5	0.0	0.0	0.0	1.5	0.5	1.0
18	6.0	4.0	5.0	1.5	0.5	1.0	0.0	0.0	0.0	1.5	1.0	1.0
19	5.5	4.0	5.0	2.0	1.0	1.5	0.0	0.0	0.0	1.5	1.0	1.0
20	5.5	4.0	4.5	2.5	1.5	2.0	0.0	0.0	0.0	1.5	0.5	1.0
21	5.5	4.0	4.5	2.5	1.5	2.0	0.0	0.0	0.0	1.5	1.0	1.5
22	5.5	4.0	4.5	3.0	2.0	2.5	0.0	0.0	0.0	2.0	1.5	1.5
23	5.0	3.5	4.0	3.0	2.0	2.5	0.0	0.0	0.0	1.5	0.5	1.0
24	4.5	3.5	4.0	2.5	1.0	1.5	0.5	0.0	0.0	2.0	0.5	1.5
25	4.5	3.5	4.0	1.5	0.5	1.0	0.5	0.0	0.5	2.5	1.5	2.0
26	4.0	3.0	3.5	1.0	0.0	0.5	0.5	0.5	0.5	2.5	1.5	2.0
27	4.0	3.0	3.5	0.5	0.0	0.5	1.0	0.5	0.5	2.0	1.5	2.0
28	4.0	3.0	3.5	0.5	0.0	0.5	1.0	0.0	0.5	2.0	1.0	1.5
29	4.0	3.0	3.5	0.5	0.0	0.5	0.5	0.0	0.5	2.0	1.0	1.5
30	3.5	2.5	3.0	1.0	0.0	0.5	1.0	0.5	0.5	2.5	1.5	2.0
31	3.5	2.0	2.5	---	---	---	1.0	0.5	0.5	3.0	1.5	2.0
MONTH	8.0	2.0	5.0	3.0	0.0	1.4	1.5	0.0	0.4	3.0	0.0	1.3

		FEBRUARY			MARCH			APRIL			MAY	
1	2.5	1.0	2.0	---	---	---	2.5	0.5	1.5	3.5	0.5	2.5
2	1.0	0.5	0.5	---	---	---	0.5	0.0	0.0	4.0	2.0	3.0
3	1.0	0.0	0.5	---	---	---	0.5	0.0	0.5	4.5	2.0	3.0
4	0.5	0.0	0.5	---	---	---	1.0	0.0	0.5	4.5	1.0	2.5
5	0.5	0.0	0.5	---	---	---	1.5	0.5	0.5	5.5	1.0	3.0
6	0.5	0.0	0.5	---	---	---	1.5	0.5	1.0	4.5	1.0	3.0
7	0.5	0.0	0.5	---	---	---	3.5	0.5	2.0	4.0	2.0	3.0
8	0.5	0.0	0.5	---	---	---	4.5	0.5	2.5	2.0	0.0	1.0
9	0.5	0.0	0.5	---	---	---	5.0	1.0	2.5	2.0	0.5	1.0
10	0.5	0.5	0.5	---	---	---	5.0	1.0	3.0	5.5	1.0	2.5
11	1.0	0.5	0.5	---	---	---	5.5	2.0	3.5	6.0	1.0	3.0
12	1.0	0.5	0.5	---	---	---	2.5	0.0	1.5	6.5	1.5	3.0
13	1.5	1.0	1.0	---	---	---	0.5	0.0	0.0	6.0	1.5	3.0
14	1.5	1.0	1.5	---	---	---	0.5	0.0	0.5	5.0	1.5	3.0
15	1.5	1.0	1.5	---	---	---	1.5	0.5	1.0	5.5	1.5	3.0
16	1.5	0.5	0.5	---	---	---	1.5	0.5	1.0	5.5	1.0	3.0
17	1.0	0.5	0.5	---	---	---	3.0	1.0	1.5	6.0	1.5	3.0
18	0.5	0.0	0.5	---	---	---	3.5	1.0	2.0	6.0	1.0	3.0
19	1.0	0.5	0.5	2.0	0.5	1.0	4.5	0.5	2.0	6.5	1.5	3.5
20	1.5	0.5	1.0	3.0	1.0	2.0	3.5	1.0	2.0	7.0	1.5	3.5
21	1.0	0.5	0.5	3.5	0.5	2.0	2.5	0.5	1.5	7.0	2.0	3.5
22	1.5	0.5	1.0	4.0	1.5	2.5	2.0	0.5	1.0	7.0	2.0	3.5
23	1.5	0.5	1.0	3.0	1.5	2.0	5.0	0.5	2.5	6.0	2.0	3.5
24	2.0	1.0	1.5	4.0	1.5	2.5	3.0	1.0	2.0	6.5	2.5	3.5
25	2.0	1.0	1.5	4.0	1.0	2.5	3.0	0.5	1.5	5.5	2.5	3.5
26	1.5	0.5	1.0	3.0	1.0	1.5	3.5	0.5	1.5	6.5	2.0	3.5
27	1.0	0.5	1.0	3.5	0.5	1.5	3.5	1.0	2.0	7.0	2.5	4.0
28	1.0	0.5	0.5	3.5	0.5	1.5	4.0	0.5	2.0	6.5	2.5	4.0
29	---	---	---	4.5	0.5	2.0	3.0	0.5	1.5	6.5	2.5	4.0
30	---	---	---	5.0	1.0	3.0	4.5	0.5	2.0	6.0	3.0	4.0
31	---	---	---	5.0	1.5	3.0	---	---	---	7.5	2.5	4.0
MONTH	2.5	0.0	0.8	---	---	---	5.5	0.0	1.6	7.5	0.0	3.1

10336580 UPPER TRUCKEE RIVER AT SOUTH UPPER TRUCKEE ROAD, NEAR MEYERS, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.5	2.5	4.5	12.0	8.0	10.0	14.5	12.5	13.5	12.5	9.5	11.0
2	8.5	3.0	5.0	12.5	7.5	10.0	13.5	12.5	13.0	13.0	10.0	11.5
3	9.0	3.5	5.5	13.0	8.5	10.5	14.0	10.5	12.5	12.0	11.0	11.5
4	9.0	4.0	5.5	12.5	7.5	10.0	15.5	11.5	13.0	12.0	11.0	11.5
5	9.0	3.5	5.5	13.0	7.5	10.5	14.5	10.5	12.5	13.5	11.0	12.0
6	9.5	4.0	6.0	13.0	7.5	10.5	13.5	9.5	11.5	13.0	10.0	11.5
7	10.0	4.5	6.5	12.5	7.5	10.0	14.0	9.5	11.5	12.0	10.0	11.0
8	11.0	5.0	7.0	13.0	8.0	10.5	14.0	9.5	11.5	11.5	10.0	11.0
9	10.5	5.0	7.0	14.5	9.0	11.5	14.0	9.5	11.5	11.0	9.5	10.0
10	11.0	4.5	7.0	14.5	9.5	12.0	14.5	9.5	12.0	10.5	8.0	9.0
11	11.0	4.5	7.5	14.5	9.0	12.0	14.5	10.5	12.5	11.0	8.0	9.5
12	11.0	4.5	7.5	14.0	9.0	11.5	14.5	10.0	12.0	11.5	9.0	10.0
13	11.0	5.5	8.0	14.5	9.5	12.0	14.0	10.0	12.0	11.0	9.0	10.0
14	11.5	5.0	8.0	14.0	8.5	11.5	14.5	10.5	12.0	11.0	8.5	10.0
15	11.5	5.5	8.5	14.5	9.0	12.0	14.5	11.0	12.5	11.0	9.0	10.0
16	12.5	6.5	9.5	15.5	10.5	13.0	15.0	11.0	12.5	10.5	9.0	10.0
17	12.0	7.5	9.5	16.0	11.0	13.5	15.0	11.0	12.5	10.0	7.5	8.5
18	11.5	7.5	9.5	16.0	11.5	13.5	15.0	11.5	13.0	9.0	7.0	8.0
19	11.5	6.5	8.5	16.0	12.0	14.0	15.0	11.5	13.5	9.5	7.5	8.5
20	11.0	6.0	8.5	16.0	13.0	14.0	14.0	11.5	13.0	9.5	7.5	9.0
21	10.5	5.5	8.0	17.0	12.0	14.5	13.5	12.5	13.0	9.5	7.5	9.0
22	10.5	5.0	8.0	17.0	12.5	14.5	15.5	12.0	13.5	10.0	8.0	9.0
23	8.5	5.5	7.0	16.5	13.5	15.0	14.5	11.5	12.5	10.0	8.5	9.5
24	10.5	5.0	7.5	17.0	13.0	14.5	14.0	11.0	12.0	10.5	8.5	9.5
25	11.5	6.0	8.5	16.0	12.0	14.0	13.5	10.0	12.0	10.0	8.5	9.5
26	12.0	7.0	9.5	15.0	11.5	13.5	14.0	11.5	12.5	10.0	8.0	9.0
27	13.0	7.5	10.5	14.5	12.0	13.5	14.5	11.5	12.5	9.5	8.0	9.0
28	13.0	8.5	11.0	15.5	11.5	14.0	14.0	11.0	12.5	10.0	8.5	9.0
29	13.0	8.5	10.5	16.0	12.5	14.5	13.0	10.5	11.5	10.0	8.5	9.5
30	12.0	7.0	9.5	16.5	13.5	15.5	13.0	10.0	11.5	10.5	8.5	9.5
31	---	---	---	16.0	14.0	15.0	12.0	10.5	11.0	---	---	---
MONTH	13.0	2.5	7.8	17.0	7.5	12.6	15.5	9.5	12.3	13.5	7.0	9.9

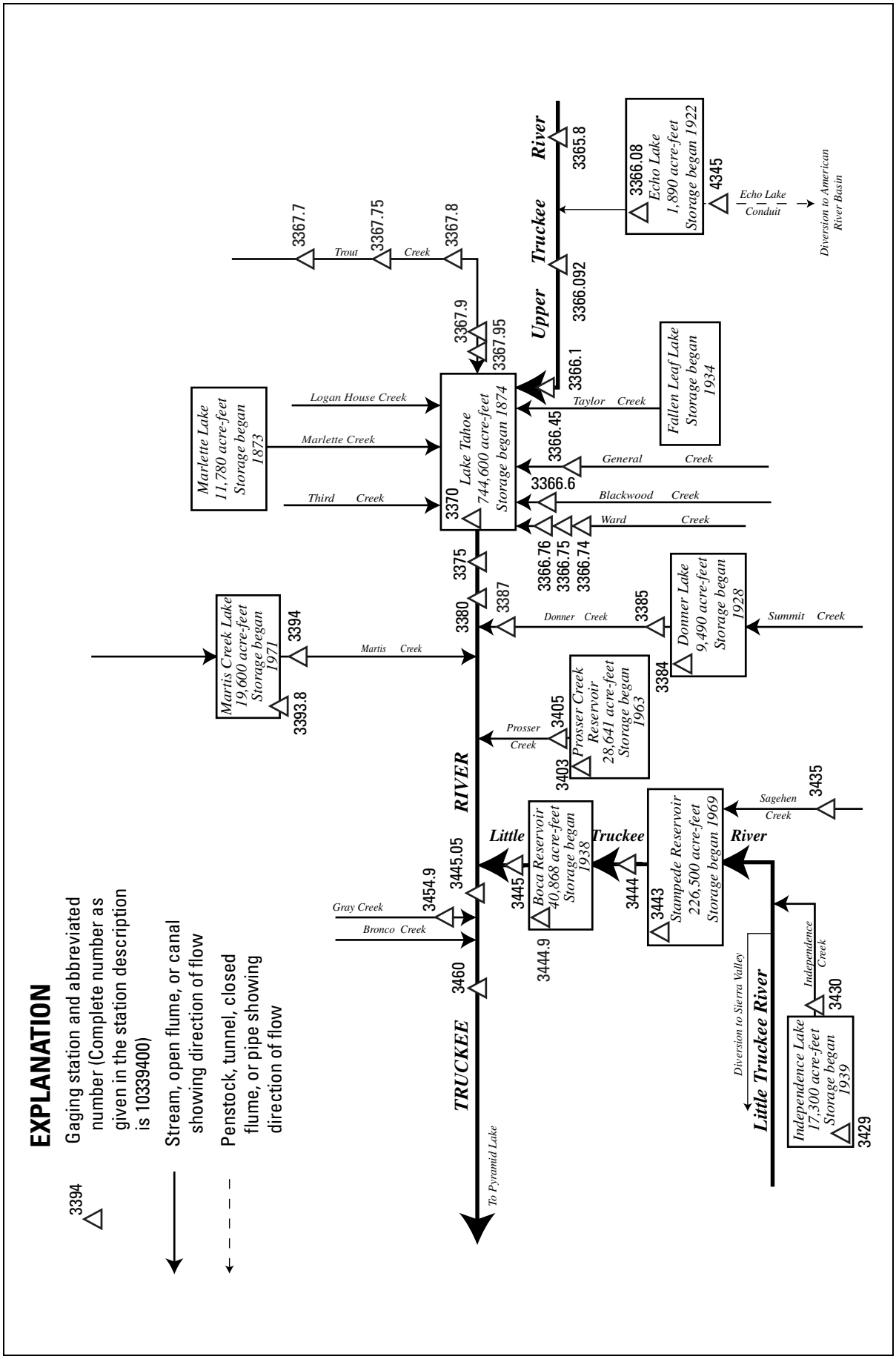


Figure 22. Diversions and storage in Truckee River Basin.

10336608 ECHO LAKE NEAR PHILLIPS, CA

LOCATION.—Lat 38° 50'05", long 120° 02'36", in NE 1/4 NE 1/4 sec.1, T.11 N., R.17 E., El Dorado County, Hydrologic Unit 16050101, Eldorado National Forest, at right end of dam on Lower Echo Lake, near valve outlet to Echo Lake Conduit, and 2.0 mi northeast of Phillips.

DRAINAGE AREA.—4.84 mi^2.

PERIOD OF RECORD.—October 1991 to current year. Unpublished records for 1981–91 water years are available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder. Prior to Dec. 3, 1991, nonrecording gage read periodically. Elevation of gage is 7,414 ft above NGVD of 1929, from topographic map.

REMARKS.—Record not computed for the winter months. Sensor non-operational all year. Reservoir is formed by concrete dam completed in 1922 and rebuilt in 1992; storage began in 1922. Usable capacity, 1,890 acre-ft, between gage heights 0.0 ft, spillway crest, and 6.0 ft, top of flashboards. Water is released via Echo Lake Conduit (station 11434500) to the South Fork American River for power and domestic use. Records from Dec. 3, 1991, including extremes, represent usable contents at 2400 hours. See schematic diagram of Truckee River Basin.

COOPERATION.—Records were collected by El Dorado Irrigation District, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 184. Contents not rounded to U.S. Geological Survey standards.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by El Dorado Irrigation District in 2000)

0	0	2	631	4	1,279	6	1,943
1	315	3	955	5	1,611		

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e874	---	---	---	---	---	---	---	e1010	1920	1970	1800
2	e851	---	---	---	---	---	---	---	1120	1930	1810	1800
3	e829	---	---	---	---	---	---	---	1250	1940	1950	1790
4	e809	---	---	---	---	---	---	---	1420	1950	1950	1800
5	e790	---	---	---	---	---	---	---	1490	1950	1930	1790
6	e767	---	---	---	---	---	---	---	1500	1950	1900	1770
7	e748	---	---	---	---	---	---	---	1520	1960	1900	1760
8	e725	---	---	---	---	---	---	---	1530	1940	1900	1760
9	e683	---	---	---	---	---	---	---	1530	1940	1890	1750
10	e657	---	---	---	---	---	---	---	1500	1940	1900	1750
11	e650	---	---	---	---	---	---	---	1490	1930	1870	1740
12	e641	---	---	---	---	---	---	---	1500	1950	1870	1730
13	e628	---	---	---	---	---	---	---	1510	1930	1850	1730
14	e618	---	---	---	---	---	---	---	1540	1920	1850	1720
15	e603	---	---	---	---	---	---	---	1590	1940	1840	1730
16	e568	---	---	---	---	---	---	---	1670	1940	1840	1700
17	e539	---	---	---	---	---	---	---	1770	1940	1830	1680
18	e514	---	---	---	---	---	---	---	1870	1940	1830	1650
19	e489	---	---	---	---	---	---	---	1920	1940	1820	1610
20	e470	---	---	---	---	---	---	---	1960	1960	1820	1580
21	e460	---	---	---	---	---	---	e331	1950	1960	1840	1550
22	e448	---	---	---	---	---	---	e356	1940	1970	1840	1510
23	e435	---	---	---	---	---	---	e388	1930	1980	1830	1460
24	e413	---	---	---	---	---	---	e416	1920	1980	1830	1420
25	e384	---	---	---	---	---	---	e445	1920	1970	1830	1390
26	e362	---	---	---	---	---	---	e470	1940	1960	1830	1360
27	e347	---	---	---	---	---	---	e498	1950	1970	1820	1330
28	e331	---	---	---	---	---	---	e527	1960	1960	1830	1290
29	e318	---	---	---	---	---	---	e644	1970	1960	1800	1260
30	e296	---	---	---	---	---	---	e787	1930	1960	1810	1210
31	e271	---	---	---	---	---	---	e897	---	1970	1810	---
MAX	874	---	---	---	---	---	---	---	1970	1980	1970	1800
MIN	271	---	---	---	---	---	---	---	1010	1920	1800	1210
a									5.95	6.07	5.59	3.80
b									+1033	+40	-160	-600
c	0	0	0	0	0	0	0	0	0	0	0	356

CAL YR 2002 c 191
WTR YR 2003 c 356

e Estimated.
a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.
c Release, in acre-feet, through Echo Lake Conduit (station 11434500), provided by El Dorado Irrigation District.

103366092 UPPER TRUCKEE RIVER AT HIGHWAY 50, ABOVE MEYERS, CA

(Lake Tahoe Interagency Monitoring Program)

LOCATION.—Lat 38° 50'55", long 120° 01'34", in NE 1/4 NE 1/4 sec.31, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on left bank, 500 ft downstream of U.S. Highway 50 bridge, 1 mi southwest of Meyers, and 7.5 mi upstream of Lake Tahoe.

DRAINAGE AREA.—39.3 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—June 1990 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 6,310 ft above NGVD of 1929, from topographic map. June 1990 to Sept. 5, 1997, at present site, datum 3.00 ft higher.

REMARKS.—Records fair except estimated daily discharges, which are poor. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,120 ft^3/s, Jan. 2, 1997, gage height, 8.95 ft; minimum daily, 1.2 ft^3/s, Dec. 22, 1990.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 28	2000	*799	*7.33

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	13	18	28	51	27	102	57	484	66	34	6.0
2	12	13	18	25	48	26	88	58	455	60	37	5.8
3	9.0	10	17	24	44	27	81	61	443	54	29	5.9
4	8.4	8.9	17	24	41	26	76	67	451	50	25	8.5
5	11	9.3	17	24	38	26	71	63	432	48	21	7.6
6	13	11	16	24	36	26	65	67	427	46	19	6.4
7	11	15	16	23	34	26	64	70	439	44	17	6.0
8	12	88	16	23	33	26	70	71	443	42	16	5.7
9	14	83	16	23	31	27	79	69	435	40	15	5.7
10	13	56	16	24	30	27	87	67	381	39	14	5.9
11	10	43	16	24	29	29	92	73	313	38	13	5.9
12	8.4	39	16	23	29	32	100	92	260	35	12	5.8
13	7.6	37	e16	22	31	38	99	136	232	32	12	5.7
14	7.0	32	e17	22	31	45	96	174	202	30	11	5.6
15	9.5	28	e17	21	31	55	82	218	182	27	10	5.5
16	13	27	e18	21	35	47	74	217	164	27	9.9	5.4
17	13	24	e18	20	31	41	70	216	158	26	9.6	6.1
18	13	23	e19	20	30	37	66	219	146	25	9.0	8.4
19	11	22	e19	21	30	35	64	219	134	25	8.7	8.4
20	8.7	22	e20	21	29	37	66	247	128	28	8.3	8.6
21	9.0	23	e20	22	28	38	65	307	122	31	9.0	7.4
22	11	24	e21	23	28	43	62	377	111	26	9.2	9.5
23	10	24	e22	39	27	60	61	422	103	26	8.5	10
24	11	23	e22	48	28	62	67	445	95	26	7.7	7.8
25	12	22	23	44	28	61	66	451	86	24	7.3	6.2
26	11	21	23	45	27	127	66	432	81	23	7.1	5.4
27	10	20	26	52	28	115	62	494	80	22	7.3	5.3
28	8.8	19	e28	58	27	94	62	604	80	23	6.5	6.6
29	7.9	19	e28	50	---	83	60	617	78	21	6.2	5.5
30	10	18	28	47	---	84	58	617	73	20	5.8	5.1
31	14	---	e28	47	---	98	---	518	---	24	5.9	---
TOTAL	330.3	817.2	612	932	913	1525	2221	7745	7218	1048	411.0	197.7
MEAN	10.7	27.2	19.7	30.1	32.6	49.2	74.0	250	241	33.8	13.3	6.59
MAX	14	88	28	58	51	127	102	617	484	66	37	10
MIN	7.0	8.9	16	20	27	26	58	57	73	20	5.8	5.1
AC-FT	655	1620	1210	1850	1810	3020	4410	15360	14320	2080	815	392

e Estimated.

103366092 UPPER TRUCKEE RIVER AT HIGHWAY 50, ABOVE MEYERS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.44	17.6	21.9	48.2	38.0	61.7	118	276	232	81.7	17.5	10.8
MAX	22.6	78.5	96.4	328	125	132	206	569	709	452	78.6	37.5
(WY)	1996	1997	1997	1997	1996	1995	1997	1993	1995	1995	1995	1995
MIN	3.25	3.33	3.15	4.37	6.69	28.2	47.2	85.0	20.4	4.81	2.28	2.50
(WY)	2002	1991	1991	1991	1991	1994	1991	1992	1992	1994	1994	1994

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	21354.7		23970.2			
ANNUAL MEAN	58.5		65.7		79.4	
HIGHEST ANNUAL MEAN					169	1995
LOWEST ANNUAL MEAN					26.1	1994
HIGHEST DAILY MEAN	378	May 18	617	May 29	2000	Jan 2 1997
LOWEST DAILY MEAN	4.4	Sep 3	5.1	Sep 30	1.2	Dec 22 1990
ANNUAL SEVEN-DAY MINIMUM	4.5	Aug 30	5.7	Sep 10	1.8	Dec 20 1990
MAXIMUM PEAK FLOW			799	May 28	5120	Jan 2 1997
MAXIMUM PEAK STAGE			7.33	May 28	8.95	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	42360		47540		57550	
10 PERCENT EXCEEDS	177		140		221	
50 PERCENT EXCEEDS	24		27		25	
90 PERCENT EXCEEDS	8.2		8.4		5.2	

103366092 UPPER TRUCKEE RIVER AT HIGHWAY 50, ABOVE MEYERS, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1990 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: September 1997 to September 2003 (discontinued).

INSTRUMENTATION.—Water temperature recorder September 1997 to September 2003, two times per hour.

REMARKS.—In November 1989, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. Samples were analyzed by the University of California, Davis, Tahoe Research Group. Water temperature records represent water temperature at probe within 0.5° C. Interruptions in record due to instrument malfunction. Water temperature data for September 1997 were not published but are available from the U.S. Geological Survey, Carson City, NV. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum, 21.0° C, July 14, 2002; minimum, freezing point on many days.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum, 20.5° C, several dlays in July and August; minimum, may not have been measured during periods of instument malfunction.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan-taneous dis-charge, cfs (00061)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, air, deg C (00020)	Temper-ature, water, deg C (00010)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	[1]Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT 2002													
11...	1315	9.5	--	--	--	--	54	16.5	10.2	--	.08	<.003	.004
NOV													
05...	1540	7.9	--	--	--	--	74	10.0	5.5	--	<.04	<.003	.009
08...	1355	96	--	--	--	--	44	5.5	4.5	.34	>.60	.004	.027
DEC													
03...	1330	17	603	10.7	99	7.3	67	8.5	2.3	.09	.09	<.003	.011
JAN 2003													
09...	1100	23	--	--	--	--	54	4.5	2.1	--	.10	<.003	.014
FEB													
05...	1210	50	--	--	--	--	57	2.0	.4	--	.12	<.003	.012
MAR													
05...	1340	25	601	10.3	102	7.1	72	10.0	5.0	--	.09	<.003	.014
26...	1450	174	--	--	--	--	32	4.5	3.5	.13	1.1	<.003	.011
27...	1245	111	--	--	--	--	32	5.5	3.5	.10	.17	<.003	.014
APR													
02...	1130	90	--	--	--	--	34	-2.0	1.1	--	.21	.014	.017
09...	1245	77	--	--	--	--	46	13.5	5.0	.09	.10	.003	.014
MAY													
08...	1140	70	--	--	--	--	52	2.0	2.1	.15	.16	<.003	.014
13...	1510	114	--	--	--	--	40	22.0	8.3	.14	.15	<.003	.007
16...	1250	188	--	--	--	--	28	18.5	5.3	<.04	.10	<.003	.013
21...	1425	231	--	--	--	--	27	E20.0	7.4	.07	.13	.004	.009
23...	1400	342	--	--	--	--	23	24.0	6.0	.07	.20	.003	.011
28...	1600	567	--	--	--	--	20	26.5	8.0	.11	.19	.003	.017
JUN													
05...	1305	342	605	9.3	102	6.9	22	22.5	9.3	.15	.32	<.003	.012
JUL													
10...	1000	40	--	--	--	--	42	22.5	12.4	--	.09	<.003	.014
AUG													
06...	1200	19	--	--	--	--	65	19.5	14.5	--	.18	<.003	.006
SEP													
02...	1340	6.1	608	8.6	114	7.4	96	25.5	17.8	.05	.07	.003	.003

[1] Hydrazine method used to determine nitrate plus nitrite concentrations was found to have interferences caused by other common ions in water samples. Values may be adjusted in the future to correct for these interferences.
< Actual value is known to be less than value shown.
> Actual value is known to be greater than value shown.

103366092 UPPER TRUCKEE RIVER AT HIGHWAY 50, ABOVE MEYERS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)	Suspnd. sedi-ment, sieve diametr percent <.063mm (70331)
OCT 2002						
11...	.003	.010	.009	1	.03	--
NOV						
05...	.003	.012	.010	1	.02	--
08...	.007	.027	.068	32	8.3	--
DEC						
03...	.004	.008	.008	3	.13	--
JAN 2003						
09...	.003	.005	.008	2	.12	--
FEB						
05...	.003	.008	.012	4	.54	--
MAR						
05...	.003	.008	.009	<1	<.07	--
26...	.005	.012	.128	92	43	50
27...	.003	.009	.015	13	3.9	--
APR						
02...	.002	.007	.009	14	3.4	--
09...	.003	.008	.011	2	.42	--
MAY						
08...	.002	.006	.010	1	.19	--
13...	.001	.006	.013	4	1.2	--
16...	.003	.013	.020	7	3.5	--
21...	.003	.020	.023	7	4.4	--
23...	.004	.009	.028	17	16	--
28...	.005	.010	--	37	57	--
JUN						
05...	.004	.010	.025	16	15	--
JUL						
10...	.007	.013	.021	2	.22	--
AUG						
06...	.005	.017	.021	1	.05	--
SEP						
02...	.005	.011	.013	1	.02	--

< Actual value is known to be less than value shown.

103366092 UPPER TRUCKEE RIVER AT HIGHWAY 50, ABOVE MEYERS, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	10.0	8.0	8.5	5.5	3.0	4.5	3.0	1.0	2.0	---	---	---
2	9.5	6.5	8.0	6.0	3.0	4.5	3.0	1.0	2.0	---	---	---
3	10.5	5.5	7.5	6.0	3.0	4.5	3.0	0.5	1.5	1.5	1.0	1.0
4	10.0	7.5	9.0	5.5	2.5	4.0	3.0	1.0	2.0	1.5	0.5	1.0
5	10.5	6.0	8.0	5.5	2.0	3.5	2.5	0.5	1.5	1.5	0.5	1.0
6	11.5	7.5	9.0	6.5	3.0	4.5	3.0	1.5	2.0	1.5	0.5	1.0
7	11.5	7.5	9.0	6.0	4.0	5.0	3.0	1.0	2.0	1.0	0.5	0.5
8	11.5	7.0	9.0	5.0	4.0	4.5	2.0	0.5	1.0	2.0	0.5	1.0
9	12.0	8.0	9.5	5.0	2.5	4.0	2.5	1.0	1.5	2.5	2.0	2.0
10	11.5	9.0	10.0	4.0	3.0	3.5	3.0	1.5	2.0	2.5	1.5	2.0
11	10.5	7.5	9.0	5.0	4.0	4.5	2.5	0.5	1.5	2.5	1.5	2.0
12	10.0	5.5	7.5	6.0	4.0	5.0	3.0	0.5	1.5	3.0	1.5	2.0
13	10.0	5.5	7.5	6.0	4.5	5.5	---	---	---	3.5	2.0	2.5
14	10.0	6.0	8.0	5.5	3.5	4.5	---	---	---	2.5	1.0	2.0
15	10.0	5.5	7.5	4.5	2.5	3.5	---	---	---	1.5	0.5	1.0
16	10.0	6.5	8.0	4.5	3.0	3.5	---	---	---	1.5	0.5	1.0
17	10.0	6.0	7.5	4.5	3.0	3.5	---	---	---	2.0	0.5	1.0
18	10.0	6.0	8.0	4.0	2.0	3.0	---	---	---	2.5	0.5	1.5
19	9.5	6.0	7.5	4.5	2.0	3.0	---	---	---	2.5	0.5	1.5
20	9.0	5.5	7.0	4.5	2.5	3.5	---	---	---	2.5	0.5	1.5
21	9.0	5.5	7.0	4.5	2.5	3.5	---	---	---	2.5	1.5	2.0
22	9.5	5.5	7.0	5.0	3.0	4.0	---	---	---	3.5	2.0	2.5
23	9.5	5.5	7.0	5.0	3.5	4.0	---	---	---	3.0	2.0	2.5
24	8.0	5.0	6.5	4.5	2.5	3.5	---	---	---	3.0	1.5	2.0
25	8.5	6.0	7.0	3.0	2.0	2.5	---	---	---	3.5	2.0	3.0
26	8.0	5.0	6.5	3.0	0.5	1.5	---	---	---	3.5	2.0	3.0
27	8.0	5.0	6.0	2.5	0.5	1.5	---	---	---	3.5	2.5	3.0
28	7.5	5.0	6.0	2.5	0.5	1.5	---	---	---	3.0	1.5	2.5
29	7.0	3.5	5.0	2.5	0.5	1.5	---	---	---	3.5	1.5	2.5
30	6.5	3.5	5.0	2.5	0.5	1.5	---	---	---	4.0	2.0	3.0
31	7.0	4.0	5.0	---	---	---	---	---	---	4.0	2.5	3.5
MONTH	12.0	3.5	7.5	6.5	0.5	3.6	---	---	---	---	---	---

		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	4.5	3.0	3.5	---	---	---	---	---	---
2	---	---	---	4.5	2.0	3.5	---	---	---	---	---	---
3	---	---	---	4.5	2.5	3.5	---	---	---	---	---	---
4	---	---	---	5.0	3.0	4.0	---	---	---	---	---	---
5	---	---	---	5.0	2.0	3.5	---	---	---	---	---	---
6	---	---	---	5.0	1.5	3.5	---	---	---	---	---	---
7	---	---	---	5.0	2.0	3.5	---	---	---	---	---	---
8	---	---	---	5.5	1.5	3.5	---	---	---	---	---	---
9	---	---	---	5.5	2.0	4.0	---	---	---	---	---	---
10	---	---	---	5.0	2.5	4.0	---	---	---	---	---	---
11	4.0	2.5	3.0	6.0	2.0	4.0	---	---	---	---	---	---
12	4.0	2.5	3.5	6.5	3.0	4.5	---	---	---	---	---	---
13	4.5	3.5	4.0	6.5	3.0	4.5	---	---	---	---	---	---
14	4.5	3.0	4.0	---	---	---	---	---	---	7.0	2.5	4.5
15	4.5	3.0	4.0	---	---	---	---	---	---	7.5	2.5	4.5
16	3.5	0.5	2.5	---	---	---	---	---	---	6.5	2.0	4.0
17	3.5	2.0	3.0	---	---	---	---	---	---	7.0	2.5	4.5
18	3.5	1.0	2.5	---	---	---	---	---	---	7.0	2.0	4.5
19	3.0	2.5	3.0	---	---	---	---	---	---	7.0	2.5	4.5
20	4.5	2.5	3.5	---	---	---	---	---	---	8.0	2.5	5.0
21	4.5	2.0	3.5	---	---	---	---	---	---	8.0	3.0	5.0
22	4.5	2.5	3.5	---	---	---	---	---	---	8.0	3.0	5.0
23	4.5	2.5	3.5	---	---	---	---	---	---	7.0	3.0	4.5
24	4.5	3.5	4.0	---	---	---	---	---	---	7.5	3.5	5.0
25	4.5	3.5	4.0	---	---	---	---	---	---	6.5	3.5	4.5
26	4.5	2.5	3.5	---	---	---	---	---	---	7.5	3.0	5.0
27	4.5	2.5	3.5	---	---	---	---	---	---	8.5	3.5	5.5
28	4.0	2.0	3.0	---	---	---	---	---	---	8.0	4.0	5.5
29	---	---	---	---	---	---	---	---	---	8.5	4.0	5.5
30	---	---	---	---	---	---	---	---	---	8.0	4.0	5.5
31	---	---	---	---	---	---	---	---	---	9.0	3.5	6.0
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

103366092 UPPER TRUCKEE RIVER AT HIGHWAY 50, ABOVE MEYERS, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	9.5	4.0	6.5	15.5	10.5	12.5	17.0	14.0	15.5	19.5	10.5	14.5
2	10.5	4.5	7.0	15.5	10.0	12.5	15.0	14.0	14.5	18.5	11.0	14.0
3	11.0	5.5	7.5	16.5	10.5	13.0	18.0	12.5	15.0	15.0	11.5	13.0
4	11.0	6.0	8.0	16.0	9.5	12.5	19.0	13.5	16.0	15.0	12.0	13.5
5	11.0	6.0	8.0	16.0	9.5	12.5	18.0	12.5	15.0	17.5	11.5	14.0
6	12.0	6.5	9.0	16.0	10.0	13.0	18.0	12.0	14.5	17.5	11.5	14.0
7	12.5	8.0	9.5	16.0	10.0	13.0	18.0	11.5	14.5	16.5	12.0	13.5
8	13.0	8.0	10.0	16.5	10.0	13.0	18.5	11.5	14.5	16.0	11.0	13.0
9	12.5	8.0	10.0	17.5	10.5	14.0	18.5	11.0	14.5	16.0	11.0	12.5
10	12.5	8.0	10.0	18.0	11.5	14.5	19.0	11.5	15.0	15.5	9.5	12.0
11	12.5	8.0	10.0	18.0	11.5	14.5	19.5	12.5	15.5	16.0	10.0	12.5
12	12.0	7.5	10.0	18.0	11.5	14.5	19.5	12.5	15.0	16.0	10.5	13.0
13	12.5	8.5	10.5	18.0	11.5	14.5	19.0	12.5	15.0	15.5	10.0	12.5
14	12.5	8.0	10.5	18.0	11.0	14.0	19.5	12.0	15.0	16.0	9.5	12.5
15	12.5	8.0	10.5	18.5	11.5	14.5	20.0	13.0	16.0	16.0	10.5	12.5
16	13.5	9.0	11.5	19.0	12.5	15.5	20.5	13.0	16.0	14.0	10.0	12.0
17	13.0	9.5	11.5	19.0	13.0	15.5	20.5	13.0	16.0	13.5	9.5	11.5
18	13.0	9.5	11.5	18.5	13.0	15.5	20.5	13.0	16.5	13.0	10.5	11.5
19	13.0	8.5	11.0	20.0	14.0	16.5	20.5	13.0	16.5	14.0	10.5	12.0
20	13.5	8.5	11.0	19.5	15.0	16.5	20.5	13.0	16.0	13.5	11.0	12.0
21	13.0	8.5	10.5	20.0	13.5	16.5	17.5	15.0	15.5	13.5	10.5	12.0
22	12.5	8.5	10.5	20.0	14.5	17.0	19.5	14.0	16.0	15.0	10.5	12.5
23	10.5	9.0	9.5	18.5	15.0	16.5	20.0	13.0	16.0	15.5	11.5	13.5
24	12.5	7.5	10.0	20.0	14.5	17.0	20.5	12.5	16.0	15.0	11.0	13.0
25	13.5	8.5	11.0	20.5	14.0	17.0	20.0	12.0	15.5	15.0	10.0	12.5
26	14.5	9.0	11.5	18.0	14.0	16.0	20.5	13.5	16.0	14.5	9.0	11.5
27	15.0	10.5	12.5	17.0	14.0	15.5	20.5	13.0	16.0	14.5	9.0	11.5
28	15.5	11.0	13.0	18.5	13.0	15.5	20.5	12.5	15.5	14.0	10.0	12.0
29	15.5	11.5	13.5	20.5	14.0	17.0	19.5	11.0	15.0	14.5	10.0	11.5
30	15.0	10.0	12.5	20.0	15.0	17.5	20.0	10.5	15.0	14.0	9.5	11.5
31	---	---	---	18.5	15.5	16.5	17.0	11.5	13.5	---	---	---
MONTH	15.5	4.0	10.3	20.5	9.5	15.0	20.5	10.5	15.4	19.5	9.0	12.6

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA

(Lake Tahoe Interagency Monitoring Program)

LOCATION.—Lat 38° 55'21", long 119° 59'26", in NW 1/4 SE 1/4 sec.4, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on left bank, 200 ft downstream from U.S. Highway 50 Bridge, 1.0 mi northeast of South Lake Tahoe Post Office, and 1.4 mi upstream from Lake Tahoe.

DRAINAGE AREA.—54.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1971 to September 1974, October 1976 to June 1977, October 1977 to June 1978, March 1980 to current year.

GAGE.—Water-stage recorder. Datum of gage is 6,229.04 ft above NGVD of 1929. Prior to Apr. 26, 1984, at datum 2.00 ft higher. Prior to Oct. 19, 1993, at site 200 ft upstream at same datum.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Two small dams may cause slight regulation at times. Some small diversions for domestic use upstream from station. Echo Lake conduit (station 11434500) diverts from Echo Lake (station 10336608), to South Fork American River Basin. See schematic diagram of Truckee River Basin. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,480 ft^3/s, Jan. 2, 1997, gage height, 9.95 ft; minimum daily, 0.01 ft^3/s, Sept. 6 2001.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 300 ft^3/s, and maximum(*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 30	0500	750	5.31

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	18	21	e35	84	38	147	100	534	95	36	e4.5
2	11	20	18	e35	80	37	132	101	503	87	47	e5.0
3	8.1	17	17	e35	73	37	123	108	489	80	35	6.8
4	7.0	14	17	e35	73	37	112	126	481	74	28	9.6
5	6.2	11	17	e35	66	36	104	113	469	70	20	13
6	10	17	17	e35	62	38	97	114	454	67	16	9.3
7	7.1	25	17	e35	62	40	95	116	458	65	14	6.7
8	8.1	133	18	e35	60	42	103	125	455	61	12	4.7
9	13	145	19	e35	60	44	114	121	456	58	11	4.5
10	14	84	16	e35	53	46	121	118	414	56	9.9	5.6
11	12	66	15	e35	47	49	127	121	364	53	9.3	5.8
12	7.3	56	16	e35	45	54	140	136	316	49	8.4	5.7
13	7.3	59	e16	e37	48	63	149	178	287	44	7.5	5.1
14	6.7	48	e20	e38	51	75	148	240	258	41	7.3	4.9
15	5.8	39	e20	39	48	110	123	292	235	37	7.1	4.7
16	14	35	e25	39	50	82	110	314	214	35	6.5	6.0
17	9.6	31	e35	36	49	69	107	306	208	33	6.0	6.2
18	13	28	e35	35	47	60	107	310	195	32	5.3	13
19	10	27	e40	35	44	54	106	302	183	31	5.0	10
20	7.1	26	e40	35	43	55	112	316	171	32	4.6	16
21	5.9	27	e40	36	41	54	113	368	162	41	6.3	14
22	11	29	e38	39	41	58	103	433	150	33	6.8	12
23	11	29	e38	67	40	102	103	494	140	32	5.9	21
24	9.8	28	e36	92	41	101	123	509	131	32	5.2	16
25	16	26	e36	76	41	93	121	536	119	28	4.1	11
26	13	25	e35	71	39	192	120	509	111	25	4.1	8.5
27	13	23	e36	83	39	195	113	535	107	24	4.5	7.6
28	10	22	e35	103	38	148	113	640	108	26	e4.5	9.6
29	9.1	22	e35	80	---	128	109	674	107	23	e4.0	9.7
30	8.0	22	e35	73	---	123	101	676	101	20	e4.0	8.1
31	19	---	e35	73	---	137	---	581	---	22	e4.2	---
TOTAL	310.9	1152	838	1507	1465	2397	3496	9612	8380	1406	349.5	264.6
MEAN	10.0	38.4	27.0	48.6	52.3	77.3	117	310	279	45.4	11.3	8.82
MAX	19	145	40	103	84	195	149	676	534	95	47	21
MIN	5.8	11	15	35	38	36	95	100	101	20	4.0	4.5
AC-FT	617	2280	1660	2990	2910	4750	6930	19070	16620	2790	693	525

e Estimated.

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15.0	39.1	48.5	65.3	67.5	106	164	304	255	85.6	20.0	12.7
MAX	72.1	225	218	484	307	305	300	567	795	448	102	55.3
(WY)	1983	1984	1982	1997	1986	1986	1982	1982	1983	1995	1983	1983
MIN	2.60	7.36	8.07	8.00	10.5	21.2	64.0	55.3	23.5	4.65	0.51	0.55
(WY)	1989	1991	1991	1991	1991	1977	1977	1977	1992	1994	2001	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1972 - 2003	
ANNUAL TOTAL	25125.7		31178.0			
ANNUAL MEAN	68.8		85.4		100	
HIGHEST ANNUAL MEAN					203	1983
LOWEST ANNUAL MEAN					29.2	1988
HIGHEST DAILY MEAN	354	May 19	676	May 30	3150	Jan 2 1997
LOWEST DAILY MEAN	1.9	Sep 3	4.0	Aug 29	0.01	Sep 6 2001
ANNUAL SEVEN-DAY MINIMUM	2.1	Aug 30	4.2	Aug 25	0.11	Sep 5 2001
MAXIMUM PEAK FLOW			750	May 30	5480	Jan 2 1997
MAXIMUM PEAK STAGE			5.31	May 30	9.95	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	49840		61840		72760	
10 PERCENT EXCEEDS	201		195		270	
50 PERCENT EXCEEDS	35		38		38	
90 PERCENT EXCEEDS	5.2		7.1		6.9	

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1972–74, 1978, 1980 to current year.

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: March 1981 to September 1983.
WATER TEMPERATURE: October 1971 to June 1974, October 1977 to June 1978, March 1980 to September 1992, September 1997 to September 2003 (discontinued).
SUSPENDED-SEDIMENT DISCHARGE: October 1971 to June 1974, October 1977 to June 1978, March 1980 to September 1992.

INSTRUMENTATION.—Water temperature recorder September 1997 to September 2003, two times per hour.

REMARKS.—In October 1992, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. Samples were analyzed by the University of California, Davis, Tahoe Research Group. Interruptions in water temperature record due to instrument problems. Water temperature records represent water temperature at probe within 0.5° C. Water temperature data for September 1997 were not published but are available from the U.S. Geological Survey, Carson City, NV. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum, 26.5° C, July 26, Aug. 10, 2001; minimum, freezing point on many days.
SEDIMENT CONCENTRATION: Maximum daily mean, 416 mg/L, Mar. 4, 1991; minimum daily mean, 0 mg/L, several days during most years.
SEDIMENT LOAD: Maximum daily, 781 tons, Mar. 8, 1986; minimum daily, 0 ton, several days during most years.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum, 25.5° C, July 30; minimum, freezing point, many days November to April.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	[1]Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT 2002													
11...	1105	14	--	--	--	--	54	13.5	9.7	--	.13	<.003	.007
NOV													
05...	1130	13	--	--	--	--	67	10.5	4.7	--	.04	.003	.017
08...	1215	177	--	--	--	--	62	6.0	4.0	.50	>.60	.005	.021
DEC													
03...	0940	20	606	11.1	97	7.1	80	2.0	.5	.13	.13	<.003	.020
JAN 2003													
13...	1120	e38	--	--	--	--	71	5.0	.1	--	.16	<.003	.017
FEB													
05...	1000	64	--	--	--	--	68	-2.5	.1	--	.16	<.003	.030
MAR													
05...	1105	36	601	10.6	101	7.1	83	7.5	3.5	.14	.15	<.003	.013
26...	1315	227	--	--	--	--	52	10.0	6.5	.19	.94	<.003	.016
27...	1115	190	--	--	--	--	40	10.0	3.5	.15	.25	.011	.013
APR													
02...	1010	136	--	--	--	--	43	-.5	.6	--	.18	<.003	.013
08...	1020	105	--	--	--	--	60	7.0	3.4	--	.19	<.003	.019
09...	1115	120	--	--	--	--	58	13.0	4.5	.10	.15	<.003	.017
23...	1130	103	--	--	--	--	64	9.0	4.4	.13	.15	<.003	.025
MAY													
02...	1210	105	--	--	--	--	69	4.5	5.6	.11	.13	<.003	.009
08...	1000	128	--	--	--	--	61	.0	3.5	.20	.18	<.003	.003
10...	1420	119	--	--	--	--	60	10.5	8.8	.14	.21	<.003	.005
13...	1335	172	--	--	--	--	43	15.5	8.7	.11	.17	<.003	.003
20...	1115	309	--	--	--	--	30	11.5	5.4	.09	.21	.005	.008
21...	1850	318	--	--	--	--	29	19.0	10.5	.08	.18	.003	.005
24...	0720	534	--	--	--	--	22	10.0	3.5	.09	.28	.003	.011
28...	1420	596	--	--	--	--	22	28.0	8.5	.14	.32	.005	.015
JUN													
05...	1110	452	606	9.6	103	6.8	22	21.0	8.3	.14	.41	.003	.011
11...	1015	368	--	--	--	--	20	18.0	9.4	.11	.17	<.003	.009
JUL													
10...	1410	60	--	--	--	--	49	22.5	19.4	--	.12	.003	.007
AUG													
06...	0945	17	--	--	--	--	71	15.0	14.7	--	.18	<.003	.011
SEP													
02...	1135	e5.0	610	8.6	110	7.3	106	16.5	16.3	.09	.14	.003	.009

[1] Hydrazine method used to determine nitrate plus nitrite concentrations was found to have interferences caused by other common ions in water samples. Values may be adjusted in the future to correct for these interferences.
< Actual value is known to be less than value shown.
> Actual value is known to be greater than value shown.
e Estimated.

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)	Suspnd. sedi-ment, sieve diametr percent <.063mm (70331)
OCT 2002						
11...	.003	.009	.013	2	.08	--
NOV						
05...	.003	.013	.014	2	.07	--
08...	.010	.044	.459	463	221	62
DEC						
03...	.004	--	.011	3	.16	--
JAN 2003						
13...	.007	.012	.024	9	e.92	--
FEB						
05...	.005	.012	.017	5	.86	--
MAR						
05...	.005	.011	.016	3	.29	--
26...	.006	.020	.194	156	96	68
27...	.004	.012	.039	24	12	--
APR						
02...	.003	--	.014	9	3.3	--
08...	.003	.010	.014	5	1.4	--
09...	.003	.011	.014	6	1.9	--
23...	.003	.007	.013	4	1.1	--
MAY						
02...	.003	.008	.013	2	.57	--
08...	.002	.012	.013	4	1.4	--
10...	.002	.006	.013	2	.64	--
13...	.001	.008	.016	6	2.8	--
20...	.002	.007	.028	15	13	--
21...	.003	.008	.031	17	15	--
24...	.004	.011	.068	75	108	--
28...	.004	.013	.058	75	121	--
JUN						
05...	.005	.011	.031	25	31	--
11...	.003	.009	.027	19	19	--
JUL						
10...	.004	.015	.024	3	.49	--
AUG						
06...	.005	.019	.019	4	.18	--
SEP						
02...	.004	.010	.013	2	e.03	--

e Estimated.

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	11.5	9.0	10.0	5.0	2.5	3.5	2.5	0.0	1.5	0.0	0.0	0.0
2	10.0	7.0	8.5	4.5	2.0	3.5	3.0	0.5	2.0	0.0	0.0	0.0
3	10.5	6.5	8.5	5.0	3.0	4.0	3.0	0.0	1.5	0.0	0.0	0.0
4	12.0	10.0	11.0	5.5	2.5	4.0	3.0	0.5	2.0	0.0	0.0	0.0
5	13.0	9.0	11.0	5.5	3.0	4.0	2.5	0.0	1.5	0.0	0.0	0.0
6	12.5	9.0	11.5	4.5	2.5	3.5	2.5	1.0	1.5	0.0	0.0	0.0
7	12.5	9.5	11.0	4.5	3.0	4.0	3.0	0.0	1.5	0.0	0.0	0.0
8	12.5	9.0	11.0	4.5	4.0	4.5	1.5	0.0	1.0	0.0	0.0	0.0
9	12.5	9.0	11.5	5.0	2.0	3.5	1.5	0.0	1.0	0.0	0.0	0.0
10	12.5	10.5	11.5	3.0	1.5	2.0	4.0	1.0	2.5	0.0	0.0	0.0
11	11.5	8.5	10.0	6.0	2.5	4.0	2.5	0.0	1.5	0.0	0.0	0.0
12	11.0	7.0	9.0	6.5	3.0	5.0	2.5	0.0	1.5	0.0	0.0	0.0
13	11.0	7.5	9.0	7.5	4.5	6.0	2.5	0.5	1.5	1.0	0.0	0.5
14	12.5	8.5	10.0	6.5	3.0	5.0	3.0	0.0	2.0	2.0	0.5	1.0
15	11.5	8.5	9.5	5.0	2.0	3.5	0.0	0.0	0.0	1.5	0.0	0.5
16	10.0	7.0	9.0	5.5	2.5	4.0	0.0	0.0	0.0	1.5	0.0	0.5
17	9.5	6.5	8.5	5.5	2.0	3.5	0.0	0.0	0.0	2.0	0.0	1.0
18	9.5	7.0	8.5	4.5	1.5	3.0	0.0	0.0	0.0	2.5	0.0	1.5
19	9.5	6.5	8.5	5.0	1.5	3.5	0.0	0.0	0.0	3.0	0.0	1.5
20	10.0	6.5	8.5	5.5	2.5	4.0	0.0	0.0	0.0	3.0	0.0	1.5
21	9.5	7.0	8.0	5.5	2.5	4.0	0.0	0.0	0.0	3.0	1.0	2.0
22	8.5	6.5	7.5	5.5	3.0	4.5	0.0	0.0	0.0	5.0	1.5	3.0
23	8.5	6.0	7.5	6.5	4.0	5.0	0.0	0.0	0.0	3.5	1.5	2.5
24	8.0	5.5	7.0	5.0	2.5	4.0	0.0	0.0	0.0	2.5	0.5	1.5
25	8.0	6.0	7.0	3.5	1.5	2.5	0.0	0.0	0.0	4.5	1.5	3.0
26	8.0	5.5	7.0	3.0	0.0	1.5	0.0	0.0	0.0	4.0	1.5	2.5
27	8.0	5.5	7.0	3.0	0.0	1.5	0.0	0.0	0.0	4.0	2.0	3.0
28	8.0	5.5	7.0	2.5	0.0	1.5	0.0	0.0	0.0	3.5	1.0	2.0
29	6.5	4.5	5.5	2.0	0.0	1.0	0.0	0.0	0.0	4.0	0.5	2.5
30	7.0	4.0	5.0	1.5	0.0	0.5	0.0	0.0	0.0	4.5	1.5	3.0
31	5.5	3.0	4.5	---	---	---	0.0	0.0	0.0	4.5	1.5	3.0
MONTH	13.0	3.0	8.7	7.5	0.0	3.5	4.0	0.0	0.7	5.0	0.0	1.2

		FEBRUARY			MARCH			APRIL			MAY	
1	3.5	1.5	3.0	6.0	1.5	3.5	5.5	1.5	4.0	8.0	3.5	6.0
2	3.0	0.0	1.5	6.0	0.0	3.0	2.5	0.0	1.0	7.0	5.0	6.0
3	3.0	0.0	1.0	5.0	1.0	3.0	4.5	0.0	2.0	8.5	4.0	6.0
4	2.5	0.0	1.0	6.0	2.5	4.0	3.0	0.0	1.5	8.5	3.0	6.0
5	1.0	0.0	0.5	7.5	2.0	4.5	6.5	0.0	3.0	10.5	3.0	7.0
6	1.0	0.0	0.5	8.0	2.0	5.0	4.5	1.5	3.0	8.5	4.0	6.5
7	1.0	0.0	0.5	8.0	2.0	5.0	9.0	1.5	5.0	8.5	4.5	6.5
8	1.0	0.0	0.5	8.0	2.0	5.0	10.0	3.0	6.5	7.5	3.0	4.5
9	1.5	0.0	0.5	8.0	2.0	5.0	9.5	3.5	6.5	6.5	0.5	3.5
10	2.5	0.0	1.0	7.0	3.0	5.0	8.0	3.5	6.5	10.5	3.5	7.0
11	3.5	0.0	2.0	8.0	2.5	5.5	9.0	4.0	6.5	11.5	4.0	7.5
12	3.0	0.5	2.0	9.0	3.0	6.0	7.0	1.5	4.5	12.0	5.0	8.5
13	5.0	2.5	3.5	9.0	3.5	6.0	1.5	0.0	0.5	11.0	4.5	8.0
14	6.0	1.5	4.0	8.0	3.0	5.5	5.0	0.0	1.5	9.5	4.0	7.0
15	5.0	2.0	3.5	5.5	2.5	4.0	6.0	0.5	3.0	10.0	3.5	7.0
16	3.5	0.0	2.0	4.5	0.5	2.5	4.0	1.5	3.0	9.5	3.0	6.0
17	3.0	0.0	1.5	5.5	1.5	3.5	8.0	2.0	4.0	10.0	3.0	6.5
18	3.5	0.0	2.0	7.5	1.0	4.0	7.5	2.5	5.0	9.5	3.0	6.0
19	4.5	1.0	2.5	7.0	1.0	4.0	9.5	2.0	5.5	9.5	3.0	6.5
20	5.5	0.5	3.0	8.0	2.5	5.0	7.0	3.0	5.5	10.5	3.5	7.0
21	5.5	0.0	3.0	8.5	2.5	6.0	6.0	3.0	4.5	10.5	3.5	7.0
22	5.5	0.5	3.0	8.5	4.0	6.5	5.5	1.5	3.5	10.5	3.5	7.0
23	5.5	0.5	3.0	7.0	3.5	5.0	9.5	2.5	5.5	9.0	4.0	6.5
24	5.0	2.5	3.5	9.0	3.0	6.0	8.0	3.0	5.5	10.0	4.0	6.5
25	5.0	2.5	3.5	8.0	3.0	6.0	7.0	1.0	4.0	8.5	4.0	6.0
26	5.0	0.5	3.0	7.0	3.5	5.5	8.0	0.0	4.0	9.5	3.5	6.5
27	4.0	1.5	3.0	7.0	1.5	4.0	8.0	3.0	5.5	10.5	4.5	7.5
28	4.0	0.0	2.5	7.0	1.5	4.0	8.5	2.5	5.5	10.5	4.5	7.0
29	---	---	---	8.0	1.5	5.0	7.5	2.5	5.0	10.5	4.5	7.5
30	---	---	---	9.0	3.0	6.0	9.0	2.0	5.5	10.0	5.0	7.5
31	---	---	---	9.0	3.5	6.5	---	---	---	10.5	4.5	7.0
MONTH	6.0	0.0	2.2	9.0	0.0	4.8	10.0	0.0	4.2	12.0	0.5	6.6

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	11.0	4.5	7.5	18.0	11.0	14.5	19.0	16.0	17.5	21.0	12.5	16.5
2	11.5	5.5	8.5	18.0	11.0	14.5	17.0	15.5	16.0	22.5	14.0	18.0
3	12.0	5.5	9.0	19.0	11.5	15.5	19.5	13.0	16.0	19.0	16.0	17.0
4	12.5	6.5	9.5	19.0	11.0	15.5	23.0	15.5	19.0	19.5	13.5	16.5
5	12.5	6.5	9.5	19.0	11.0	15.5	22.0	14.5	18.0	21.5	13.5	17.0
6	13.0	7.0	10.0	19.5	11.5	15.5	21.5	14.0	18.0	20.5	13.5	17.0
7	14.0	8.0	11.0	19.0	11.5	15.5	22.0	13.5	17.5	19.5	14.0	16.5
8	14.0	8.0	11.0	20.0	11.5	15.5	22.0	14.0	18.0	18.0	13.5	15.5
9	14.0	8.5	11.0	21.0	12.5	17.0	21.5	13.5	17.5	15.5	12.5	13.5
10	14.0	8.0	11.0	21.5	13.5	17.5	22.0	13.5	18.0	17.5	10.0	13.5
11	14.0	8.5	11.0	21.5	13.5	17.5	22.5	14.5	18.5	19.5	11.5	15.0
12	13.5	8.5	11.0	21.0	13.5	17.5	22.5	14.5	18.5	20.5	13.0	16.5
13	14.0	9.5	11.5	21.5	14.0	17.5	22.0	14.5	18.0	19.5	13.0	16.5
14	14.0	9.0	11.5	21.5	13.5	17.5	22.5	14.5	18.5	19.0	12.0	15.5
15	14.5	9.5	12.0	22.0	14.0	18.0	24.0	16.0	19.5	18.5	12.5	15.5
16	16.0	10.0	13.0	23.0	14.5	18.5	24.0	16.0	19.5	17.5	11.5	14.5
17	15.5	11.0	13.0	23.0	15.5	19.5	24.5	16.0	20.0	16.5	10.0	13.5
18	15.0	11.0	13.0	22.5	16.5	19.5	24.5	16.5	20.0	17.0	9.5	13.5
19	15.5	10.0	12.5	23.5	17.0	20.0	24.5	16.5	20.5	17.5	11.0	14.0
20	15.0	9.5	12.5	24.0	18.0	21.0	23.0	16.5	20.0	18.0	11.5	14.5
21	15.0	9.5	12.0	24.5	16.0	20.0	20.5	18.0	19.0	18.5	11.0	14.5
22	15.0	9.0	12.0	24.5	17.0	20.5	23.0	16.0	19.0	18.5	11.5	15.0
23	12.0	9.0	10.5	22.0	18.5	19.5	23.5	15.5	19.0	18.5	12.0	15.0
24	15.0	7.5	11.0	24.0	16.5	20.0	24.0	16.0	19.5	19.0	12.0	15.0
25	16.5	9.0	12.5	23.5	17.0	20.0	23.5	15.5	19.0	18.5	12.0	15.0
26	17.0	9.5	13.5	23.5	16.5	20.0	22.5	17.0	19.5	18.0	11.0	14.5
27	18.5	11.0	14.5	21.0	17.0	19.5	22.5	15.5	18.5	17.5	10.5	14.0
28	19.5	11.5	15.5	22.0	15.5	19.0	22.5	15.5	18.5	18.0	11.5	14.5
29	18.5	12.0	15.5	25.0	17.0	21.0	22.5	14.5	18.5	17.0	11.5	14.5
30	18.0	11.0	14.5	25.5	18.5	22.0	22.5	14.0	18.0	17.0	11.0	14.0
31	---	---	---	23.0	19.0	20.5	19.0	15.0	16.5	---	---	---
MONTH	19.5	4.5	11.7	25.5	11.0	18.2	24.5	13.0	18.5	22.5	9.5	15.2
YEAR	25.5	0.0	8.0									

10336645 GENERAL CREEK NEAR MEEKS BAY, CA

LOCATION.—Lat 39° 03'07", long 120° 07'03", in NE 1/4 NE 1/4 sec.20, T.14 N., R.17 E., El Dorado County, Hydrologic Unit 16050101, on right bank, 200 ft upstream from State Highway 89, 0.4 mi upstream from Lake Tahoe, and 1.1 mi north of Meeks Bay.

DRAINAGE AREA.—7.44 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—July 1980 to current year.

GAGE.—Water-stage recorder. Datum of gage is 6,250.38 ft above NGVD of 1929.

REMARKS.—Records good except for estimated daily discharges, which are fair. No known diversion or regulation upstream from station. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 797 ft^3/s, Jan. 2, 1997, gage height, 7.86 ft (backwater from plugged culvert), from rating curve extended above 180 ft^3/s, on basis of computation of flow through culvert; minimum daily, 0.29 ft^3/s, July 28, Aug. 15, 1994.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 28	2200	242	2.80

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.87	0.82	1.5	e5.0	18	6.2	44	12	118	3.7	1.5	0.99
2	0.84	0.84	1.5	4.8	18	6.1	26	12	117	3.3	1.5	0.94
3	0.84	0.84	1.5	4.5	15	6.2	21	14	113	e3.0	1.5	0.98
4	0.86	0.84	1.5	4.6	14	6.2	18	19	110	2.8	1.4	1.1
5	0.86	0.84	1.5	4.5	e13	6.0	17	18	93	2.6	1.2	1.1
6	0.86	0.84	1.5	4.6	e13	6.4	15	20	83	2.4	1.2	0.95
7	0.84	1.9	1.5	4.9	e12	6.6	14	21	79	2.3	1.2	0.91
8	0.81	7.4	1.5	4.6	e11	6.6	17	20	73	2.2	1.1	0.94
9	0.80	4.5	1.5	4.7	e10	6.7	22	17	65	2.1	1.1	1.0
10	0.80	2.5	1.5	4.9	e9.2	7.1	27	16	53	1.9	1.1	1.1
11	0.82	2.0	1.6	4.9	e8.4	7.5	29	19	40	1.9	1.1	1.0
12	0.83	2.0	1.7	4.8	e7.7	8.8	33	29	29	1.8	1.0	0.94
13	0.82	2.2	3.1	4.7	7.7	12	24	54	21	1.7	1.0	0.94
14	0.77	2.4	11	4.9	8.4	17	23	80	19	1.7	1.0	0.93
15	0.77	2.2	6.4	4.9	7.9	23	20	90	18	1.6	1.0	0.94
16	0.77	2.0	6.8	4.6	7.7	18	17	88	17	1.6	0.95	0.98
17	0.78	1.9	e8.8	4.5	7.2	14	15	76	16	1.5	0.92	0.94
18	0.78	1.8	e7.9	4.7	7.7	12	15	81	15	1.5	0.93	0.97
19	0.78	1.7	e7.2	5.1	7.0	10	15	79	14	1.4	0.88	1.0
20	0.73	1.7	e6.4	5.2	6.6	10	15	86	12	1.4	0.87	1.0
21	0.77	1.8	e5.6	5.5	6.5	10	16	110	11	1.4	1.7	0.99
22	0.80	2.0	5.1	6.0	6.9	12	15	134	9.8	1.4	1.6	1.00
23	0.83	2.1	4.5	16	7.1	21	14	156	8.8	1.4	1.2	0.90
24	0.78	2.1	4.5	22	6.7	23	16	159	8.5	1.4	1.1	0.91
25	0.79	1.9	e4.5	19	6.6	21	16	140	8.2	1.3	1.1	0.90
26	0.77	1.8	4.4	18	6.6	51	14	125	7.4	1.4	1.2	0.91
27	0.83	1.7	5.4	21	6.6	54	15	152	6.4	1.4	1.1	0.88
28	0.84	1.7	6.6	29	6.2	30	14	168	5.7	1.4	0.98	0.86
29	0.85	1.7	9.8	21	---	24	14	163	5.0	1.3	0.97	0.86
30	0.84	1.5	5.7	17	---	25	12	153	4.1	1.2	0.90	0.94
31	0.84	---	e5.4	16	---	39	---	126	---	1.3	0.95	---
TOTAL	25.17	59.52	137.4	285.9	262.7	506.4	573	2437	1179.9	57.3	35.25	28.80
MEAN	0.81	1.98	4.43	9.22	9.38	16.3	19.1	78.6	39.3	1.85	1.14	0.96
MAX	0.87	7.4	11	29	18	54	44	168	118	3.7	1.7	1.1
MIN	0.73	0.82	1.5	4.5	6.2	6.0	12	12	4.1	1.2	0.87	0.86
AC-FT	50	118	273	567	521	1000	1140	4830	2340	114	70	57

e Estimated.

10336645 GENERAL CREEK NEAR MEEKS BAY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.04	6.36	8.44	9.62	12.3	18.0	37.7	63.4	35.2	6.39	1.33	1.32
MAX	15.5	45.4	58.7	68.9	64.2	60.1	70.4	114	158	49.6	4.72	4.36
(WY)	1983	1982	1982	1997	1986	1986	1989	1999	1983	1983	1983	1983
MIN	0.73	0.84	0.89	0.90	0.99	5.86	15.9	7.18	1.63	0.49	0.35	0.39
(WY)	1993	1993	1991	1991	1991	1994	1991	1992	2001	1994	1994	1992

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1980 - 2003	
ANNUAL TOTAL	4600.07		5588.34			
ANNUAL MEAN	12.6		15.3		16.8	
HIGHEST ANNUAL MEAN					34.7	1982
LOWEST ANNUAL MEAN					4.96	1988
HIGHEST DAILY MEAN	95	Apr 14	168	May 28	600	Jan 1 1997
LOWEST DAILY MEAN	0.73	Oct 20	0.73	Oct 20	0.29	Jul 28 1994
ANNUAL SEVEN-DAY MINIMUM	0.76	Sep 22	0.77	Oct 14	0.31	Aug 15 1994
MAXIMUM PEAK FLOW			242	May 28	797	Jan 2 1997
MAXIMUM PEAK STAGE			2.80	May 28	7.86	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	9120		11080		12200	
10 PERCENT EXCEEDS	48		29		51	
50 PERCENT EXCEEDS	4.5		4.9		3.3	
90 PERCENT EXCEEDS	0.83		0.86		0.83	

10336645 GENERAL CREEK NEAR MEEKS BAY, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1981 to current year.

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: October 1980 to September 1983.
WATER TEMPERATURE: October 1980 to September 1992.
SUSPENDED-SEDIMENT DISCHARGE: October 1980 to September 1992.

REMARKS.—In October 1992, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. Samples were analyzed by the University of California, Davis, Tahoe Research Group. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan-taneous dis-charge, cfs (00061)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, air, deg C (00020)	Temper-ature, water, deg C (00010)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	[1]Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT 2002													
22...	1455	.80	607	9.2	92	--	60	12.2	5.5	--	.14	.004	.002
NOV													
07...	1900	2.1	--	--	--	--	62	2.5	3.5	.15	.15	<.003	.004
07...	2245	4.9	--	--	--	--	68	4.5	3.5	.28	.48	.003	.006
08...	0910	8.3	--	--	--	--	65	3.5	2.8	.57	.88	.004	.011
08...	1920	6.6	--	--	--	--	62	3.8	3.5	.69	.75	.005	.013
09...	1430	4.2	--	--	--	--	56	.0	3.0	.29	.30	.004	.019
DEC													
05...	1910	1.5	606	10.6	95	--	54	-1.5	1.5	--	.10	.004	.003
13...	2120	7.0	--	--	--	--	45	2.5	1.5	.07	.26	.004	.003
14...	0845	11	--	--	--	--	36	6.5	1.9	.22	.28	.003	.009
14...	1730	12	--	--	--	--	32	.0	1.0	.19	.24	.005	.010
JAN 2003													
20...	1650	5.2	607	11.3	100	--	35	1.0	1.0	--	.10	<.003	.003
23...	0925	15	--	--	--	--	29	3.0	.5	.09	.14	<.003	.004
23...	1615	18	--	--	--	--	26	2.5	.5	.13	.20	<.003	.006
28...	1250	28	--	--	--	--	23	3.0	1.2	.14	.27	<.003	.007
FEB													
20...	1635	6.6	606	10.7	97	--	31	2.5	2.0	--	.17	<.003	.003
MAR													
15...	1210	28	--	--	--	--	25	1.0	1.5	.15	.23	<.003	.009
24...	1230	22	606	10.4	99	--	24	6.5	3.8	.10	.15	<.003	.003
26...	1245	64	--	--	--	--	22	4.0	2.5	.16	.42	<.003	.004
26...	1820	77	--	--	--	--	19	1.2	1.2	.17	.23	<.003	.008
APR													
10...	1900	25	604	10.3	99	--	20	3.5	3.8	--	.14	<.003	.002
MAY													
06...	1655	21	602	10.1	99	--	26	6.5	4.5	--	.10	<.003	.002
10...	1310	15	--	--	--	--	27	8.0	5.5	.09	.17	<.003	.002
14...	1930	88	--	--	--	--	17	11.0	5.0	.12	.20	.003	.003
17...	0825	71	--	--	--	7.0	16	4.0	1.5	.08	.19	.003	.003
24...	1015	127	--	--	--	--	12	14.5	3.0	.06	.17	<.003	.003
29...	1755	151	--	--	--	--	11	22.5	7.5	.13	.15	.005	.003
31...	0740	122	--	--	--	--	11	6.5	3.0	.12	.11	.003	.003
JUN													
01...	2005	133	--	--	--	--	11	16.0	7.5	.12	.14	.003	.003
07...	2005	78	606	8.7	98	--	13	--	10.5	.13	.15	.003	.004
15...	2120	18	--	--	--	--	21	13.0	11.0	.11	.13	.003	.003
JUL													
08...	1650	2.1	610	7.3	96	--	41	24.0	17.5	--	.16	.005	.003
AUG													
14...	1750	.80	611	6.8	89	--	55	23.8	17.5	--	.11	<.003	.002
21...	1805	2.9	--	--	--	--	56	15.0	15.0	.12	.21	.003	.003
21...	2045	2.5	--	--	--	--	56	--	14.0	.15	.20	.004	.002
SEP													
22...	1200	1.1	609	8.1	91	--	78	19.0	10.5	.06	.08	.003	.005

[1] Hydrazine method used to determine nitrate plus nitrite concentrations was found to have interferences caused by other common ions in water samples. Values may be adjusted in the future to correct for these interferences.
< Actual value is known to be less than value shown.

10336645 GENERAL CREEK NEAR MEEKS BAY, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)
OCT 2002					
22...	.011	.022	.022	<1	<.01
NOV					
07...	.015	.029	.035	2	.01
07...	.029	.060	.111	22	.29
08...	.027	.058	.050	10	.22
08...	.011	.041	.070	18	.32
09...	.006	.023	.029	2	.02
DEC					
05...	.009	.013	.014	<1	<.01
13...	.013	.021	.045	14	.26
14...	.007	.013	.028	5	.15
14...	.004	.009	.021	9	.29
JAN 2003					
20...	.003	.008	.009	3	.04
23...	.002	.006	.015	6	.24
23...	.002	.007	.012	4	.19
28...	.002	.006	.007	4	.30
FEB					
20...	.003	.008	.010	<1	<.02
MAR					
15...	.004	.009	.016	11	.83
24...	.002	.008	.007	<1	<.06
26...	.005	.011	.043	47	8.1
26...	.004	.011	.023	20	4.2
APR					
10...	.007	.006	.011	<1	<.07
MAY					
06...	.002	.007	.009	1	.06
10...	.001	.005	.008	1	.04
14...	.001	.005	.024	50	12
17...	.001	.004	.006	6	1.1
24...	.002	.009	.014	10	3.4
29...	.001	.006	.011	15	6.1
31...	.001	.003	.007	7	2.3
JUN					
01...	.002	.006	.009	17	6.1
07...	.001	.006	.008	4	.84
15...	.002	.008	.010	4	.19
JUL					
08...	.009	--	.022	1	.01
AUG					
14...	.015	.021	.025	1	<.01
21...	.014	.021	.036	5	.04
21...	.012	.018	.029	3	.02
SEP					
22...	.016	.027	.026	<1	<.01

< Actual value is known to be less than value shown.

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA

LOCATION.—Lat 39° 06'27", long 120° 09'40", in NW 1/4 NE 1/4 sec.36, T.15 N., R.16 E., Placer County, Hydrologic Unit 16050101, on right bank, 300 ft upstream from bridge on State Highway 89, 1,000 ft upstream from Lake Tahoe, and 4.6 mi south of Tahoe City.

DRAINAGE AREA.—11.2 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1960 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 6,234.59 ft above NGVD of 1929. Oct. 1, 1960, to Sept. 30, 1964, at datum 10.25 ft lower and Oct. 1, 1964, to Aug. 27, 1970, at datum 12 ft lower, at site 400 ft downstream.

REMARKS.—Records good except estimated daily discharges, which are fair. No known diversion or regulation upstream from station. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,940 ft^3/s, Jan. 1, 1997, gage height, 9.82 ft; maximum gage height, 9.90 ft, site and datum then in use, Dec. 22, 1964; minimum daily, 0.50 ft^3/s, Sept. 24, 1968.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 28	1930	372	3.01

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	1.4	3.4	e11	36	14	73	26	200	31	5.2	3.1
2	1.6	1.4	3.4	e10	32	13	58	27	209	29	5.4	3.1
3	1.6	1.4	3.4	10	29	13	48	31	206	27	5.4	3.2
4	1.6	1.5	3.5	10	27	13	44	35	212	25	5.0	3.6
5	1.6	1.5	3.4	10	26	13	40	35	188	23	4.6	3.6
6	1.5	1.5	3.5	10	24	13	36	39	179	21	4.6	3.4
7	1.5	3.2	3.5	10	23	13	35	40	187	19	4.8	3.2
8	1.5	17	3.5	10	e22	14	38	39	182	18	4.5	3.1
9	1.4	11	3.5	10	e20	14	44	35	164	17	3.9	3.2
10	1.4	3.6	3.5	10	19	14	50	35	146	16	3.6	3.3
11	1.4	2.6	3.5	10	19	14	58	41	128	15	3.4	3.0
12	1.4	2.8	3.5	10	18	17	58	57	113	14	3.2	2.9
13	1.4	3.3	6.0	10	19	22	49	77	103	13	3.2	2.8
14	1.3	3.6	e18	10	19	27	44	112	94	12	3.1	2.8
15	1.3	3.3	e10	10	19	35	39	139	86	11	2.9	2.6
16	1.3	3.1	e11	10	19	29	36	136	88	11	3.0	2.4
17	1.3	3.1	e14	10	18	25	34	129	93	10	3.1	2.5
18	1.3	3.2	e13	10	17	23	33	130	87	9.7	3.0	2.6
19	1.3	3.1	e11	10	17	22	32	126	75	9.0	2.7	2.5
20	1.4	3.3	e11	11	16	22	32	137	66	8.7	2.6	2.3
21	1.4	3.5	e9.9	11	16	22	32	175	59	8.3	5.1	2.3
22	1.3	3.9	e9.0	13	15	24	30	209	53	7.8	4.7	2.2
23	1.4	3.9	8.0	e28	15	49	30	241	49	7.7	3.9	2.2
24	1.4	3.9	e8.0	e38	15	51	33	252	46	7.3	3.6	2.1
25	1.4	3.8	e8.0	36	15	46	30	228	43	6.9	3.5	2.0
26	1.3	3.7	8.1	32	14	120	29	198	41	6.6	3.7	2.0
27	1.4	3.6	e9.1	e36	14	93	28	230	41	6.3	3.3	2.0
28	1.5	3.5	e10	e39	14	65	28	274	40	6.1	3.1	2.0
29	1.4	3.4	e11	e36	---	56	27	273	38	5.6	3.2	1.9
30	1.4	3.4	e11	33	---	58	26	253	34	5.5	3.1	2.0
31	1.5	---	e11	32	---	70	---	214	---	5.3	3.2	---
TOTAL	44.1	111.5	238.7	536	557	1024	1174	3973	3250	412.8	117.6	79.9
MEAN	1.42	3.72	7.70	17.3	19.9	33.0	39.1	128	108	13.3	3.79	2.66
MAX	1.6	17	18	39	36	120	73	274	212	31	5.4	3.6
MIN	1.3	1.4	3.4	10	14	13	26	26	34	5.3	2.6	1.9
AC-FT	87	221	473	1060	1100	2030	2330	7880	6450	819	233	158

e Estimated.

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.66	12.1	19.1	24.8	21.0	30.3	60.7	128	100	28.3	5.61	2.81
MAX	28.1	94.8	157	201	116	122	124	312	320	149	36.1	10.3
(WY)	1963	1984	1965	1997	1986	1986	1989	1969	1983	1983	1983	1982
MIN	1.19	1.68	1.90	2.00	2.27	3.82	13.6	29.7	7.20	2.76	1.31	1.00
(WY)	2002	1978	1977	1991	1991	1977	1975	1977	1992	2001	2001	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1961 - 2003	
ANNUAL TOTAL	10143.2		11518.6			
ANNUAL MEAN	27.8		31.6		36.5	
HIGHEST ANNUAL MEAN					73.4	1982
LOWEST ANNUAL MEAN					8.71	1977
HIGHEST DAILY MEAN	172	Apr 14	274	May 28	2000	Jan 1 1997
LOWEST DAILY MEAN	1.3	Oct 14	1.3	Oct 14	0.50	Sep 24 1968
ANNUAL SEVEN-DAY MINIMUM	1.3	Oct 13	1.3	Oct 13	0.54	Sep 23 1968
MAXIMUM PEAK FLOW			372	May 28	2940	Jan 1 1997
MAXIMUM PEAK STAGE			3.01	May 28	9.90	Dec 22 1964
ANNUAL RUNOFF (AC-FT)	20120		22850		26430	
10 PERCENT EXCEEDS	92		87		106	
50 PERCENT EXCEEDS	9.9		11		10	
90 PERCENT EXCEEDS	1.5		1.6		2.1	

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1975–78, 1980 to current year.

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: December 1980 to September 1983.
WATER TEMPERATURE: October 1974 to June 1978 (1977–78 storm season only), October 1979 to September 1992.
SUSPENDED-SEDIMENT DISCHARGE: October 1974 to June 1978 (1977–78 storm season only), October 1979 to September 1992.

REMARKS.—In October 1992, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. Samples were analyzed by the University of California, Davis, Tahoe Research Group. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan-taneous dis-charge, cfs (00061)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, air, deg C (00020)	Temper-ature, water, deg C (00010)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	[1]Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT 2002													
22...	1355	1.3	605	9.5	99	--	78	10.0	7.1	--	.04	.003	<.002
NOV													
07...	1755	3.0	--	--	--	--	75	3.2	4.5	.10	.11	<.003	.003
07...	2145	6.5	--	--	--	--	71	4.0	3.5	.25	.29	<.003	.004
08...	0810	8.4	--	--	--	--	72	3.0	3.0	.23	.31	.004	.005
08...	1605	20	--	--	--	--	63	4.0	4.0	.25	.67	<.003	.004
08...	1625	22	--	--	--	--	62	--	--	.25	--	<.003	.004
08...	1720	20	--	--	--	--	62	3.5	4.0	.24	.61	.003	.030
09...	1330	5.7	--	--	--	--	60	.0	3.0	.25	.30	<.003	.133
DEC													
05...	1805	3.3	607	10.2	97	--	69	-1.0	3.5	.05	.07	.004	.002
13...	2020	9.7	--	--	--	--	57	2.5	2.5	.13	.26	.004	.003
14...	0755	e62	--	--	--	--	41	3.5	1.5	.22	.42	<.003	.056
14...	1630	e39	--	--	--	--	45	.0	1.5	.11	.18	.004	.078
JAN 2003													
20...	1535	11	607	10.4	100	--	59	2.5	4.0	--	.07	<.003	.004
23...	0830	e38	--	--	--	--	47	3.0	1.2	.15	.17	<.003	.016
23...	1510	e37	--	--	--	--	47	3.0	3.0	.09	.10	<.003	.018
28...	1155	e49	--	--	--	--	48	2.0	2.5	.10	.12	<.003	.035
FEB													
20...	1530	16	607	10.0	99	--	58	2.5	5.3	--	.12	<.003	.004
MAR													
15...	1120	40	--	--	--	--	49	.0	1.2	.07	.15	<.003	.032
24...	1120	47	606	10.1	100	--	50	3.2	5.0	.08	.13	<.003	.028
26...	1155	175	--	--	--	--	37	2.5	2.5	.13	.90	<.003	.045
26...	1730	155	--	--	--	--	40	1.5	2.5	.14	.24	<.003	.060
APR													
10...	1805	52	605	9.8	99	--	49	7.0	6.0	--	.11	<.003	.018
MAY													
06...	1545	38	602	9.2	99	--	56	6.5	8.0	--	.13	<.003	.002
10...	1205	33	--	--	--	--	54	4.5	7.5	--	.13	<.003	.004
14...	1845	148	--	--	--	--	40	11.8	4.5	.12	.38	.004	.016
17...	0720	122	--	--	--	7.2	42	.0	1.8	.11	.19	.004	.030
24...	1145	192	--	--	--	--	35	17.0	6.0	.07	.16	.003	.031
29...	1615	266	--	--	--	--	30	22.5	8.0	.06	.15	.004	.018
31...	0650	200	--	--	--	--	32	3.0	3.0	.12	.17	.004	.026
JUN													
01...	1920	240	--	--	--	--	29	17.0	6.0	.11	.21	.004	.016
07...	1905	230	607	9.5	100	--	26	20.0	7.5	.15	.21	.003	.009
15...	2030	94	--	--	--	--	31	14.0	8.5	.11	.12	.003	.002
26...	1805	41	--	--	--	--	39	20.0	14.5	.10	.12	<.003	.003
JUL													
08...	1545	17	610	7.4	98	--	46	23.0	18.0	.09	--	.009	.003
AUG													
14...	1635	2.8	611	7.2	98	--	68	24.5	19.5	--	.06	<.003	.002
21...	1640	6.7	--	--	--	--	58	--	16.5	.20	2.0	.006	.006
21...	1955	9.7	--	--	--	--	63	15.0	15.0	.09	.15	.003	.012
SEP													
22...	1050	2.3	610	8.9	99	--	99	16.5	10.0	.08	.09	.003	.004

[1] Hydrazine method used to determine nitrate plus nitrite concentrations was found to have interferences caused by other common ions in water samples. Values may be adjusted in the future to correct for these interferences.
< Actual value is less than value shown.
e Estimated.

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)
OCT 2002					
22...	.007	.020	.022	<1	<.01
NOV					
07...	.010	.030	.027	5	.04
07...	.007	.030	.050	13	.23
08...	.008	.034	.047	9	.20
08...	.006	.026	.209	100	5.4
08...	.005	.025	.565	411	24
08...	.005	.028	.175	82	4.4
09...	.004	.019	.027	4	.06
DEC					
05...	.007	.013	.011	3	.03
13...	.005	.012	.037	13	.34
14...	.004	.011	.089	77	e13
14...	.003	.008	.019	13	e1.4
JAN 2003					
20...	.003	.010	.009	1	.03
23...	.003	.007	.031	29	e3.0
23...	.001	.006	.013	9	e.90
28...	.003	.009	.009	5	e.66
FEB					
20...	.004	--	.012	1	.04
MAR					
15...	.004	.010	.019	11	1.2
24...	.003	--	.011	4	.51
26...	.005	.015	.143	187	88
26...	.004	.013	.039	42	18
APR					
10...	.003	.011	.014	3	.42
MAY					
06...	.002	.010	.013	3	.31
10...	.002	.008	.013	2	.18
14...	.001	.005	.054	69	28
17...	.001	.006	.012	7	2.3
24...	.003	.017	.035	35	18
29...	.004	.011	.063	86	62
31...	.001	.010	.023	28	15
JUN					
01...	.002	.006	.039	52	34
07...	.001	.006	.031	40	25
15...	.001	.007	.017	10	2.5
26...	.002	.009	.014	7	.77
JUL					
08...	.007	--	.019	3	.14
AUG					
14...	.008	.016	.024	3	.02
21...	.006	.029	.995	312	5.6
21...	.004	.016	.032	13	.34
SEP					
22...	.009	--	.018	<1	<.01

< Actual value is less than value shown.
e Estimated.

10336674 WARD CREEK BELOW CONFLUENCE, NEAR TAHOE CITY, CA

LOCATION.—Lat 39° 08'27", long 120° 12'40", in SE 1/4 SE 1/4 sec.16, T.15 N., R.16 E., Placer County, Hydrologic Unit 16050101, Tahoe National Forest, on left bank, 0.1 mi downstream from confluence with unnamed tributary, 3.2 mi west of William Kent Campground, and 4.8 mi southwest of Tahoe City.

DRAINAGE AREA.—4.96 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1991 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 6,600 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good except for estimated daily discharges, which are fair. No storage or diversion upstream from station. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,220 ft^3/s, Jan. 1, 1997, gage height, 8.85 ft, from crest stage gage; no flow for some days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 29	1830	212	5.26

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.43	0.26	1.4	e4.4	17	4.4	e21	9.6	124	17	1.3	0.40
2	0.45	0.31	1.4	4.3	15	4.3	e15	10	133	15	1.6	0.37
3	0.46	0.34	1.4	4.3	14	4.3	e13	12	133	14	1.4	0.37
4	0.49	0.33	1.4	4.3	13	4.2	e12	12	141	13	1.3	0.38
5	0.49	0.32	1.5	4.3	11	4.1	e10	12	125	12	1.2	0.34
6	0.45	0.34	1.4	4.3	9.8	4.3	8.8	14	121	12	1.2	0.30
7	0.44	1.9	1.4	4.1	9.0	4.4	8.9	14	127	11	1.0	0.27
8	0.43	e7.2	1.4	4.1	8.7	4.5	11	14	121	9.8	0.92	0.28
9	0.40	e4.2	1.4	4.1	7.4	4.7	13	12	109	8.8	0.84	0.30
10	0.38	e1.7	1.4	4.1	7.2	4.8	15	13	99	8.2	0.74	0.33
11	0.40	e1.3	1.3	3.8	7.0	5.1	19	15	86	7.4	0.66	0.31
12	0.40	e1.5	1.4	3.8	7.0	7.1	17	22	76	6.7	0.64	0.28
13	0.40	e1.7	e2.9	3.9	7.5	e10	14	31	66	6.0	0.58	0.26
14	0.39	e1.9	e8.9	3.9	7.1	e11	14	47	55	5.6	0.57	0.25
15	0.39	e1.8	e5.9	3.7	6.7	e12	15	61	48	5.1	0.52	0.24
16	0.38	e1.7	e3.6	3.7	e6.4	10	13	57	52	4.4	0.48	0.23
17	0.39	e1.7	e5.7	3.8	6.0	8.2	13	55	58	4.0	0.46	0.26
18	0.36	1.7	e5.0	3.9	5.9	7.2	12	55	53	3.7	0.43	0.27
19	0.34	e1.6	e4.3	4.0	5.6	6.5	12	55	43	3.4	0.40	0.26
20	0.35	e1.6	e3.8	3.9	5.5	6.5	12	66	37	3.1	0.38	0.24
21	0.38	e1.7	e3.5	4.1	5.3	6.5	12	89	34	2.8	1.6	0.23
22	0.40	e1.8	e3.3	e4.9	5.5	7.9	11	102	30	2.6	1.0	0.22
23	0.40	e1.9	e3.1	e13	5.3	e15	11	117	28	2.4	0.76	0.21
24	0.40	e1.9	e3.2	e17	5.2	e14	12	112	26	2.2	0.64	0.20
25	0.40	e1.8	e3.2	e16	4.9	e15	11	98	24	2.0	0.56	0.20
26	0.43	1.7	e3.1	e15	4.8	e29	14	86	22	1.9	0.63	0.20
27	0.45	1.6	e4.5	e19	4.6	e24	10	109	22	1.9	0.53	0.19
28	0.43	1.5	e5.4	e23	4.5	e18	10	126	22	1.7	0.47	0.20
29	0.40	1.5	e6.6	19	---	e17	10	146	21	1.5	0.44	0.20
30	0.39	1.5	e5.1	17	---	e19	9.6	138	18	1.4	0.40	0.23
31	0.36	---	e4.7	17	---	e23	---	133	---	1.3	0.44	---
TOTAL	12.66	50.30	102.6	245.7	216.9	316.0	379.3	1842.6	2054	191.9	24.09	8.02
MEAN	0.41	1.68	3.31	7.93	7.75	10.2	12.6	59.4	68.5	6.19	0.78	0.27
MAX	0.49	7.2	8.9	23	17	29	21	146	141	17	1.6	0.40
MIN	0.34	0.26	1.3	3.7	4.5	4.1	8.8	9.6	18	1.3	0.38	0.19
AC-FT	25	100	204	487	430	627	752	3650	4070	381	48	16

e Estimated.

10336674 WARD CREEK BELOW CONFLUENCE, NEAR TAHOE CITY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.64	1.79	4.58	10.1	7.06	11.6	25.6	60.6	52.8	18.6	2.64	0.61
MAX	1.43	9.82	27.2	68.8	32.5	26.9	43.1	93.5	127	88.7	16.0	1.94
(WY)	1999	1997	1997	1997	1996	1995	1997	1996	1998	1995	1995	1995
MIN	0.11	0.45	0.69	0.82	0.95	5.85	12.6	20.5	3.67	0.81	0.025	0.008
(WY)	1993	1996	1995	1992	1994	1994	2003	1992	1992	1994	1992	1992

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1992 - 2003	
ANNUAL TOTAL	4694.77		5444.07			
ANNUAL MEAN	12.9		14.9		16.4	
HIGHEST ANNUAL MEAN					29.0	1995
LOWEST ANNUAL MEAN					5.56	1992
HIGHEST DAILY MEAN	97	May 18	146	May 29	720	Jan 2 1997
LOWEST DAILY MEAN	0.25	Sep 15	0.19	Sep 27	0.00	Aug 21 1992
ANNUAL SEVEN-DAY MINIMUM	0.29	Sep 21	0.20	Sep 23	0.00	Sep 9 1992
MAXIMUM PEAK FLOW			212	May 29	1220	Jan 1 1997
MAXIMUM PEAK STAGE			5.26	May 29	8.85	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	9310		10800		11900	
10 PERCENT EXCEEDS	43		45		51	
50 PERCENT EXCEEDS	3.5		4.3		3.5	
90 PERCENT EXCEEDS	0.37		0.37		0.38	

10336674 WARD CREEK BELOW CONFLUENCE, NEAR TAHOE CITY, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1993 to current year.

REMARKS.—In October 1992, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. Samples were analyzed by the University of California, Davis, Tahoe Research Group. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan-taneous dis-charge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, air, deg C (00020)	Temper-ature, water, deg C (00010)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	[1]Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)
OCT 2002											
22...	1035	.40	--	45	8.0	4.0	--	<.04	.003	.003	.002
NOV											
08...	1145	e12	--	48	3.8	.9	.40	.73	.003	.032	.007
DEC											
05...	1415	1.6	--	43	6.5	2.0	.08	.10	.004	.002	.003
14...	1320	e15	--	34	5.0	1.0	.22	.28	.005	.065	.004
JAN 2003											
20...	1245	3.8	--	44	8.5	2.0	--	.07	<.003	.007	.002
23...	1230	e13	--	38	4.8	2.0	.08	.09	<.003	.016	.001
FEB											
20...	1145	5.5	--	40	6.0	1.8	--	.15	<.003	.003	.002
MAR											
21...	1240	6.1	--	39	11.2	3.7	.06	.09	<.003	.003	.002
26...	1455	e63	--	31	2.0	2.5	.14	.21	<.003	.034	.004
APR											
10...	1515	14	--	35	6.0	3.5	--	.09	<.003	.005	.003
MAY											
06...	1245	11	--	38	8.5	3.5	--	.09	<.003	.002	.001
14...	1545	52	--	29	14.0	3.5	.10	.10	.004	.021	.001
17...	1005	47	7.1	33	10.2	2.2	.05	.22	<.003	.022	.001
31...	0910	110	--	27	11.5	3.0	.10	.13	.003	.017	.003
JUN											
07...	1600	147	--	22	24.0	5.5	.15	.19	.004	.017	.001
15...	1830	53	--	25	18.5	6.0	.09	.11	.003	.002	.003
JUL											
08...	1250	9.4	--	32	22.5	12.0	.09	.13	e.007	.003	.006
AUG											
14...	1330	.50	--	42	--	--	--	.08	<.003	.002	.003
SEP											
19...	1235	.30	--	46	21.5	12.0	.05	.05	<.003	.004	.003

[1] Hydrazine method used to determine nitrate plus nitrite concentrations was found to have interferences caused by other common ions in water samples. Values may be adjusted in the future to correct for these interferences.
< Actual value is known to be less than value shown.
e Estimated.

10336674 WARD CREEK BELOW CONFLUENCE, NEAR TAHOE CITY, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)
OCT 2002				
22...	.012	.011	1	<.01
NOV				
08...	.035	.040	11	e.36
DEC				
05...	.007	.006	2	.01
14...	.009	.022	8	e.32
JAN 2003				
20...	.007	.006	4	.04
23...	.005	.007	2	e.07
FEB				
20...	.008	.008	3	.04
MAR				
21...	.008	.008	<1	<.02
26...	.012	.017	23	e3.9
APR				
10...	.008	.010	<1	<.04
MAY				
06...	.006	.008	<1	<.03
14...	.004	.033	43	6.0
17...	.005	.008	4	.51
31...	.007	.013	10	3.0
JUN				
07...	.006	.032	30	12
15...	.007	.016	2	.29
JUL				
08...	--	.013	1	.03
AUG				
14...	.009	.011	<1	<.01
SEP				
19...	.016	.017	<1	<.01

< Actual value is known to be less than value shown.
e Estimated.

10336675 WARD CREEK AT STANFORD ROCK TRAIL CROSSING, NEAR TAHOE CITY, CA

(Lake Tahoe Interagency Monitoring Program)

LOCATION.—Lat 39° 08'13", long 120° 10'48", in NE 1/4 NW 1/4 sec.23, T.15 N., R.16 E., Placer County, Hydrologic Unit 16050101, Tahoe National Forest, on left bank, 1.5 mi west of William Kent Campground, 1.7 mi upstream from mouth, and 3.6 mi southwest of Tahoe City.

DRAINAGE AREA.—8.97 mi^2.

PERIOD OF RECORD.—Water years 1993 to current year.

REMARKS.—In October 1992, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. Samples were analyzed by the University of California, Davis, Tahoe Research Group. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey. See schematic diagram of Truckee River Basin.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	[1]Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)
OCT 2002										
22...	1150	79	5.0	--	.08	.005	.002	.013	.025	.023
NOV										
08...	1325	57	2.5	.48	.97	.003	.035	.016	.044	.047
DEC										
05...	1545	58	2.0	.07	.07	<.003	.002	.009	.016	.015
14...	1505	41	1.0	.20	.24	.006	.043	.007	.013	.018

[1] Hydrazine method used to determine nitrate plus nitrite concentrations was found to have interferences caused by other common ions in water samples. Values may be adjusted in the future to correct for these interferences.
< Actual value is known to be less than value shown.

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA

LOCATION.—Lat 39° 07'56", long 120° 09'24", in NW 1/4 SE 1/4 sec.24, T.15 N., R.16 E., Placer County, Hydrologic Unit 16050101, Tahoe National Forest, on right bank, 165 ft downstream from State Highway 89 Bridge, 2.1 mi north of Tahoe Pines, and 2.6 mi southwest of Tahoe City.

DRAINAGE AREA.—9.70 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1972 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 6,230 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good except for estimated daily discharges, which are fair. Minor diversion for local water supply upstream from station. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,530 ft^3/s, Jan. 1, 1997, gage height, 9.36 ft; no flow for many days during several years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 26	1145	185	5.59	May 29	1815	357	6.04

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.38	e0.80	2.8	e8.6	e27	8.1	54	21	159	18	2.1	1.1
2	0.43	e0.80	2.7	e8.5	26	8.3	43	24	166	16	2.4	1.0
3	0.47	e0.83	2.7	e8.4	24	7.9	38	27	166	15	2.3	1.1
4	0.49	e0.83	2.7	e8.6	22	7.7	32	30	174	14	1.9	1.1
5	0.52	e0.87	e2.7	e8.4	e22	7.6	31	30	149	12	1.8	0.92
6	0.50	e0.91	2.7	8.2	e21	7.8	26	32	139	11	1.7	0.80
7	0.55	2.9	2.5	e8.2	e20	8.1	26	32	147	10	1.7	0.73
8	0.45	33	e2.5	e8.0	e19	8.4	30	32	140	9.4	1.7	0.68
9	0.45	16	2.6	e8.1	e17	8.8	35	28	122	8.6	1.6	0.70
10	0.45	13	2.6	e8.2	e16	9.0	39	27	106	8.0	1.5	0.81
11	0.49	4.9	e2.6	e8.2	e14	9.6	46	32	89	7.4	1.4	0.77
12	0.54	4.1	2.5	e8.1	e13	13	44	44	77	6.5	1.3	0.71
13	0.57	4.7	e8.8	e8.1	13	20	53	61	69	5.9	1.3	0.67
14	0.58	4.5	e20	e8.0	13	24	48	89	61	5.5	1.3	0.62
15	0.59	3.9	e12	e7.9	13	33	33	109	56	5.0	1.2	0.57
16	0.61	3.6	e13	e7.9	e13	25	30	101	57	4.6	1.1	0.53
17	0.62	3.5	e15	e7.8	12	21	29	97	60	4.3	1.1	0.55
18	0.64	3.3	e14	e7.9	e12	18	28	96	58	4.1	1.1	0.59
19	0.65	3.3	e13	e8.2	10	17	27	92	50	3.8	1.00	0.59
20	0.70	e3.4	e13	e8.2	10	17	28	106	44	3.5	0.96	0.57
21	0.75	e3.5	e12	e8.7	10	17	28	139	39	3.3	2.2	0.50
22	0.77	e3.7	e10	9.7	9.8	20	25	167	34	3.1	2.4	0.47
23	0.79	e3.8	e9.1	e23	10	44	26	204	33	3.1	1.7	0.46
24	0.79	e3.6	e8.6	e27	9.6	42	29	220	30	3.0	1.5	0.43
25	0.84	e3.4	e8.5	e25	9.0	38	25	186	27	2.8	1.4	0.42
26	0.90	3.1	e7.9	e25	8.7	108	30	164	25	2.6	1.5	0.42
27	0.93	3.0	e8.6	e30	8.5	68	24	201	25	2.5	1.4	0.40
28	0.83	2.8	e9.4	e35	e8.3	49	24	236	24	2.3	1.2	0.37
29	0.81	e2.8	e9.6	e31	---	43	22	248	23	2.1	1.1	0.37
30	0.82	e2.8	e8.7	e26	---	46	21	217	20	2.0	1.1	0.40
31	e0.82	---	e8.6	e25	---	57	---	172	---	2.0	1.1	---
TOTAL	19.73	141.64	241.4	428.9	410.9	811.3	974	3264	2369	201.4	47.06	19.35
MEAN	0.64	4.72	7.79	13.8	14.7	26.2	32.5	105	79.0	6.50	1.52	0.65
MAX	0.93	33	20	35	27	108	54	248	174	18	2.4	1.1
MIN	0.38	0.80	2.5	7.8	8.3	7.6	21	21	20	2.0	0.96	0.37
AC-FT	39	281	479	851	815	1610	1930	6470	4700	399	93	38

e Estimated.

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.95	10.1	11.7	16.7	14.6	21.2	42.5	91.9	74.2	21.4	3.72	1.69
MAX	22.4	73.9	92.5	144	77.7	80.3	89.2	177	265	123	26.9	7.93
(WY)	1983	1982	1982	1997	1982	1986	1989	1996	1983	1983	1983	1983
MIN	0.15	1.06	0.80	1.10	1.24	2.52	8.06	18.7	4.59	1.00	0.003	0.005
(WY)	1978	1978	1977	1991	1991	1977	1975	1977	1992	2001	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1973 - 2003	
ANNUAL TOTAL	7402.98		8928.68			
ANNUAL MEAN	20.3		24.5		26.1	
HIGHEST ANNUAL MEAN					59.0	1983
LOWEST ANNUAL MEAN					5.29	1977
HIGHEST DAILY MEAN	131	May 18	248	May 29	1390	Jan 1 1997
LOWEST DAILY MEAN	0.21	Sep 24	0.37	Sep 28	0.00	Aug 4 1977
ANNUAL SEVEN-DAY MINIMUM	0.22	Sep 22	0.40	Sep 24	0.00	Aug 4 1977
MAXIMUM PEAK FLOW			357	May 29	2530	Jan 1 1997
MAXIMUM PEAK STAGE			6.04	May 29	9.36	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	14680		17710		18890	
10 PERCENT EXCEEDS	68		59		75	
50 PERCENT EXCEEDS	7.6		8.5		6.7	
90 PERCENT EXCEEDS	0.44		0.66		0.85	

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1973–78, 1980 to current year.

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: October 1980 to September 1983.
WATER TEMPERATURE: October 1972 to June 1978 (storm season only for water years 1977–78), October 1979 to September 1992.
SUSPENDED-SEDIMENT DISCHARGE: October 1972 to June 1978 (storm season only for water years 1977–78), October 1979 to September 1992.

REMARKS.—In October 1992, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. Samples were analyzed by the University of California, Davis, Tahoe Research Group. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan-taneous dis-charge, cfs (00061)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, air, deg C (00020)	Temper-ature, water, deg C (00010)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	[1]Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT 2002													
22...	1245	.80	605	9.9	101	--	77	10.2	6.2	--	.07	.004	.002
NOV													
07...	1645	2.3	--	--	--	--	77	3.5	2.5	.07	.10	<.003	.003
07...	2045	5.3	--	--	--	--	69	1.5	2.0	.35	.44	.003	.005
08...	0705	18	--	--	--	--	61	2.5	1.0	--	.29	.003	.025
08...	1415	33	--	--	--	--	60	4.0	2.5	.47	.49	.003	.031
09...	1230	11	--	--	--	--	61	--	2.0	.27	.26	<.003	.062
DEC													
05...	1700	e2.9	608	11.6	100	--	62	1.0	.0	.07	.08	<.003	.002
13...	1915	e15	--	--	--	--	46	3.0	.0	.19	.25	.006	.003
14...	0705	e90	--	--	--	--	39	3.8	.1	.30	.49	.007	.037
14...	1550	e47	--	--	--	--	43	1.0	1.0	.17	.41	.005	.041
JAN 2003													
20...	1430	46.7	608	11.3	100	--	56	5.0	1.0	--	.07	<.003	.004
23...	0730	e41	--	--	--	--	45	2.5	.0	.14	.18	<.003	.007
23...	1415	e37	--	--	--	--	46	3.5	2.0	.09	.12	<.003	.008
28...	1055	e42	--	--	--	--	46	2.5	2.5	.09	.12	<.003	.011
FEB													
20...	1430	9.7	607	10.8	100	--	52	2.8	2.5	--	.18	<.003	.003
MAR													
15...	1015	42	--	--	--	--	43	1.0	.5	.08	.14	<.003	.004
21...	1445	16	609	9.8	100	--	52	8.5	6.5	.12	.15	<.003	.002
24...	1020	39	--	--	--	--	46	4.0	3.5	.11	.12	<.003	.002
26...	1100	176	--	--	--	--	36	4.0	1.2	.12	.95	<.003	.021
26...	1640	140	--	--	--	--	39	1.5	2.0	.14	.26	<.003	.029
APR													
10...	1700	38	605	10.0	99	--	45	7.5	5.0	--	.13	<.003	.002
MAY													
06...	1440	31	602	9.2	99	--	50	10.0	8.0	--	.12	<.003	.002
10...	1105	25	--	--	--	--	48	5.5	5.5	.14	.16	<.003	.002
14...	1750	127	--	--	--	--	40	14.0	6.2	.06	.21	.004	.007
17...	0645	88	--	--	--	7.2	41	.0	1.5	.05	.18	.004	.017
24...	1250	164	--	--	--	--	36	17.5	7.5	.08	.12	<.003	.013
29...	1420	225	--	--	--	--	31	27.0	7.5	.09	.25	.004	.010
31...	0555	161	--	--	--	--	32	4.0	3.0	.13	.13	.004	.015
JUN													
01...	1830	205	--	--	--	--	30	20.0	6.0	.09	.15	.003	.010
07...	1805	191	607	9.4	99	--	27	22.5	7.7	.11	.16	.003	.006
15...	1950	61	--	--	--	--	31	17.0	9.0	.07	.14	<.003	.002
26...	1720	25	--	--	--	--	38	22.0	14.5	.07	.11	.006	.002
JUL													
08...	1425	8.9	611	7.5	99	--	43	23.0	17.8	.10	.10	.004	.002
AUG													
14...	1525	1.3	612	7.2	99	--	69	27.0	20.0	--	.12	<.003	.002
21...	1715	2.8	--	--	--	--	66	--	16.5	.17	.28	<.003	.003
21...	1905	4.5	--	--	--	--	66	15.0	15.0	.15	.19	.004	.012
SEP													
19...	1440	.70	609	8.2	102	--	84	--	15.0	--	--	<.003	.003

[1] Hydrazine method used to determine nitrate plus nitrite concentrations was found to have interferences caused by other common ions in water samples. Values may be adjusted in the future to correct for these interferences.
< Actual value is known to be less than value shown.
e Estimated.

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)
OCT 2002					
22...	.008	.022	.020	1	<.01
NOV					
07...	.017	.033	.040	65	.40
07...	.046	.074	.119	19	.27
08...	.016	.049	.042	7	.34
08...	.014	.042	.052	16	1.4
09...	.012	.029	.031	6	.18
DEC					
05...	.009	.015	.014	1	e.01
13...	.011	.018	.039	13	e.53
14...	.009	.017	.104	66	e16
14...	.007	.014	.024	5	e.63
JAN 2003					
20...	.006	.012	.011	2	e.04
23...	.005	.011	.026	13	e1.4
23...	.005	.009	.014	8	e.80
28...	.004	.011	.010	1	e.11
FEB					
20...	.006	.013	.012	<1	<.03
MAR					
15...	.006	.011	.026	11	1.2
21...	.005	--	.011	1	.04
24...	.004	--	.011	3	.32
26...	.008	.014	.165	203	96
26...	.006	.014	.034	30	11
APR					
10...	.004	.009	.028	3	.31
MAY					
06...	.004	.014	.013	2	.17
10...	.004	.010	.013	5	.34
14...	.004	.008	.044	43	15
17...	.003	.006	.012	2	.48
24...	.005	.018	.025	16	7.1
29...	.005	.013	.027	28	17
31...	.003	.007	.018	12	5.2
JUN					
01...	.004	.008	.032	21	12
07...	.004	.008	.023	20	10
15...	.001	.008	.013	4	.66
26...	.007	.014	.037	5	.34
JUL					
08...	.007	--	.015	2	.05
AUG					
14...	.010	.018	.025	1	<.01
21...	.011	.024	.046	9	.07
21...	.008	.020	.056	21	.26
SEP					
19...	.009	.016	.021	1	<.01

< Acutal value is known to be less than value shown.
e Estimated.

10336770 TROUT CREEK AT U.S. FOREST SERVICE ROAD 12N01, NEAR MEYERS, CA

(Lake Tahoe Interagency Monitoring Program)

LOCATION.—Lat 38° 51'48", long 119° 57'26", in NE 1/4 NW 1/4 sec.26, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on right bank, 50 ft downstream from U.S. Forest Service Road 12N01, about 2.2 mi upstream from confluence of Saxon Creek, and 2.6 mi northeast of Meyers.

DRAINAGE AREA.—7.41 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—May 1990 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 6,850 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair except for estimated daily discharges, which are poor. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 166 ft^3/s, June 27, 1995, gage height, 6.19 ft; minimum daily, 1.9 ft^3/s, Dec. 21, 1990.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 29	1900	*73	*5.40

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	4.3	4.2	4.3	e5.0	4.2	7.6	6.2	49	13	8.5	4.9
2	3.8	4.4	4.1	4.4	5.0	e4.2	6.6	6.6	52	13	8.8	4.6
3	3.8	4.1	4.1	4.4	e4.9	4.2	7.8	6.7	55	13	8.0	4.8
4	3.9	4.1	4.1	4.5	e4.8	4.2	5.9	6.4	58	12	6.9	5.6
5	3.8	4.0	4.0	4.5	e4.8	4.2	5.8	6.6	58	12	5.8	5.1
6	3.8	4.2	4.0	4.4	e4.7	4.2	5.7	6.9	55	11	5.5	4.6
7	3.8	4.8	4.0	4.4	e4.7	4.2	6.0	6.7	56	12	5.7	4.3
8	3.8	14	4.4	4.5	e4.6	4.3	7.0	6.5	55	11	6.0	4.3
9	3.8	7.3	4.0	4.5	e4.6	4.3	7.7	6.2	51	9.5	5.8	4.1
10	3.8	4.9	4.0	4.4	e4.5	4.5	7.7	6.5	47	7.1	5.7	4.5
11	3.9	4.7	4.1	4.3	4.5	4.7	8.2	7.4	46	7.4	5.6	4.8
12	3.8	4.7	4.0	4.3	4.4	4.9	8.0	9.0	41	7.0	5.8	4.7
13	3.9	4.7	e4.0	4.3	4.5	5.3	9.1	11	39	6.9	5.7	4.6
14	4.0	4.7	e4.0	4.2	4.4	5.3	8.8	12	37	6.3	5.6	4.5
15	4.0	4.7	e4.0	4.2	4.3	5.3	6.7	14	35	7.0	5.6	4.5
16	4.0	4.5	e4.0	4.2	e4.3	5.0	6.6	15	35	6.3	5.5	4.5
17	4.0	4.5	e4.1	4.3	4.3	4.7	6.5	16	32	7.1	5.5	4.6
18	4.0	4.4	e4.1	4.3	e4.3	e4.7	6.4	17	32	7.0	5.4	4.6
19	4.1	4.4	e4.1	4.3	4.2	e4.7	6.7	17	28	7.4	5.4	4.6
20	4.1	4.7	e4.2	4.3	4.2	4.7	6.8	19	26	7.6	5.4	4.5
21	4.2	4.8	e4.2	4.3	4.2	4.9	6.6	22	23	7.7	6.8	4.5
22	4.2	4.8	e4.2	4.4	4.2	5.3	6.4	25	22	7.2	7.0	4.5
23	4.2	4.7	e4.2	e4.5	4.3	5.6	6.4	28	22	9.2	5.9	4.4
24	4.2	4.5	4.3	e4.7	4.2	5.4	6.6	29	21	9.3	5.4	4.4
25	4.2	4.3	4.3	4.9	4.2	5.5	6.3	28	19	7.5	5.3	4.4
26	4.2	4.3	4.3	5.0	4.2	9.0	6.4	28	18	7.3	6.4	4.4
27	4.2	4.4	4.4	e5.0	4.2	7.3	6.5	34	17	7.2	5.6	4.4
28	4.1	4.2	4.5	e5.0	4.3	6.3	6.5	44	17	6.6	5.0	4.4
29	4.2	4.2	4.5	5.0	---	6.3	6.2	50	16	6.4	4.9	4.4
30	4.2	4.2	4.4	5.0	---	7.3	6.2	52	15	5.8	4.7	4.5
31	4.1	---	4.5	e5.0	---	8.2	---	50	---	7.3	5.0	---
TOTAL	123.8	146.5	129.3	139.8	124.8	162.9	205.7	592.7	1077	265.1	184.2	137.0
MEAN	3.99	4.88	4.17	4.51	4.46	5.25	6.86	19.1	35.9	8.55	5.94	4.57
MAX	4.2	14	4.5	5.0	5.0	9.0	9.1	52	58	13	8.8	5.6
MIN	3.7	4.0	4.0	4.2	4.2	4.2	5.7	6.2	15	5.8	4.7	4.1
AC-FT	246	291	256	277	248	323	408	1180	2140	526	365	272

e Estimated.

10336770 TROUT CREEK AT U.S. FOREST SERVICE ROAD 12N01, NEAR MEYERS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.94	5.25	5.54	6.41	5.24	6.43	10.1	24.6	30.2	14.9	7.15	5.45
MAX	7.87	8.20	14.2	24.9	11.4	14.2	22.3	48.1	84.9	62.1	20.0	10.7
(WY)	1999	1997	1997	1997	1997	1997	1997	1997	1995	1995	1995	1998
MIN	2.91	2.93	2.63	2.59	2.65	3.25	5.18	8.81	4.10	3.41	2.93	3.02
(WY)	1993	1993	1993	1991	1991	1991	1991	1992	1992	2001	2001	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	2468.4		3288.8			
ANNUAL MEAN	6.76		9.01		10.8	
HIGHEST ANNUAL MEAN					19.8	1995
LOWEST ANNUAL MEAN					4.48	1992
HIGHEST DAILY MEAN	28	Jun 1	58	Jun 4	130	Jun 28 1995
LOWEST DAILY MEAN	3.3	Feb 2	3.7	Oct 1	1.9	Dec 21 1990
ANNUAL SEVEN-DAY MINIMUM	3.3	Jan 31	3.8	Oct 1	2.4	Dec 17 1990
MAXIMUM PEAK FLOW			73	May 29	166	Jun 27 1995
MAXIMUM PEAK STAGE			5.40	May 29	6.19	Jun 27 1995
ANNUAL RUNOFF (AC-FT)	4900		6520		7800	
10 PERCENT EXCEEDS	16		19		23	
50 PERCENT EXCEEDS	4.2		4.9		5.8	
90 PERCENT EXCEEDS	3.5		4.1		3.2	

10336770 TROUT CREEK AT U.S. FOREST SERVICE ROAD 12N01, NEAR MEYERS, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1990 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: September 1997 to current year.

INSTRUMENTATION.—Water temperature recorder since September 1997, two times per hour.

REMARKS.—In November 1989, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. Samples were analyzed by the University of California, Davis, Tahoe Research Group. Water temperature monitor records represent water temperature at probe within 0.5° C. Interruptions in record due to instrument malfunction. Water temperature records for September 1997 were not published but are available from the U.S. Geological Survey, in Carson City, NV. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum, 14.0° C, July 10, 2002; minimum, freezing point on many days.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum presumably not measured during period of missing record; minimum, freezing point, many days October, November, and February to April.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	Instan-taneous dis-charge, cfs (00061)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, air, deg C (00020)	Temper-ature, water, deg C (00010)	Chlor-ide, water, fltrd, mg/L (00940)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT 2001													
02...	1330	3.3	--	--	--	--	60	23.0	7.7	--	--	.14	<.003
17...	1345	3.4	--	--	--	--	59	16.5	5.5	--	--	--	--
NOV													
07...	1340	3.1	--	--	--	--	57	11.0	3.0	.21	.14	.14	.004
JAN 2002													
07...	1315	4.5	--	--	--	--	50	6.5	2.6	.23	.25	.32	.007
FEB													
13...	1130	3.6	--	--	--	--	47	5.5	1.9	.18	.15	.20	<.003
MAR													
11...	1105	3.8	--	--	--	7.3	50	3.5	1.4	.19	.15	.29	<.003
APR													
30...	1105	9.9	--	--	--	--	32	.5	2.1	.26	.22	.35	<.003
MAY													
08...	1250	15	--	--	--	--	29	4.5	4.3	.20	--	.34	.003
14...	1145	16	--	--	--	--	28	13.5	4.7	.19	.18	.35	<.003
24...	1150	14	--	--	--	--	28	14.0	5.5	.20	.17	.19	<.003
29...	1240	20	--	--	--	--	24	22.0	8.8	.17	--	.27	<.003
30...	1700	23	--	--	--	--	23	23.0	16.5	.16	.23	.29	<.003
JUN													
05...	1100	25	593	9.4	102	7.4	23	19.0	8.1	.15	.28	.28	.004
JUL													
02...	1735	7.0	--	--	--	--	39	21.0	13.2	.14	.23	.34	<.003
AUG													
16...	1210	4.0	594	8.3	93	7.2	50	25.0	9.5	.15	.08	.13	<.003
SEP													
11...	1620	3.6	--	--	--	--	54	17.5	7.5	.17	--	.16	.003

< Actual value is known to be less than value shown.

10336770 TROUT CREEK AT U.S. FOREST SERVICE ROAD 12N01, NEAR MEYERS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	[1]Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Iron (bio reac-tive), water, unfltrd ug/L (46568)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)	Iron (bio-reac-tive, water, fltrd, ug/L (63673)
OCT 2001								
02...	.002	.009	--	.016	74	1	.01	--
17...	--	--	--	--	--	--	--	--
NOV								
07...	.002	.008	--	.014	42	1	.01	24
JAN 2002								
07...	.004	.009	.017	.023	135	3	.04	44
FEB								
13...	.006	.010	.019	.017	48	1	.01	8.5
MAR								
11...	.006	.010	.015	.018	57	2	.02	28
APR								
30...	.003	.005	.010	.018	116	2	.05	150
MAY								
08...	.004	.006	.010	.026	53	4	.16	--
14...	.004	.005	.010	.019	176	6	.26	46
24...	.002	.005	.011	.016	318	3	.11	40
29...	.003	.005	.011	.019	177	5	.27	32
30...	.004	.006	.011	.023	243	10	.62	34
JUN								
05...	.002	.007	.011	.019	138	9	.61	30
JUL								
02...	.004	.009	.015	.029	88	3	.06	27
AUG								
16...	.006	.010	.015	.017	79	1	.01	30
SEP								
11...	.006	.010	.014	.015	68	2	.02	--

Date	Time	Instan-taneous dis-charge, cfs (00061)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, air, deg C (00020)	Temper-ature, water, deg C (00010)	Chlor-ide, water, fltrd, mg/L (00940)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT 2002													
10...	1605	3.8	--	--	--	--	56	15.5	6.6	.19	.04	.13	<.003
NOV													
06...	1615	4.2	--	--	--	--	52	10.0	2.7	.19	--	.04	.004
DEC													
05...	1645	4.0	588	10.4	97	7.6	51	.0	1.9	.22	.04	.10	<.003
JAN 2003													
13...	1325	4.2	--	--	--	--	50	4.5	2.7	.22	.05	.09	<.003
FEB													
04...	1130	E4.8	--	--	--	--	51	.5	.1	.25	.11	.16	<.003
MAR													
18...	1040	5.4	--	--	--	--	51	.5	.4	.23	.08	.31	<.003
MAY													
06...	1210	6.4	--	--	--	--	44	7.5	3.5	.23	.12	.17	<.003
20...	1315	16	--	--	--	--	32	15.5	5.5	--	.06	.20	.004
23...	1555	31	--	--	--	--	23	14.0	5.5	--	.14	.44	.004
28...	1755	52	--	--	--	--	18	21.0	5.5	--	.18	.73	.004
JUN													
07...	1305	53	591	8.9	100	7.2	19	25.0	9.1	--	.11	.16	<.003
JUL													
09...	1600	10	--	--	--	--	44	28.0	11.8	--	.06	.09	.003
AUG													
08...	1510	5.9	--	--	--	--	47	20.0	9.6	--	.07	.09	.003
SEP													
03...	1540	4.7	594	8.7	99	7.7	51	13.5	9.8	--	<.04	.09	.006

[1] Hydrazine method used to determine nitrate plus nitrite concentrations was found to have interferences caused by other common ions in water samples. Values may be adjusted in the future to correct for these interferences.

< Actual value is known to be less than value shown.

10336770 TROUT CREEK AT U.S. FOREST SERVICE ROAD 12N01, NEAR MEYERS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ammonia water, unfltrd mg/L as N (00610)	[1]Nitrite + nitrate water fltrd, mg/L as N (00631)	[1]Nitrite + nitrate water unfltrd mg/L as N (00630)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Iron (bio reac-tive), water, unfltrd ug/L (46568)	Iron (bio reac-tive), water, fltrd, ug/L (63673)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)	Suspnd. sedi-ment, sieve diametr percent <.063mm (70331)
OCT 2002												
10...	<.003	.002	<.002	.009	.01	.018	.020	17	16	1	.01	--
NOV												
06...	.003	<.002	.003	.009	.01	.018	.017	48	17	2	.02	--
DEC												
05...	<.003	.002	.002	.009	.01	.014	.015	56	--	2	.02	--
JAN 2003												
13...	<.003	.007	.007	.009	.01	.013	.017	63	31	4	.05	--
FEB												
04...	<.003	.007	.011	.010	.01	.015	.015	170	39	4	e.05	--
MAR												
18...	.005	.009	.008	.009	.01	.015	.033	301	20	10	.15	--
MAY												
06...	<.003	.005	.007	.006	.01	.012	.019	104	48	3	.05	--
20...	.007	.009	.012	.007	.01	.014	.029	235	82	8	.35	--
23...	.016	.009	.024	.007	.02	.021	.073	1140	65	44	3.7	--
28...	.008	.008	.021	.010	.02	.021	.118	2250	51	129	18	33
JUN												
07...	.007	.003	.007	.007	.01	.015	.024	506	32	13	1.9	--
JUL												
09...	.005	.004	.004	.010	.01	.017	.024	81	25	1	.03	--
AUG												
08...	.004	.006	.005	.011	.01	.016	.019	114	41	1	.02	--
SEP												
03...	.009	.007	.008	.013	.01	.021	.023	129	36	2	.03	--

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	5.0	3.0	3.5	1.5	0.0	0.5	---	---	---	---	---	---
2	3.5	2.0	3.0	1.5	0.0	0.5	---	---	---	---	---	---
3	5.0	1.5	3.0	2.0	0.5	1.0	---	---	---	---	---	---
4	5.5	4.5	5.0	1.5	0.0	1.0	---	---	---	---	---	---
5	6.0	3.0	4.5	2.0	0.0	1.0	---	---	---	---	---	---
6	6.5	4.0	5.0	2.5	0.5	1.5	---	---	---	---	---	---
7	6.0	3.5	5.0	3.0	1.5	2.5	---	---	---	---	---	---
8	6.0	3.0	4.5	2.0	0.5	1.5	---	---	---	---	---	---
9	6.5	4.0	5.0	1.5	0.0	0.5	---	---	---	---	---	---
10	7.0	5.0	6.0	1.0	0.0	0.5	---	---	---	---	---	---
11	6.0	4.0	5.0	1.5	0.5	1.0	---	---	---	---	---	---
12	5.0	2.0	3.5	2.5	1.5	2.0	---	---	---	---	---	---
13	5.5	3.0	4.0	3.0	2.0	2.5	---	---	---	---	---	---
14	5.5	3.5	4.5	2.0	1.0	1.5	---	---	---	---	---	---
15	5.0	3.0	4.0	---	---	---	---	---	---	---	---	---
16	5.0	3.5	4.5	---	---	---	---	---	---	---	---	---
17	5.0	3.0	4.0	---	---	---	---	---	---	---	---	---
18	4.5	2.5	3.5	---	---	---	---	---	---	---	---	---
19	5.0	2.0	3.5	---	---	---	---	---	---	---	---	---
20	4.5	2.0	3.0	---	---	---	---	---	---	---	---	---
21	3.5	2.0	3.0	---	---	---	---	---	---	---	---	---
22	4.0	2.0	3.0	---	---	---	---	---	---	---	---	---
23	3.5	2.0	3.0	---	---	---	---	---	---	---	---	---
24	3.5	1.5	2.5	---	---	---	---	---	---	---	---	---
25	4.0	2.5	3.0	---	---	---	---	---	---	---	---	---
26	3.5	1.5	2.5	---	---	---	---	---	---	---	---	---
27	3.5	1.5	2.5	---	---	---	---	---	---	---	---	---
28	3.5	2.0	2.5	---	---	---	---	---	---	---	---	---
29	2.5	1.0	2.0	---	---	---	---	---	---	---	---	---
30	2.5	1.5	2.0	---	---	---	---	---	---	---	---	---
31	1.5	0.0	1.0	---	---	---	---	---	---	---	---	---
MONTH	7.0	0.0	3.6	---	---	---	---	---	---	---	---	---

[1] Hydrazine method used to determine nitrate plus nitrite concentrations was found to have interferences caused by other common ions in water samples. Values may be adjusted in the future to correct for these interferences.

< Actual value is known to be less than value shown.

e Estimated.

10336770 TROUT CREEK AT U.S. FOREST SERVICE ROAD 12N01, NEAR MEYERS, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	3.0	1.0	2.5	4.0	1.5	2.5
2	---	---	---	---	---	---	1.0	0.0	0.5	4.0	2.5	3.0
3	---	---	---	---	---	---	1.0	0.0	0.5	4.0	2.5	3.0
4	---	---	---	---	---	---	1.0	0.0	0.5	4.0	1.5	2.5
5	---	---	---	---	---	---	2.0	0.5	1.0	5.0	1.0	3.0
6	1.0	0.0	0.0	---	---	---	2.0	1.0	1.5	4.5	1.5	3.0
7	0.5	0.0	0.0	---	---	---	3.0	0.5	2.0	4.0	2.5	3.0
8	0.5	0.0	0.0	---	---	---	4.5	1.5	2.5	3.0	0.5	1.5
9	0.0	0.0	0.0	---	---	---	4.5	1.5	3.0	2.5	0.5	1.5
10	0.5	0.0	0.0	---	---	---	5.0	2.0	3.0	4.5	1.0	2.5
11	1.0	0.5	1.0	---	---	---	5.0	2.0	3.5	5.5	1.5	3.5
12	1.5	1.0	1.0	---	---	---	3.0	0.5	2.5	6.0	2.0	4.0
13	---	---	---	---	---	---	0.5	0.0	0.0	6.0	2.5	4.0
14	---	---	---	---	---	---	1.5	0.0	0.5	5.0	2.5	3.5
15	---	---	---	---	---	---	2.5	0.5	1.5	5.5	2.0	3.5
16	---	---	---	---	---	---	2.0	1.0	1.5	5.5	2.0	3.5
17	---	---	---	---	---	---	3.0	1.5	2.0	5.5	2.0	3.5
18	---	---	---	---	---	---	3.0	1.5	2.5	5.5	1.5	3.5
19	---	---	---	2.0	0.0	0.5	3.5	1.0	2.0	5.5	2.0	3.5
20	---	---	---	2.5	1.0	2.0	3.5	1.5	2.5	7.0	2.5	4.0
21	---	---	---	3.5	1.0	2.0	3.0	1.5	2.0	7.0	2.5	4.0
22	---	---	---	3.5	1.5	2.5	3.0	0.5	1.5	7.0	2.5	4.0
23	---	---	---	3.0	2.0	2.5	4.5	1.5	3.0	6.0	2.5	3.5
24	---	---	---	3.5	2.0	3.0	3.5	2.0	2.5	7.0	2.5	4.0
25	---	---	---	4.0	1.5	3.0	3.5	1.5	2.5	6.0	2.5	4.0
26	---	---	---	3.5	2.0	3.0	4.0	1.0	2.5	7.0	2.5	4.0
27	---	---	---	3.0	1.0	2.0	3.5	1.5	2.5	7.5	3.0	4.5
28	---	---	---	3.0	1.0	2.0	3.5	1.0	2.5	7.5	3.0	4.5
29	---	---	---	4.0	1.0	2.5	3.0	1.0	2.0	7.0	3.5	4.5
30	---	---	---	4.5	1.5	3.0	3.5	0.5	2.0	7.5	3.5	5.0
31	---	---	---	4.5	2.0	3.5	---	---	---	8.0	3.0	5.0
MONTH	---	---	---	---	---	---	5.0	0.0	1.9	8.0	0.5	3.5

		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.5	3.0	5.5	11.0	7.0	8.5	---	---	---	10.0	7.0	8.5
2	9.0	3.5	6.0	11.0	7.0	9.0	---	---	---	10.0	8.0	9.0
3	9.0	4.0	6.5	11.5	7.5	9.5	---	---	---	9.5	8.5	9.0
4	9.5	4.5	6.5	11.0	6.0	8.5	---	---	---	9.5	8.0	9.0
5	9.5	5.0	7.0	11.5	6.0	9.0	11.0	8.0	9.5	10.5	8.0	9.0
6	10.0	5.0	7.5	11.5	6.0	9.0	10.5	7.5	9.0	10.0	7.5	8.5
7	10.5	5.5	8.0	11.0	6.0	8.5	10.5	7.5	9.0	9.5	7.5	9.0
8	11.0	5.5	8.0	11.5	6.5	9.0	10.5	7.0	8.5	9.0	7.5	8.5
9	10.5	6.0	8.0	---	---	---	10.5	7.0	8.5	8.5	6.5	7.5
10	10.5	5.5	8.0	---	---	---	11.0	7.5	9.0	8.5	5.5	7.0
11	10.0	5.0	7.5	---	---	---	11.0	8.0	9.5	9.0	6.0	7.5
12	10.0	5.0	7.5	---	---	---	10.5	7.5	9.0	9.5	7.0	8.0
13	10.0	5.5	8.0	---	---	---	10.5	7.5	9.0	9.0	7.0	8.0
14	10.5	5.0	8.0	---	---	---	11.0	7.5	9.5	9.5	6.5	8.0
15	10.5	5.5	8.0	---	---	---	11.0	8.5	10.0	9.5	7.5	8.5
16	11.5	7.0	9.0	---	---	---	11.0	8.5	10.0	8.5	7.5	8.0
17	11.0	7.5	9.5	---	---	---	11.5	8.0	9.5	8.0	5.5	7.0
18	10.5	7.5	9.0	---	---	---	11.5	8.5	10.0	8.0	5.0	6.5
19	10.5	6.5	8.5	---	---	---	11.5	9.0	10.0	8.5	6.0	7.0
20	10.0	6.0	8.0	---	---	---	11.0	8.5	10.0	8.5	6.0	7.0
21	9.5	5.0	7.5	---	---	---	10.5	9.5	10.0	9.0	6.0	7.5
22	9.0	5.0	7.0	---	---	---	11.0	9.5	10.0	9.0	6.5	7.5
23	7.5	5.0	6.5	---	---	---	10.5	8.0	9.5	9.0	6.5	8.0
24	9.0	5.0	7.0	---	---	---	10.5	8.0	9.5	9.0	7.0	8.0
25	10.0	6.0	8.0	---	---	---	10.5	8.0	9.5	9.0	7.0	8.0
26	11.0	6.5	8.5	---	---	---	11.0	9.0	10.0	9.0	6.5	8.0
27	11.5	7.0	9.0	---	---	---	10.5	8.5	9.5	9.0	6.5	7.5
28	12.0	7.5	9.5	---	---	---	10.5	8.5	9.5	9.0	7.0	8.0
29	11.5	8.0	9.5	---	---	---	9.5	7.0	8.5	9.0	7.0	8.0
30	11.0	6.0	8.5	---	---	---	10.5	7.5	9.0	9.0	7.0	8.0
31	---	---	---	---	---	---	9.5	8.0	8.5	---	---	---
MONTH	12.0	3.0	7.8	---	---	---	---	---	---	10.5	5.0	8.0
YEAR	14.0	0.0	4.7									

10336775 TROUT CREEK AT PIONEER TRAIL, NEAR SOUTH LAKE TAHOE, CA

(Lake Tahoe Interagency Monitoring Program)

LOCATION.—Lat 38° 54'13", long 119° 58'04", in SE 1/4 NE 1/4 sec.10, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on left bank, 200 ft upstream of Pioneer Trail Road, 0.6 mi upstream of confluence of Cold Creek, and 2.8 mi south of South Lake Tahoe.

DRAINAGE AREA.—23.1 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—June 1990 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 6,270 ft above sea level, from topographic map. Prior to May 1, 1992, at datum 0.12 ft higher.

REMARKS.—Records fair except for estimated daily discharges, which are poor. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 525 ft^3/s, Jan. 2, 1997, gage height, 7.59 ft; minimum daily, 2.0 ft^3/s, Dec. 22, 1990.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 31	0130	*126	*3.11

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	7.0	e8.5	e8.0	e8.8	e8.0	23	21	102	22	16	10
2	5.9	e7.1	e8.5	e8.0	e8.6	e8.1	20	22	103	21	e14	9.3
3	5.9	e7.6	e8.5	e8.0	e8.6	e8.1	21	22	104	20	e13	9.8
4	6.0	e7.8	e8.5	e7.5	e8.5	8.1	19	24	105	19	12	9.7
5	6.0	e7.4	e8.4	e7.0	e8.4	8.7	19	23	102	17	11	e9.2
6	5.9	e7.2	e8.4	e7.0	e8.2	9.6	18	24	96	15	10	9.0
7	5.9	7.1	e8.4	e6.9	e8.1	9.5	18	23	95	15	9.8	e8.8
8	5.9	27	e8.4	e6.9	e8.0	10	20	24	92	13	9.5	e8.5
9	6.1	22	e8.4	e6.9	e7.9	11	22	23	89	10	9.2	e8.2
10	5.8	11	8.4	e6.8	e7.8	11	22	23	81	9.1	8.9	7.9
11	5.6	11	e8.3	e6.8	e7.7	12	22	24	75	8.5	10	9.2
12	5.7	10	e8.3	e7.0	e7.6	14	23	26	69	e8.6	e10	8.4
13	5.9	11	e8.3	6.7	7.6	16	18	30	64	e8.8	e10	8.7
14	5.9	10	e8.2	e6.7	e7.6	18	25	33	60	e9.0	e10	9.1
15	5.9	9.7	e8.2	e6.7	7.6	23	22	35	56	e9.2	e10	8.6
16	5.9	9.4	e8.2	e6.6	e7.7	19	20	37	53	e9.4	e10	8.5
17	5.9	9.1	e8.2	e6.6	e7.7	16	20	38	51	e9.6	e11	7.5
18	5.9	9.0	e8.1	e6.6	e7.8	15	20	39	48	e9.6	e11	7.6
19	5.9	9.0	e8.1	e6.6	e7.8	17	20	40	45	e9.8	e12	7.5
20	6.0	8.9	e8.1	e6.6	e7.8	15	21	42	42	e9.8	12	7.5
21	6.1	9.2	e8.0	6.5	e7.8	15	21	47	39	10	13	7.4
22	6.2	9.2	e8.0	6.7	e7.9	16	20	56	37	10	16	7.3
23	6.3	9.5	e8.0	9.2	e7.9	22	20	67	35	12	10	7.3
24	6.3	9.1	e8.0	11	7.9	21	23	76	35	11	11	7.2
25	6.5	8.6	e8.0	8.9	7.9	19	22	81	31	8.5	12	7.1
26	6.5	e8.6	e8.0	8.6	e8.0	29	22	72	29	8.2	15	7.2
27	6.7	e8.6	e8.0	9.6	e8.0	25	22	80	27	8.8	16	7.3
28	6.7	e8.6	e8.0	11	e8.0	21	22	94	26	10	15	7.4
29	6.7	e8.6	e8.0	9.4	---	20	21	101	24	10	13	7.5
30	6.7	e8.6	e8.0	8.9	---	21	21	111	23	15	9.7	7.8
31	6.6	---	e8.0	e8.9	---	23	---	110	---	19	11	---
TOTAL	189.0	296.9	254.4	238.6	223.2	489.1	627	1468	1838	375.9	361.1	246.5
MEAN	6.10	9.90	8.21	7.70	7.97	15.8	20.9	47.4	61.3	12.1	11.6	8.22
MAX	6.7	27	8.5	11	8.8	29	25	111	105	22	16	10
MIN	5.6	7.0	8.0	6.5	7.6	8.0	18	21	23	8.2	8.9	7.1
AC-FT	375	589	505	473	443	970	1240	2910	3650	746	716	489

e Estimated.

10336775 TROUT CREEK AT PIONEER TRAIL, NEAR SOUTH LAKE TAHOE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.89	10.0	11.5	17.0	14.5	20.3	29.3	54.5	59.2	30.7	12.8	9.16
MAX	15.4	18.7	34.2	87.8	38.2	42.0	54.9	107	158	142	35.8	19.0
(WY)	1999	1997	1997	1997	1997	1997	1996	1996	1995	1995	1995	1995
MIN	4.49	5.03	4.05	4.70	5.49	7.85	12.2	14.2	7.66	5.64	4.11	4.08
(WY)	1991	1991	1991	1991	1993	1992	1991	1992	1992	2001	2001	1992

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	4844.1		6607.7			
ANNUAL MEAN	13.3		18.1		23.7	
HIGHEST ANNUAL MEAN					46.9	1995
LOWEST ANNUAL MEAN					7.71	1992
HIGHEST DAILY MEAN	46	Jun 1	111	May 30	457	Jan 2 1997
LOWEST DAILY MEAN	5.2	Sep 24	5.6	Oct 11	2.0	Dec 22 1990
ANNUAL SEVEN-DAY MINIMUM	5.3	Sep 21	5.8	Oct 10	2.8	Dec 21 1990
MAXIMUM PEAK FLOW			126	May 31	525	Jan 2 1997
MAXIMUM PEAK STAGE			3.11	May 31	7.59	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	9610		13110		17160	
10 PERCENT EXCEEDS	28		37		56	
50 PERCENT EXCEEDS	9.2		9.4		13	
90 PERCENT EXCEEDS	5.8		6.7		5.3	

10336775 TROUT CREEK AT PIONEER TRAIL, NEAR SOUTH LAKE TAHOE, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1990 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: September 1997 to September 2003 (discontinued).

INSTRUMENTATION.—Water temperature recorder September 1997 to September 2003, two times per hour.

REMARKS.—In November 1989, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. Samples were analyzed by the University of California, Davis, Tahoe Research Group. Water temperature records represent water temperature at probe within 0.5° C. Interruptions in water temperature record due to instrument malfunction. Water temperature data for September 1997 were not published but are available for the U.S. Geological Survey, Carson City, NV. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum, 22.0° C, July 2, 2001; minimum, freezing point on many days.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum, 20.0° C, July 21, 22, 29, 30; minimum, freezing point, many days October to April.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	Instan-taneous dis-charge, cfs (00061)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, air, deg C (00020)	Temper-ature, water, deg C (00010)	Chlor-ide, water, fltrd, mg/L (00940)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT 2001													
02...	1520	4.7	--	--	--	--	63	23.0	14.2	--	--	.22	<.003
17...	1120	4.5	--	--	--	--	62	19.5	6.0	--	--	--	--
NOV													
07...	1040	5.5	--	--	--	--	61	9.5	2.6	--	--	.17	<.003
DEC													
11...	0945	16	597	--	--	7.4	59	-1.5	.3	--	.13	.20	.004
JAN 2002													
09...	0945	9.9	--	--	--	--	58	.0	.6	1.42	.23	.25	.007
FEB													
06...	1140	15	--	--	--	--	60	8.0	.1	.89	.19	.06	.003
20...	1600	12	--	--	--	--	52	5.5	.3	1.23	.25	.26	<.003
MAR													
05...	1510	9.7	596	10.1	100	7.0	43	7.0	4.4	2.31	.20	.29	.004
27...	1410	11	--	--	--	--	60	11.5	6.5	3.04	--	.22	.003
APR													
03...	1250	20	--	--	--	--	50	17.0	7.0	2.39	.12	.33	.003
13...	1400	25	--	--	--	--	40	18.0	7.4	1.33	.18	.29	<.003
25...	1600	24	--	--	--	--	40	15.5	8.8	1.04	.24	.39	.003
MAY													
08...	1430	28	--	--	--	--	38	14.0	7.9	.63	.21	.35	<.003
14...	1320	29	--	--	--	--	31	16.0	8.8	.50	.19	.21	<.003
24...	1310	29	--	--	--	--	29	17.0	8.4	.44	.12	.19	<.003
29...	1350	33	--	--	--	--	30	24.5	11.8	.35	.17	.24	<.003
30...	1540	35	--	--	--	--	28	22.5	12.7	.33	.13	.20	<.003
JUN													
05...	1305	37	607	8.7	103	7.4	26	24.0	12.4	.28	.24	.14	.004
JUL													
02...	1600	15	--	--	--	--	41	25.0	19.1	.36	.21	.11	<.003
AUG													
16...	1515	6.4	608	8.1	107	7.1	52	27.5	17.5	.50	.07	.07	<.003
SEP													
11...	1510	5.8	--	--	--	--	57	23.0	11.9	.51	--	<.04	<.003

< Actual value is known to be less than value shown.

10336775 TROUT CREEK AT PIONEER TRAIL, NEAR SOUTH LAKE TAHOE, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	[1]Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Iron (bio reac-tive), water, unfltrd ug/L (46568)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)	Iron (bio reac-tive), water, fltrd ug/L (63673)
OCT 2001								
02...	.002	.009	--	.020	161	1	.01	--
17...	--	--	--	--	--	--	--	--
NOV								
07...	.003	.006	--	.012	167	3	.04	--
DEC								
11...	.003	.006	.015	.014	189	2	.09	100
JAN 2002								
09...	.007	.008	.018	.025	234	2	.05	160
FEB								
06...	.011	.006	.011	.013	89	1	.04	160
20...	.003	.010	.019	.031	84	11	.36	130
MAR								
05...	.011	.009	--	.024	293	2	.05	190
27...	.010	.009	.017	.021	--	3	.09	210
APR								
03...	.023	.009	.019	.029	404	8	.43	250
13...	.015	.008	.013	.032	789	14	.95	180
25...	.008	.006	.016	.023	349	6	.39	140
MAY								
08...	.005	.006	.012	.023	297	4	.30	99
14...	.005	.006	.012	.020	310	6	.47	84
24...	.003	.005	.012	.021	--	3	.23	71
29...	.004	.006	.013	.025	317	10	.89	65
30...	.005	.006	.013	.028	608	8	.76	62
JUN								
05...	.003	.007	.012	.028	307	12	1.2	58
JUL								
02...	.004	.009	.015	.025	173	3	.12	92
AUG								
16...	.003	.011	.017	.021	172	1	.02	110
SEP								
11...	.003	.009	.016	.015	147	1	.02	--

Date	Time	Instan-taneous dis-charge, cfs (00061)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, air, deg C (00020)	Temper-ature, water, deg C (00010)	Chlor-ide, water, fltrd, mg/L (00940)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT 2002													
10...	1445	6.0	--	--	--	--	59	17.5	8.6	.52	.06	.13	<.003
NOV													
06...	1440	e7.2	--	--	--	--	55	14.5	1.9	.45	.04	.07	.004
08...	1655	35	--	--	--	--	50	4.5	3.0	2.41	.71	1.1	.006
DEC													
05...	1420	e8.4	604	11.0	97	7.7	55	7.5	.8	.54	.07	.14	<.003
JAN 2003													
10...	1240	e6.8	--	--	--	--	56	3.0	.1	1.05	.07	.11	<.003
FEB													
03...	1445	e8.6	--	--	--	--	56	6.0	.7	1.73	.14	.23	<.003
MAR													
06...	1530	9.2	601	10.3	100	7.2	59	7.5	3.9	1.66	.08	.10	<.003
27...	1350	24	--	--	--	--	51	7.0	5.0	2.00	.25	.25	<.003
APR													
03...	1245	29	--	--	--	--	49	-.5	1.4	1.29	.16	.31	<.003
09...	1200	21	--	--	--	--	51	13.0	4.5	1.87	.14	.20	<.003
MAY													
06...	1140	24	--	--	--	--	53	8.0	4.3	2.01	.16	.18	<.003
13...	1900	29	--	--	--	--	49	16.5	9.3	--	.19	.20	<.003
16...	1100	35	--	--	--	--	41	18.5	4.7	--	.05	.38	<.003
21...	1300	44	--	--	--	--	37	19.0	7.5	--	.10	.26	<.003
23...	1700	60	--	--	--	--	30	21.0	7.5	--	.11	.53	.003
28...	1915	95	--	--	--	--	24	20.5	9.5	--	.13	.34	.004
30...	1445	100	--	--	--	--	23	21.5	8.5	--	.19	.24	<.003
JUN													
07...	1045	93	605	9.2	98	6.7	22	22.0	7.9	--	.15	.18	<.003
JUL													
09...	1340	11	--	--	--	--	46	25.5	14.7	--	.06	.08	.005
AUG													
08...	1240	10	--	--	--	--	51	21.5	13.2	--	.06	.11	.004
SEP													
03...	1320	9.9	608	8.8	102	7.3	54	22.0	11.8	--	.06	.08	.003

< Actual value is known to be less than value shown.
e Estimated.

10336775 TROUT CREEK AT PIONEER TRAIL, NEAR SOUTH LAKE TAHOE, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ammonia water, unfltrd mg/L as N (00610)	[1]Nitrite + nitrate water fltrd, mg/L as N (00631)	[1]Nitrite + nitrate water unfltrd mg/L as N (00630)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Iron (bio reac-tive), water, unfltrd ug/L (46568)	Iron (bio reac-tive), water, fltrd, ug/L (63673)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)
OCT 2002											
10...	<.003	.003	--	.008	.01	.018	.021	128	--	1	.02
NOV											
06...	.009	.003	.003	.008	.01	.016	.026	254	76	4	e.08
08...	--	.020	.037	.014	.03	.053	.200	4550	209	--	--
DEC											
05...	<.003	.003	.003	.007	.01	.013	.035	525	102	17	e.39
JAN 2003											
10...	.004	.008	.011	.007	.01	.011	.018	224	117	2	e.04
FEB											
03...	.004	.008	.014	.008	.01	.014	.024	393	161	7	e.16
MAR											
06...	<.003	.007	.009	.008	.01	.015	.018	202	152	2	.05
27...	.008	.026	.028	.006	.01	.017	.026	134	108	5	.32
APR											
03...	.015	.014	.024	.007	.02	.015	.040	644	165	16	1.2
09...	.007	.010	.018	.005	.01	.012	.023	546	167	8	.45
MAY											
06...	<.003	.008	.014	.006	.01	.013	.020	338	187	1	.06
13...	.004	.006	.006	.007	.01	.013	.026	353	138	5	.39
16...	.004	.014	.022	.006	.01	.013	.033	444	130	9	.85
21...	.009	.013	.021	.006	.01	.013	.041	485	123	9	1.1
23...	.012	.012	.021	.008	.02	.023	.056	726	96	21	3.4
28...	.013	.008	.022	.008	.02	.021	.069	1120	71	41	11
30...	.007	.008	.018	.007	.02	.016	.051	777	75	30	8.1
JUN											
07...	.008	.004	.010	.006	.01	.013	.027	402	61	13	3.3
JUL											
09...	.004	.005	.006	.009	.01	.017	.024	186	93	2	.06
AUG											
08...	.004	.006	.005	.010	.01	.015	.023	283	152	2	.05
SEP											
03...	.006	.002	.006	.012	.01	.017	.024	311	145	6	.16

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	2.0	0.0	0.5	1.0	0.0	0.5	0.0	0.0	0.0
2	---	---	---	2.0	0.0	0.5	1.0	0.0	0.5	0.0	0.0	0.0
3	---	---	---	1.5	0.0	0.5	1.0	0.0	0.5	0.0	0.0	0.0
4	---	---	---	1.5	0.0	0.5	1.0	0.0	0.5	0.5	0.0	0.0
5	---	---	---	2.0	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.0
6	---	---	---	1.5	0.0	0.5	1.0	0.0	0.5	0.5	0.0	0.0
7	---	---	---	3.5	1.0	2.0	1.0	0.0	0.5	0.5	0.0	0.0
8	---	---	---	3.5	2.5	3.0	0.5	0.0	0.0	0.5	0.0	0.0
9	---	---	---	3.0	0.0	2.0	0.5	0.0	0.5	0.0	0.0	0.0
10	---	---	---	0.5	0.0	0.5	1.5	0.0	0.5	0.0	0.0	0.0
11	8.5	5.0	7.0	1.5	0.0	0.5	1.0	0.0	0.5	0.0	0.0	0.0
12	6.5	3.0	5.0	3.0	0.0	1.5	1.0	0.0	0.5	0.5	0.0	0.5
13	7.0	2.5	5.0	4.5	2.0	3.0	1.0	0.0	0.5	1.0	0.5	1.0
14	7.5	3.5	5.5	3.0	1.0	2.0	1.5	0.0	1.0	1.0	0.0	0.5
15	7.0	3.0	5.5	1.5	0.0	1.0	0.0	0.0	0.0	0.5	0.0	0.5
16	6.5	3.0	5.0	2.5	0.0	1.5	0.0	0.0	0.0	0.5	0.0	0.0
17	6.5	2.5	5.0	3.0	1.0	2.0	0.0	0.0	0.0	0.5	0.0	0.5
18	6.0	2.5	4.5	1.5	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.5
19	6.0	2.0	4.5	2.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.5
20	6.0	2.0	4.5	2.5	0.5	1.5	0.0	0.0	0.0	1.0	0.0	0.5
21	5.0	2.0	4.0	3.0	0.5	2.0	0.0	0.0	0.0	1.5	0.5	1.0
22	5.0	1.5	3.5	3.5	1.5	2.5	0.0	0.0	0.0	3.0	1.0	2.0
23	5.0	2.0	3.5	4.0	2.0	3.0	0.0	0.0	0.0	2.5	0.5	2.0
24	4.5	1.0	3.0	2.5	0.5	2.0	0.0	0.0	0.0	2.5	0.5	1.5
25	5.5	2.5	4.0	2.0	0.5	1.0	0.0	0.0	0.0	3.0	1.5	2.0
26	4.5	1.5	3.5	1.0	0.0	0.5	0.0	0.0	0.0	3.0	1.0	2.0
27	4.5	1.5	3.5	1.0	0.0	0.5	0.0	0.0	0.0	3.0	2.0	2.5
28	4.0	1.5	3.0	1.0	0.0	0.5	0.0	0.0	0.0	2.5	1.0	1.5
29	3.0	1.0	2.0	0.5	0.0	0.0	0.0	0.0	0.0	2.5	0.5	1.5
30	3.5	1.0	2.5	0.5	0.0	0.0	0.0	0.0	0.0	3.0	1.0	2.0
31	2.5	0.0	1.5	---	---	---	0.0	0.0	0.0	3.0	1.0	2.0
MONTH	---	---	---	4.5	0.0	1.2	1.5	0.0	0.2	3.0	0.0	0.8

[1] Hydrazine method used to determine nitrate plus nitrite concentrations was found to have interferences caused by other common ions in water samples. Values may be adjusted in the future to correct for these interferences.

< Actual value is known to be less than value shown.

e Estimated.

10336775 TROUT CREEK AT PIONEER TRAIL, NEAR SOUTH LAKE TAHOE, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.0	1.0	2.0	2.0	0.0	1.0	4.5	1.5	3.5	6.0	2.0	4.0
2	1.5	0.0	1.0	2.0	0.0	1.0	1.5	0.0	1.0	5.0	3.0	4.0
3	1.0	0.0	0.5	1.5	0.0	1.0	1.5	0.0	0.5	7.0	2.5	4.5
4	1.0	0.0	0.5	2.5	0.5	1.5	1.0	0.0	0.5	7.5	2.0	4.0
5	0.5	0.0	0.0	3.5	0.0	1.5	4.0	0.0	1.5	8.5	2.0	5.0
6	0.5	0.0	0.0	4.0	0.0	2.0	3.0	0.5	1.5	6.5	2.0	4.5
7	0.5	0.0	0.0	4.5	0.0	2.0	6.5	0.5	3.0	6.5	3.5	5.0
8	0.5	0.0	0.0	4.0	0.0	2.0	7.5	1.0	4.0	4.5	1.0	3.0
9	0.5	0.0	0.5	4.5	0.0	2.5	8.0	2.0	4.5	4.0	0.5	2.0
10	1.0	0.0	0.5	4.0	1.0	2.5	7.0	2.0	4.5	8.0	2.0	4.5
11	1.0	0.0	0.5	5.0	0.5	2.5	9.0	3.0	5.5	9.5	2.0	5.5
12	1.0	0.0	0.5	5.5	1.0	3.0	5.5	1.0	4.0	10.5	3.0	6.5
13	1.0	0.5	0.5	6.0	1.0	3.0	1.0	0.0	0.0	10.0	3.5	6.5
14	2.0	0.0	0.5	6.0	1.5	3.5	0.5	0.0	0.0	8.5	4.0	6.0
15	2.0	0.0	1.0	3.5	1.0	2.0	2.0	0.0	1.0	9.5	3.5	6.5
16	1.0	0.0	0.5	3.0	0.0	1.5	2.5	0.5	1.5	9.0	3.0	6.0
17	1.0	0.0	0.5	3.5	0.5	2.0	5.0	1.0	2.5	9.5	3.0	6.0
18	1.0	0.0	0.5	4.5	0.0	2.0	5.5	1.5	3.0	9.0	2.5	5.5
19	1.0	0.0	0.5	3.5	0.0	1.5	7.5	1.0	3.5	9.0	3.0	6.0
20	3.0	0.5	1.5	5.5	1.0	2.5	5.5	1.0	3.0	10.0	3.5	6.5
21	1.5	0.0	0.5	6.0	1.0	3.0	4.0	1.5	2.5	10.0	3.5	7.0
22	2.0	0.0	1.0	5.5	1.5	3.5	3.5	0.5	2.0	10.0	3.5	6.5
23	1.5	0.0	1.0	4.5	2.5	3.5	7.5	1.0	4.0	8.0	4.0	6.0
24	2.5	0.5	1.5	6.5	2.0	4.0	5.0	2.0	3.5	9.5	4.0	6.5
25	3.0	1.0	2.0	6.0	1.5	3.5	6.5	1.0	3.0	8.0	4.0	6.0
26	2.0	0.0	1.0	5.5	3.0	4.0	6.5	0.5	3.0	9.5	3.5	6.5
27	1.5	0.0	1.0	6.0	1.5	3.0	6.5	2.0	4.0	10.0	4.0	7.0
28	1.5	0.0	0.5	5.5	1.0	3.0	7.0	1.5	4.0	10.0	4.5	7.0
29	---	---	---	6.5	1.0	3.5	6.0	1.5	3.5	10.0	4.5	7.0
30	---	---	---	7.5	1.5	4.5	7.0	1.0	4.0	9.5	5.0	7.0
31	---	---	---	8.0	2.5	5.0	---	---	---	9.5	4.0	6.5
MONTH	3.0	0.0	0.7	8.0	0.0	2.6	9.0	0.0	2.7	10.5	0.5	5.6

		JUNE			JULY			AUGUST			SEPTEMBER	
1	10.0	4.0	7.0	14.5	8.0	11.0	15.0	12.5	14.0	16.0	8.0	11.5
2	10.0	5.0	7.5	15.0	7.5	11.0	13.5	12.0	13.0	16.0	9.0	12.5
3	10.5	5.5	8.0	15.5	8.5	11.5	16.0	10.5	13.0	13.0	10.0	11.5
4	10.5	6.0	8.5	15.0	8.0	11.0	18.0	11.0	14.0	14.0	9.5	11.5
5	10.5	6.0	8.5	15.0	8.0	11.0	17.5	10.0	13.5	16.0	9.5	12.0
6	10.5	6.0	8.5	15.0	8.0	11.5	16.5	9.5	12.5	16.0	8.5	12.0
7	11.5	7.0	9.5	15.0	8.0	11.0	16.5	9.0	12.5	15.0	9.0	11.5
8	11.5	7.0	9.5	15.5	8.0	11.5	16.5	8.5	12.5	14.5	9.5	11.5
9	11.5	7.5	9.5	16.5	9.0	12.5	16.5	8.0	12.0	13.5	8.5	10.5
10	11.0	6.5	9.0	17.0	9.5	13.0	17.0	8.5	12.5	13.0	6.5	9.5
11	11.0	6.5	9.0	17.0	9.5	13.0	17.5	9.5	13.0	14.0	6.5	10.0
12	10.5	6.0	8.5	17.0	9.5	13.0	17.5	9.0	13.0	14.5	7.5	11.0
13	11.0	7.0	9.0	17.5	9.5	13.0	16.0	9.0	12.5	14.0	8.0	11.0
14	11.0	6.5	9.0	17.0	9.0	12.5	17.5	9.0	13.0	14.0	7.0	10.0
15	11.5	7.0	9.5	17.5	9.5	13.0	18.0	10.5	14.0	14.0	7.5	10.5
16	13.0	8.0	10.5	18.0	10.0	14.0	18.0	10.5	14.0	14.0	8.0	11.0
17	12.5	9.5	11.0	18.5	11.0	14.5	18.0	10.0	14.0	12.5	6.0	9.0
18	12.5	9.5	11.0	16.5	11.5	14.0	18.0	10.5	14.0	12.0	5.0	8.5
19	12.5	8.0	10.0	19.5	12.5	15.5	18.0	11.0	14.5	12.5	5.5	9.0
20	12.0	7.5	9.5	18.5	13.0	15.5	17.0	11.0	14.0	13.0	6.0	9.0
21	11.5	6.5	9.0	20.0	12.5	16.0	15.5	13.0	14.0	13.0	6.0	9.5
22	11.5	6.0	8.5	20.0	12.5	15.5	16.5	11.5	13.5	13.0	6.0	9.5
23	8.5	6.0	7.5	17.0	13.5	15.0	17.0	10.5	13.5	13.5	6.5	10.0
24	11.0	5.5	8.0	18.0	12.5	15.0	17.0	10.5	13.5	14.0	7.0	10.0
25	12.5	6.0	9.0	18.0	12.5	15.0	17.0	9.5	13.0	13.5	6.5	10.0
26	13.5	7.0	10.0	18.0	12.0	14.5	16.0	11.5	14.0	13.0	6.0	9.5
27	14.5	8.5	11.0	16.5	12.5	14.5	17.0	10.5	13.5	12.5	5.5	9.0
28	15.5	9.0	12.0	17.5	11.5	14.5	16.5	10.5	13.5	13.0	6.5	9.5
29	15.5	9.5	12.0	20.0	12.5	15.5	16.0	9.5	13.0	12.5	6.5	10.0
30	14.5	8.0	11.0	20.0	13.5	16.5	16.5	8.5	12.0	13.0	6.5	10.0
31	---	---	---	18.0	14.5	16.0	12.5	9.5	11.0	---	---	---
MONTH	15.5	4.0	9.3	20.0	7.5	13.6	18.0	8.0	13.2	16.0	5.0	10.3

10336779 COLD CREEK AT MOUTH, CA

(Lake Tahoe Interagency Monitoring Program)

LOCATION.—Lat 38° 54'44", long 119° 58'06", in SE 1/4 SE 1/4 sec.03, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on left bank, 600 ft upstream of mouth, about 0.5 mi downstream from Pioneer Trail Road, and 1.7 mi south of South Lake Tahoe.

DRAINAGE AREA.—12.8 mi^2.

PERIOD OF RECORD.—September 1997 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: September 1997 to current year.

INSTRUMENTATION.—Water temperature recorder since September 1997, two times per hour.

REMARKS.—In September 1997, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor streamflows and water temperature within the Upper Truckee River–Trout Creek watershed. Records represent water temperature at probe within 0.5° C. Water temperature data for September 1997 were not published but are available from the U.S. Geological Survey, Carson City, NV. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum, 18.5° C, July 26, Aug. 10, 2001; minimum, freezing point on many days.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum, 16.5° C, July 29; minimum, freezing point, many days October to April.

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.0	4.0	5.0	2.5	0.0	1.0	2.5	0.5	1.5	1.0	0.0	0.5
2	7.0	3.0	4.0	2.5	0.0	1.0	2.5	0.5	1.5	2.5	1.0	1.5
3	7.0	1.5	4.0	3.5	0.0	2.0	2.0	0.0	1.0	3.0	1.5	2.0
4	8.0	5.0	6.5	3.5	0.0	1.5	2.5	0.0	1.0	3.5	1.5	2.5
5	8.5	4.0	6.0	3.0	0.0	1.5	2.5	0.0	1.5	3.0	1.0	2.0
6	9.5	4.5	6.5	3.5	0.0	2.0	3.0	1.0	2.0	3.0	1.0	1.5
7	10.0	4.5	7.0	5.0	2.5	3.5	2.5	0.5	1.5	2.0	0.0	1.0
8	9.0	4.0	6.5	4.0	3.0	3.5	1.5	0.0	0.5	3.0	0.5	1.5
9	9.5	4.5	6.5	3.5	1.0	2.5	2.5	0.0	1.5	3.5	2.5	3.0
10	9.5	6.0	7.5	1.5	0.5	1.0	4.5	1.5	2.5	3.5	2.5	3.0
11	8.5	4.5	6.5	3.5	1.0	2.0	2.0	0.0	1.0	3.5	1.5	2.5
12	8.0	3.0	5.0	4.0	1.5	2.5	2.5	0.0	1.5	4.0	1.5	2.5
13	8.0	3.0	5.0	5.0	2.5	3.5	3.5	1.5	2.5	4.5	1.5	3.0
14	8.5	4.0	5.5	4.0	1.5	2.5	3.5	0.0	2.5	3.0	1.0	1.5
15	7.5	3.5	5.5	3.0	0.5	2.0	0.0	0.0	0.0	2.0	0.0	1.0
16	8.0	3.5	5.0	4.0	1.0	2.5	0.0	0.0	0.0	2.0	0.0	1.0
17	7.5	3.0	5.0	4.0	1.5	2.5	0.0	0.0	0.0	3.0	0.5	1.5
18	7.5	3.0	4.5	3.0	0.5	2.0	0.0	0.0	0.0	3.5	0.5	2.0
19	7.0	2.5	4.5	3.5	1.0	2.0	0.0	0.0	0.0	3.0	0.5	1.5
20	7.0	2.5	4.5	4.5	1.5	2.5	0.0	0.0	0.0	3.0	0.5	1.5
21	6.5	2.5	4.0	5.0	2.0	3.0	0.0	0.0	0.0	3.5	1.5	2.5
22	6.5	2.5	4.0	5.5	2.5	4.0	0.0	0.0	0.0	5.0	2.5	3.5
23	6.5	2.5	4.0	5.0	2.5	4.0	0.0	0.0	0.0	5.0	2.5	3.5
24	5.5	1.5	3.5	4.0	1.5	2.5	0.0	0.0	0.0	4.0	2.0	3.0
25	6.0	3.0	4.0	3.0	0.5	1.5	0.0	0.0	0.0	5.0	2.5	3.0
26	5.5	2.0	3.5	2.5	0.0	1.0	1.5	0.0	0.5	4.5	2.0	3.0
27	6.0	2.5	4.0	2.5	0.0	1.0	2.5	1.5	2.0	5.0	2.5	3.5
28	5.5	2.5	4.0	2.0	0.0	1.0	3.0	0.0	1.5	4.0	2.0	2.5
29	4.5	1.5	3.0	1.5	0.0	0.5	1.0	0.0	0.5	4.0	1.0	2.5
30	5.0	1.5	3.0	2.0	0.0	1.0	2.0	0.5	1.0	5.0	2.0	3.0
31	4.0	0.0	2.0	---	---	---	1.5	0.0	0.5	5.0	2.0	3.0
MONTH	10.0	0.0	4.8	5.5	0.0	2.1	4.5	0.0	0.9	5.0	0.0	2.2

10336779 COLD CREEK AT MOUTH, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.5	1.5	3.0	4.5	0.5	2.0	5.5	2.0	4.0	7.5	2.0	4.5
2	3.0	0.5	1.5	4.5	0.0	2.0	3.0	0.0	1.5	6.0	3.5	4.5
3	2.5	0.0	1.0	4.0	0.5	2.0	4.5	0.0	1.5	8.5	3.0	5.0
4	2.0	0.0	0.5	4.0	1.0	2.5	3.5	0.0	1.5	8.5	3.0	4.5
5	0.5	0.0	0.0	6.0	0.5	2.5	6.0	0.5	2.5	10.0	2.5	5.5
6	0.5	0.0	0.0	6.5	0.5	3.0	3.0	1.0	2.0	7.5	2.5	5.0
7	0.5	0.0	0.0	6.5	0.5	3.0	8.0	1.0	4.0	6.5	3.5	5.0
8	0.5	0.0	0.0	7.0	0.5	3.0	9.0	1.5	4.5	4.5	2.0	3.5
9	0.5	0.0	0.0	7.0	1.0	3.5	9.0	2.5	5.0	5.5	1.5	3.0
10	1.5	0.0	0.5	7.0	2.0	4.0	8.0	2.5	5.0	9.5	2.5	5.0
11	3.0	0.5	1.5	7.5	1.5	4.0	9.5	3.0	5.5	10.5	2.5	6.0
12	3.0	0.5	2.0	8.0	2.0	4.5	6.0	1.5	4.0	11.5	3.5	7.0
13	4.5	2.5	3.0	8.5	2.0	4.5	1.5	0.0	0.5	11.5	3.5	7.0
14	5.5	1.5	3.0	7.0	2.5	4.5	3.0	0.0	1.0	10.0	4.0	6.5
15	5.0	1.5	3.0	6.0	2.0	3.5	5.5	1.0	2.5	11.0	3.5	7.0
16	3.5	0.0	1.5	5.0	0.5	2.5	3.5	1.5	2.5	10.0	3.0	6.5
17	3.0	0.0	1.0	5.5	1.5	2.5	6.5	2.0	3.5	11.0	3.5	6.5
18	3.0	0.0	1.0	6.5	0.5	3.0	7.5	2.0	4.0	10.5	2.5	6.0
19	4.0	0.5	2.0	6.5	0.0	3.0	8.0	1.5	4.0	10.5	3.0	6.5
20	5.0	1.0	2.5	8.0	1.5	4.0	6.5	2.0	4.0	11.5	3.5	7.0
21	4.5	0.0	2.0	8.5	1.5	4.5	5.5	2.0	3.5	12.0	4.0	7.5
22	5.0	0.5	2.0	8.0	2.5	4.5	5.0	1.5	3.0	12.0	4.5	8.0
23	4.5	0.0	2.0	6.5	3.0	4.5	8.5	2.5	5.0	10.5	4.5	7.5
24	5.0	1.5	3.0	9.0	3.0	5.0	6.5	2.5	4.5	12.0	5.0	8.5
25	4.5	1.5	3.0	9.0	2.0	5.0	7.5	2.0	4.0	10.0	5.5	7.5
26	4.5	0.0	2.0	8.5	3.0	5.5	8.5	1.0	4.0	11.5	5.0	8.0
27	3.0	1.0	2.0	7.5	2.0	4.0	7.0	2.5	4.5	13.0	5.5	9.5
28	3.5	0.0	1.5	6.0	1.0	3.0	8.0	2.0	4.5	13.0	6.0	9.5
29	---	---	---	7.5	1.0	4.0	6.5	2.0	4.0	12.5	6.5	9.5
30	---	---	---	8.5	2.0	5.0	7.0	1.5	4.0	11.5	6.5	9.0
31	---	---	---	9.0	3.0	5.5	---	---	---	11.5	5.0	8.0
MONTH	5.5	0.0	1.6	9.0	0.0	3.7	9.5	0.0	3.5	13.0	1.5	6.6

		JUNE			JULY			AUGUST			SEPTEMBER	
1	11.5	5.0	8.5	12.5	7.5	10.0	13.5	11.5	12.5	13.0	8.0	10.0
2	12.0	5.5	9.0	12.5	7.0	10.0	12.0	11.0	11.5	13.5	9.0	11.0
3	12.0	6.0	9.5	13.5	8.0	11.0	13.5	10.0	11.5	12.5	10.0	11.0
4	12.0	6.5	9.5	12.5	7.5	10.0	15.0	10.5	12.5	12.5	9.5	11.0
5	11.5	6.5	9.5	12.5	7.5	10.5	14.0	9.5	11.5	13.5	9.5	11.0
6	12.0	6.0	9.5	12.5	7.5	10.5	13.5	8.5	11.0	13.5	9.0	10.5
7	13.0	7.0	10.0	12.5	7.5	10.0	13.5	8.5	11.0	13.0	9.0	10.5
8	13.0	7.5	10.0	13.0	8.0	10.5	13.5	8.5	11.0	12.0	8.5	10.0
9	12.5	7.0	10.0	14.0	8.5	11.5	13.0	8.0	10.5	11.0	7.5	8.5
10	12.0	6.0	9.5	14.0	9.5	12.0	14.0	8.5	11.0	11.0	6.5	8.5
11	11.5	6.0	9.0	13.5	8.5	11.5	14.0	9.0	11.5	12.0	7.0	9.0
12	11.0	5.5	8.5	13.5	9.0	11.5	14.0	9.0	11.0	12.5	8.0	9.5
13	11.0	6.5	9.0	14.0	8.5	11.5	13.5	8.5	10.5	12.0	8.0	9.5
14	11.5	5.5	9.0	13.5	8.0	11.0	14.0	9.0	11.5	12.0	7.0	9.0
15	11.5	6.5	9.5	14.0	9.0	11.5	15.0	10.0	12.0	12.5	8.0	9.5
16	13.0	7.5	10.5	15.0	10.0	12.5	15.0	10.0	12.0	12.0	8.0	9.5
17	13.0	9.0	11.0	15.5	10.5	13.0	15.0	10.0	12.0	10.0	5.5	7.5
18	12.0	9.0	10.5	14.5	11.0	12.5	15.0	10.0	12.0	10.0	5.5	7.5
19	11.5	7.0	9.5	16.0	11.5	13.5	15.5	10.5	12.5	11.0	6.0	8.0
20	11.0	6.5	9.0	15.0	12.0	13.5	15.0	10.5	12.5	11.5	6.5	8.5
21	10.5	6.0	8.5	16.0	11.5	14.0	13.5	12.0	12.5	11.5	6.5	8.5
22	10.5	5.5	8.0	16.0	12.0	14.0	14.5	11.0	12.5	11.5	7.0	9.0
23	9.0	5.5	7.0	14.5	13.0	13.5	14.5	10.0	12.0	12.0	7.5	9.0
24	10.0	5.0	7.5	16.0	11.5	13.5	14.5	10.0	11.5	12.0	7.5	9.5
25	11.5	6.0	9.0	15.5	11.5	13.5	14.5	9.0	11.5	12.0	7.5	9.0
26	12.0	7.0	10.0	14.5	11.0	13.0	14.0	11.0	12.0	11.5	7.0	9.0
27	13.0	8.0	11.0	14.5	11.5	13.0	14.5	10.0	12.0	11.5	6.5	8.5
28	13.5	9.0	11.5	15.0	10.5	13.0	14.5	10.0	11.5	11.5	7.5	9.0
29	13.5	9.0	11.5	16.5	11.5	14.0	13.5	8.5	10.5	12.5	8.0	9.5
30	12.5	7.5	10.0	16.0	12.5	14.5	13.5	8.5	10.5	12.0	7.5	9.5
31	---	---	---	16.0	13.0	14.0	11.5	9.5	10.0	---	---	---
MONTH	13.5	5.0	9.5	16.5	7.0	12.2	15.5	8.0	11.5	13.5	5.5	9.3
YEAR	16.5	0.0	5.7									

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA

(Lake Tahoe Interagency Monitoring Program)

LOCATION.—Lat 38° 55'12", long 119° 58'17", in NW 1/4 SE 1/4 sec.3, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on left bank, 5 ft upstream from Martin Avenue Bridge, 500 ft upstream from Heavenly Valley Creek, and 1.8 mi east of Tahoe Valley.

DRAINAGE AREA.—36.7 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1960 to current year.

GAGE.—Water-stage recorder. Datum of gage is 6,241.57 ft above NGVD of 1929.

REMARKS.—Records good except for estimated daily discharges, which are poor. Minor diversions for local water supply upstream from station. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 535 ft^3/s, Feb. 1, 1963, gage height, 11.14 ft, and Jan. 2, 1997, gage height, 9.33 ft, from rating curve extended above 250 ft^3/s, on basis of computation of peak flow (weir formula); minimum daily, 2.5 ft^3/s, Sept. 7, 1988.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft^3/s, and maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 14	1145	126	7.17	May 30	0415	*142	*7.22

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	11	13	e14	18	14	34	31	124	45	27	17
2	10	12	13	e16	18	14	28	32	124	44	29	17
3	10	12	13	e16	18	14	39	34	127	43	28	17
4	10	11	15	e16	e17	14	29	38	127	41	25	19
5	10	12	15	16	e17	14	25	35	124	40	23	20
6	9.9	12	11	15	e17	15	23	37	119	39	22	17
7	9.8	12	12	e15	e16	15	23	36	117	38	22	16
8	9.8	46	14	e14	e16	15	26	37	115	37	22	16
9	9.9	37	16	13	e15	16	30	34	114	36	21	16
10	9.6	17	11	13	e15	16	30	33	108	35	20	16
11	9.4	17	12	13	e14	17	30	36	104	34	20	16
12	9.5	17	12	13	e13	18	33	42	98	32	19	15
13	9.6	17	13	13	13	21	78	48	93	32	19	15
14	9.6	15	e13	e13	13	23	84	53	87	31	19	15
15	9.5	14	e13	e13	13	30	39	55	85	30	19	15
16	9.5	13	e14	e13	e13	23	33	57	82	29	19	15
17	9.5	13	e14	e13	e13	20	32	59	80	29	18	14
18	9.6	12	e14	e13	e13	18	31	60	79	28	18	15
19	9.6	12	e14	14	e13	18	30	60	76	29	18	14
20	9.7	13	e15	14	13	19	33	63	74	28	18	14
21	9.8	13	e15	13	13	19	32	69	72	27	22	14
22	9.8	13	e15	13	13	20	28	77	69	26	24	14
23	10	13	e15	18	13	30	30	87	68	29	20	13
24	9.9	13	e16	21	13	27	36	88	67	30	19	13
25	10	12	e16	17	13	25	34	93	62	26	18	13
26	10	13	e16	16	13	41	35	92	57	25	18	13
27	10	15	e15	18	13	38	34	98	54	25	18	13
28	10	16	e15	21	13	29	34	110	50	26	17	13
29	10	16	e15	17	---	26	32	119	47	24	19	13
30	10	15	e14	16	---	28	30	130	45	24	17	13
31	10	---	e14	16	---	32	---	127	---	23	17	---
TOTAL	303.8	464	433	466	402	669	1035	1970	2648	985	635	451
MEAN	9.80	15.5	14.0	15.0	14.4	21.6	34.5	63.5	88.3	31.8	20.5	15.0
MAX	10	46	16	21	18	41	84	130	127	45	29	20
MIN	9.4	11	11	13	13	14	23	31	45	23	17	13
AC-FT	603	920	859	924	797	1330	2050	3910	5250	1950	1260	895

e Estimated.

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.0	19.4	20.8	24.2	24.7	29.6	43.3	77.4	91.5	48.8	23.9	17.2
MAX	37.6	61.1	64.0	115	68.7	85.0	81.9	184	286	188	88.7	49.6
(WY)	1983	1984	1984	1997	1986	1986	1982	1969	1983	1995	1983	1983
MIN	5.19	7.43	8.18	8.00	8.02	11.0	15.7	14.2	10.9	5.21	3.43	3.71
(WY)	1989	1978	1991	1991	1991	1977	1988	1988	1988	1988	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1961 - 2003	
ANNUAL TOTAL	7630.0		10461.8			
ANNUAL MEAN	20.9		28.7		36.5	
HIGHEST ANNUAL MEAN					85.3	1983
LOWEST ANNUAL MEAN					10.2	1977
HIGHEST DAILY MEAN	63	Jun 2	130	May 30	501	Jan 2 1997
LOWEST DAILY MEAN	8.9	Sep 25	9.4	Oct 11	2.5	Sep 7 1988
ANNUAL SEVEN-DAY MINIMUM	9.0	Sep 22	9.5	Oct 11	3.0	Sep 9 1977
MAXIMUM PEAK FLOW			142	May 30	535	Feb 1 1963
MAXIMUM PEAK STAGE			7.22	May 30	11.14	Feb 1 1963
ANNUAL RUNOFF (AC-FT)	15130		20750		26440	
10 PERCENT EXCEEDS	45		67		82	
50 PERCENT EXCEEDS	15		17		22	
90 PERCENT EXCEEDS	9.8		12		9.0	

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1974, 1978, 1980–85, 1988, 1997 to current year.

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: March 1981 to September 1983.
WATER TEMPERATURE: September 1997 to September 2003 (discontinued).
SUSPENDED-SEDIMENT DISCHARGE: October 1971 to June 1974, October 1977 to June 1978, March 1980 to September 1985, October 1987 to September 1988.

INSTRUMENTATION.—Water temperature recorder September 1997 to September 2003, two times per hour.

REMARKS.—In October 1992, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. Water temperature records represent water temperature probe within 0.5° C. Interruptions in record due to vandalism of sensor. Water temperature data for September 1997 were not published but are available from the U.S. Geological Survey, Carson City, NV. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum recorded, 160 microsiemens, Aug. 24, 1981; minimum recorded 14 microsiemens, May 28, 1982.
WATER TEMPERATURE: Maximum, 21.5° C, Aug. 10, 12, 13, 17, 29, 2001; minimum, freezing point on many days during winter months.
SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 162 tons, Feb. 16, 1982; minimum daily, 0 ton, Oct. 15, 16, 1973.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 19.5° C, July 21; minimum, freezing point, many days October to March.

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.0	5.0	6.5	3.0	0.0	1.0	2.0	0.0	1.0	0.0	0.0	0.0
2	9.5	3.5	5.5	3.0	0.0	1.0	3.0	0.0	1.0	0.0	0.0	0.0
3	9.0	2.0	5.0	3.5	0.0	1.5	2.0	0.0	0.5	0.0	0.0	0.0
4	9.5	5.5	7.0	3.5	0.0	1.0	2.0	0.0	0.5	1.0	0.0	0.5
5	11.0	4.0	7.0	3.0	0.0	1.0	1.5	0.0	0.5	1.5	0.0	0.5
6	11.5	4.5	7.5	3.0	0.0	1.0	2.0	0.5	1.0	1.5	0.0	0.5
7	11.5	5.0	7.5	4.5	1.0	2.5	2.0	0.0	1.0	1.0	0.0	0.5
8	11.0	4.5	7.0	3.5	3.0	3.5	0.5	0.5	0.5	---	---	---
9	11.5	4.5	7.5	3.5	1.0	2.5	1.5	0.5	1.0	---	---	---
10	11.0	6.5	8.0	2.0	0.5	1.0	3.5	0.5	1.5	---	---	---
11	10.0	5.0	7.0	4.0	0.5	1.5	1.5	0.5	1.0	---	---	---
12	9.5	3.5	6.0	4.5	0.5	2.5	1.5	0.5	1.0	---	---	---
13	9.5	3.5	6.0	5.5	2.5	3.5	2.5	0.5	1.5	---	---	---
14	10.0	4.0	6.0	5.0	1.0	2.5	2.5	0.5	2.0	---	---	---
15	9.0	3.5	6.0	3.5	0.0	1.5	0.5	0.0	0.5	---	---	---
16	9.0	3.0	5.5	4.0	0.5	2.0	0.5	0.0	0.0	---	---	---
17	9.0	3.0	5.5	4.5	1.0	2.5	0.0	0.0	0.0	---	---	---
18	9.0	2.5	5.0	3.5	0.5	1.5	0.0	0.0	0.0	---	---	---
19	8.5	2.5	5.0	4.0	0.5	1.5	0.0	0.0	0.0	---	---	---
20	8.5	2.5	5.0	5.0	0.5	2.5	0.0	0.0	0.0	---	---	---
21	7.5	2.5	4.5	4.5	1.0	2.5	0.0	0.0	0.0	---	---	---
22	7.5	2.0	4.5	5.0	2.0	3.5	0.0	0.0	0.0	---	---	---
23	7.5	2.5	4.0	5.5	2.5	3.5	0.0	0.0	0.0	---	---	---
24	6.5	1.5	4.0	4.5	1.0	2.5	0.0	0.0	0.0	---	---	---
25	7.0	3.0	4.5	3.0	0.0	1.5	0.0	0.0	0.0	---	---	---
26	7.0	2.0	4.0	2.5	0.0	0.5	0.0	0.0	0.0	---	---	---
27	7.0	2.0	4.0	2.0	0.0	0.5	0.0	0.0	0.0	---	---	---
28	6.0	2.0	3.5	2.0	0.5	0.5	0.0	0.0	0.0	---	---	---
29	5.0	1.0	2.5	1.0	0.0	0.5	0.0	0.0	0.0	---	---	---
30	6.0	1.0	3.0	1.0	0.0	0.5	0.0	0.0	0.0	---	---	---
31	5.0	0.0	2.0	---	---	---	0.0	0.0	0.0	---	---	---
MONTH	11.5	0.0	5.4	5.5	0.0	1.8	3.5	0.0	0.5	---	---	---

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	5.0	2.5	4.5	---	---	---
2	---	---	---	---	---	---	2.5	1.0	2.0	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	6.5	0.0	3.0	---	---	---	6.5	3.5	5.0
8	---	---	---	6.0	0.0	3.0	---	---	---	5.0	1.5	3.5
9	---	---	---	6.5	0.0	3.0	---	---	---	5.0	0.5	2.5
10	---	---	---	6.5	1.5	3.5	---	---	---	9.0	2.5	5.0
11	---	---	---	7.0	1.0	3.5	---	---	---	11.0	2.5	6.0
12	---	---	---	7.5	1.5	4.0	---	---	---	11.5	3.5	7.0
13	---	---	---	8.0	1.5	4.0	---	---	---	11.5	4.0	7.5
14	---	---	---	7.0	2.0	4.0	---	---	---	10.0	4.5	7.0
15	---	---	---	5.0	1.5	3.0	---	---	---	11.0	4.0	7.0
16	---	---	---	4.0	0.0	2.0	---	---	---	10.0	3.0	6.5
17	---	---	---	5.0	1.0	2.5	---	---	---	11.0	3.5	7.0
18	---	---	---	6.5	0.0	3.0	---	---	---	10.0	3.0	6.5
19	---	---	---	5.5	0.0	2.5	---	---	---	10.5	3.5	6.5
20	---	---	---	7.5	1.0	3.5	---	---	---	11.0	3.5	7.0
21	---	---	---	7.5	1.0	4.0	---	---	---	11.5	4.0	7.5
22	---	---	---	7.5	2.0	4.5	---	---	---	11.0	4.0	7.5
23	---	---	---	5.5	3.0	4.0	---	---	---	9.5	4.5	7.0
24	---	---	---	8.0	2.5	4.5	---	---	---	11.0	4.5	7.5
25	---	---	---	7.5	2.0	4.5	---	---	---	9.0	5.0	7.0
26	---	---	---	7.0	3.5	5.0	---	---	---	10.0	4.0	7.0
27	---	---	---	6.5	2.0	4.0	---	---	---	11.5	5.0	8.0
28	---	---	---	5.5	1.5	3.5	---	---	---	11.5	5.5	8.5
29	---	---	---	7.0	1.5	4.0	---	---	---	11.5	5.5	8.5
30	---	---	---	8.0	2.5	5.0	---	---	---	11.5	6.0	8.5
31	---	---	---	8.0	3.0	5.5	---	---	---	11.5	5.0	8.0
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

		JUNE			JULY			AUGUST			SEPTEMBER	
1	11.5	5.0	8.5	15.0	8.0	11.0	15.0	12.5	13.5	15.5	8.5	11.5
2	11.5	5.5	9.0	15.0	7.5	11.0	13.5	12.0	13.0	16.0	9.5	12.5
3	12.0	6.0	9.0	16.0	8.5	12.0	15.0	10.5	12.5	13.0	10.5	12.0
4	12.5	7.0	9.5	15.0	8.0	11.5	18.0	11.0	14.0	14.0	10.0	12.0
5	12.0	6.5	9.5	15.0	8.0	11.5	17.0	10.0	13.5	16.0	9.5	12.5
6	12.0	6.5	9.5	15.5	8.0	11.5	16.5	9.5	13.0	16.0	9.0	12.5
7	13.0	7.5	10.5	15.0	8.0	11.5	16.5	9.0	12.5	15.0	9.5	12.0
8	13.0	8.0	10.5	15.5	8.5	11.5	16.5	9.0	12.5	14.5	9.5	11.5
9	12.5	8.0	10.5	16.5	9.0	12.5	16.0	8.5	12.0	12.0	8.5	10.0
10	12.0	7.0	9.5	17.0	9.5	13.0	16.5	9.0	12.5	13.0	7.0	10.0
11	11.5	7.0	9.5	17.0	9.0	13.0	17.0	10.0	13.0	14.0	7.5	10.5
12	11.5	6.5	9.0	16.5	9.5	13.0	16.5	9.5	13.0	15.0	8.5	11.0
13	11.5	7.5	9.5	17.0	9.5	13.0	15.5	9.5	12.5	14.5	9.0	11.5
14	11.5	6.5	9.5	16.5	9.0	13.0	16.5	9.5	13.0	14.5	8.0	10.5
15	12.0	7.5	10.0	17.0	9.5	13.0	17.5	11.0	14.0	14.5	8.5	11.0
16	13.5	8.5	11.0	18.0	10.5	14.0	17.5	11.0	14.0	14.0	9.0	11.0
17	13.5	9.5	11.5	18.5	11.0	14.5	17.5	11.0	14.0	12.5	6.5	9.5
18	13.0	9.5	11.5	17.0	11.5	14.0	17.5	11.5	14.0	12.5	6.0	9.0
19	13.0	8.0	10.5	18.0	12.0	15.0	18.0	12.0	14.5	13.0	6.5	9.5
20	12.0	7.5	10.0	18.0	13.0	15.5	17.5	12.0	14.0	13.5	7.0	9.5
21	12.0	7.0	9.5	19.5	12.5	15.5	15.0	13.0	13.5	13.5	7.0	10.0
22	12.0	6.5	9.0	19.0	13.0	15.5	17.0	11.5	13.5	14.0	7.5	10.0
23	9.0	6.5	7.5	16.5	13.5	15.0	16.5	10.5	13.5	14.0	8.0	10.5
24	11.5	5.5	8.0	18.5	12.5	15.0	17.5	11.0	13.5	14.5	8.0	10.5
25	13.0	6.5	9.5	18.5	12.5	15.0	17.0	10.5	13.5	14.5	8.0	10.5
26	14.0	7.5	10.5	17.0	12.0	14.5	16.5	12.5	13.5	14.0	7.5	10.0
27	15.0	8.5	11.5	16.5	12.5	14.5	17.0	11.0	13.5	14.0	7.0	10.0
28	16.0	9.5	12.5	17.0	11.5	14.5	17.0	11.0	13.5	14.0	8.0	10.5
29	15.5	9.5	12.5	19.0	12.5	15.5	15.5	10.5	12.5	14.0	8.0	10.5
30	14.5	8.5	11.5	19.0	13.5	16.5	16.0	9.0	12.5	14.5	8.0	10.5
31	---	---	---	18.0	14.5	16.0	12.5	10.0	11.0	---	---	---
MONTH	16.0	5.0	10.0	19.5	7.5	13.6	18.0	8.5	13.2	16.0	6.0	10.8

10336790 TROUT CREEK AT SOUTH LAKE TAHOE, CA

(Lake Tahoe Interagency Monitoring Program)

LOCATION.—Lat 38° 55'56", long 119° 58'40", in SE 1/4 NW 1/4 sec.3, T.12 N., R.18 E., El Dorado County, Hydrologic Unit 16050101, on right bank, downstream side of U.S. Highway 50 bridge, 1.2 mi upstream from Lake Tahoe, and 1.4 mi southwest of South Lake Tahoe Post Office.

DRAINAGE AREA.—40.4 mi^2.

PERIOD OF RECORD.—Water years 1972–74, 1989 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Instantaneous: October 1971 to June 1974, October 1988 to September 1992. Continuous: September 1997 to current year.
SUSPENDED-SEDIMENT DISCHARGE: October 1971 to June 1974, October 1988 to September 1992.

INSTRUMENTATION.—Water temperature recorder since September 1997, two times per hour.

REMARKS.—In October 1992, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor tributary contributions of nutrients and sediment to Lake Tahoe. Samples were analyzed by the University of California, Davis, Tahoe Research Group. Water temperature records represent water temperature at probe within 0.5° C. Water temperature data for September 1997 were not published but are available from the U.S. Geological Survey in Carson City, NV. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum, 22.0° C, July 8, 1990, Aug. 2, 2001; minimum, freezing point on many days during winter months.
SEDIMENT CONCENTRATION: Maximum daily mean, 300 mg/L, Jan. 15, 1974; minimum daily mean, 0 mg/L, at times in most years.
SEDIMENT LOAD: Maximum daily, 52 tons, Jan. 15, 1974; minimum daily, 0 ton, at times in most years.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum, 20.5° C, July 21; minimum, freezing point, many days October to April.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT 2001													
02...	1030	7.8	--	--	--	--	65	18.5	10.8	--	--	.17	<.003
17...	1010	6.1	--	--	--	--	62	10.0	7.0	--	--	--	--
NOV													
07...	1210	10	--	--	--	--	62	12.0	4.6	--	--	.11	.008
DEC													
11...	1630	16	--	--	--	7.4	58	-.5	.4	1.01	.18	.16	.004
JAN 2002													
09...	0750	--	--	--	--	--	--	--	--	1.99	--	--	--
09...	0850	15	--	--	--	--	60	-2.5	.8	2.0	--	.23	.005
FEB													
06...	0930	31	--	--	--	--	64	-2.0	.1	1.38	.19	.19	<.003
20...	1000	17	--	--	--	--	63	6.0	1.3	2.57	.21	.43	<.003
MAR													
05...	0655	15	610	11.0	95	6.6	66	2.0	.5	2.84	.21	.22	.003
27...	1235	16	--	--	--	--	63	11.5	4.0	3.23	--	.21	.003
APR													
03...	1050	32	--	--	--	--	50	13.5	5.5	2.29	.26	.42	.003
04...	1630	39	--	--	--	--	49	14.5	8.3	2.09	--	.24	.003
12...	1305	46	--	--	--	--	42	13.0	6.9	1.45	.24	.46	.004
23...	1035	34	--	--	--	--	40	11.0	4.3	1.33	.24	.42	.003
25...	1715	34	--	--	--	--	42	13.0	10.4	1.12	.21	.51	.004
MAY													
08...	1735	40	--	--	--	--	36	13.5	10.2	.76	.16	.27	<.003
14...	1535	44	--	--	--	--	33	18.0	11.4	.63	.23	.16	<.003
15...	1850	47	--	--	--	--	32	14.5	11.7	.59	.19	.21	<.003
24...	1440	45	--	--	--	--	34	18.0	10.4	.58	.16	.25	.003
29...	1510	50	--	--	--	--	32	23.0	13.6	.43	.22	.22	<.003
30...	1435	56	--	--	--	--	36	22.5	13.3	.41	.24	.18	<.003
JUN													
05...	1450	59	610	8.7	106	7.5	29	25.5	14.2	.36	.43	.27	.004
JUL													
02...	1315	24	--	--	--	--	39	23.0	16.0	.45	.34	.11	<.003
AUG													
16...	0855	11	609	7.4	90	6.6	47	18.5	14.0	.57	.10	.09	.003
SEP													
11...	1220	10	--	--	--	--	54	20.5	11.0	.59	--	.09	.003

< Actual value is known to be less than value shown.

10336790 TROUT CREEK AT SOUTH LAKE TAHOE, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	[1]Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Iron (bio reac-tive), water, unfltrd ug/L (46568)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)	Iron (bio reac-tive), water, fltrd ug/L (63673)
OCT 2001								
02...	.003	.009	--	.023	342	3	.06	--
17...	--	--	--	--	--	--	--	--
NOV								
07...	.003	.008	--	.015	263	5	.14	--
DEC								
11...	.007	.007	.016	.011	172	1	.04	170
JAN 2002								
09...	--	--	--	--	--	--	--	--
09...	.006	.007	.017	.025	431	5	.20	220
FEB								
06...	.006	.003	.009	.013	207	2	.17	120
20...	.003	.006	.012	.022	--	3	.14	210
MAR								
05...	.008	.006	--	.019	442	4	.16	220
27...	.007	.006	.013	.019	--	5	.22	210
APR								
03...	.019	.007	.017	.036	744	11	.95	210
04...	.020	.008	.019	.042	779	10	1.1	300
12...	.016	.007	.012	.037	696	10	1.2	180
23...	.009	.005	.015	.026	529	6	.55	170
25...	.008	.006	.017	.024	386	4	.37	180
MAY								
08...	.004	.007	.012	.029	366	6	.65	150
14...	.004	.006	.011	.025	373	6	.71	140
15...	.004	.006	.012	.026	371	5	.63	130
24...	.003	.005	.013	.022	175	4	.49	120
29...	.004	.006	.013	.023	337	9	1.2	100
30...	.005	.006	.013	.031	478	13	2.0	98
JUN								
05...	.003	.007	.013	.030	412	6	.96	93
JUL								
02...	.004	.009	.016	.036	342	4	.26	140
AUG								
16...	.003	.009	.015	.025	366	2	.06	190
SEP								
11...	.003	.009	.015	.019	350	4	.11	--

[1] Hydrazine method used to determine nitrate plus nitrite concentrations was found to have interferences caused by other common ions in water samples. Values may be adjusted in the future to correct for these interferences.

10336790 TROUT CREEK AT SOUTH LAKE TAHOE, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT 2002													
10...	1155	e11	--	--	--	--	54	17.5	7.9	.65	--	.17	<.003
NOV													
06...	1035	e12	--	--	--	--	55	13.5	1.2	.77	.07	.08	.004
08...	1045	e37	--	--	--	--	55	4.5	3.0	2.47	.46	.61	.004
DEC													
05...	0930	e16	609	11.1	95	7.6	55	2.5	.0	.85	.07	--	.003
JAN 2003													
10...	1050	e9.1	--	--	--	--	56	2.5	.1	1.44	.08	.13	<.003
FEB													
03...	1020	e14	--	--	--	--	62	1.5	.3	2.55	.09	.17	<.003
MAR													
06...	1045	e16	605	10.9	100	7.1	64	9.0	2.3	2.03	.08	.11	<.003
26...	1155	e40	--	--	--	--	56	8.5	6.0	2.33	.15	.26	<.003
APR													
03...	1055	e38	--	--	--	--	55	-.5	1.3	1.88	.11	.24	<.003
08...	1130	e27	--	--	--	--	54	15.0	3.8	2.21	.16	.18	<.003
09...	1045	e30	--	--	--	--	53	11.0	3.8	--	.15	.39	<.003
23...	1015	e30	--	--	--	--	58	7.5	2.9	2.54	.19	.22	<.003
MAY													
02...	1050	e34	--	--	--	--	58	4.5	4.3	2.25	.13	.12	.003
06...	1020	e39	--	--	--	--	54	7.5	3.8	2.02	.15	.21	<.003
10...	1300	e34	--	--	--	--	53	7.5	6.9	--	.13	.18	<.003
13...	1210	e48	--	--	--	--	48	13.5	7.6	--	.21	.27	<.003
16...	1640	e56	--	--	--	--	42	17.0	10.1	--	.25	.45	<.003
21...	1720	e67	--	--	--	--	38	20.5	11.5	--	.11	.32	.005
23...	1135	e87	--	--	--	--	31	18.5	6.5	--	.15	.46	.003
28...	1125	e114	--	--	--	--	26	21.5	7.5	--	.20	.39	.005
30...	1130	e137	--	--	--	--	24	19.0	8.0	--	.23	.48	.003
JUN													
07...	1550	e118	605	8.2	99	6.7	24	25.5	13.4	--	.16	.31	<.003
10...	1155	e114	--	--	--	--	23	20.5	9.4	--	.13	.22	<.003
JUL													
09...	1020	e39	--	--	--	--	42	20.0	10.1	--	.10	.13	.003
AUG													
08...	0925	e25	--	--	--	--	44	17.0	10.5	--	.07	.12	.003
SEP													
03...	0950	e18	610	9.0	104	7.2	49	19.0	11.8	--	.08	.12	.006

e Estimated.
< Actual value is known to be less than value shown.

10336790 TROUT CREEK AT SOUTH LAKE TAHOE, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ammonia water, unfltrd mg/L as N (00610)	[1]Nitrite + nitrate water fltrd, mg/L as N (00631)	[1]Nitrite + nitrate water unfltrd mg/L as N (00630)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Ortho-phos-phate, water, unfltrd mg/L as P (70507)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Iron (bio reac-tive), water, unfltrd ug/L (46568)	Iron (bio reac-tive), water, fltrd, ug/L (63673)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)	Suspnd. sedi-ment, sieve diametr percent <.063mm (70331)
OCT 2002												
10...	.008	.003	.003	.009	.01	.022	.021	211	--	4	e.12	--
NOV												
06...	.004	.006	.006	.007	.01	.016	.021	380	179	6	e.19	--
08...	.004	.018	.024	.021	.04	.056	.160	3420	284	96	e9.7	41
DEC												
05...	<.003	.005	.006	.007	.01	.013	.018	276	169	--	--	--
JAN 2003												
10...	.005	.010	.017	.006	.01	.010	.019	382	181	2	e.05	--
FEB												
03...	.003	.013	.021	.007	.01	.014	.016	396	256	9	e.34	--
MAR												
06...	.003	.013	.015	.007	.01	.016	.021	432	261	5	e.22	--
26...	.008	.017	.026	.007	.01	.017	.027	717	176	6	e.65	--
APR												
03...	.005	.023	.031	.006	.01	.014	.026	730	246	9	e.93	--
08...	.005	.014	.022	.005	.01	.012	.020	517	144	6	e.43	--
09...	.007	.005	.021	.005	.01	.012	.029	622	167	6	e.48	--
23...	.007	.012	.021	.004	.01	.008	.020	548	206	8	e.65	--
MAY												
02...	.004	.009	.018	.005	.01	.012	.023	469	22	3	e.28	--
06...	.004	.009	.018	.005	.01	.012	.023	504	204	4	e.43	--
10...	.003	.009	.009	.006	.01	.011	.026	478	253	4	e.37	--
13...	.006	.010	.018	.006	.01	.015	.037	564	127	9	e1.2	--
16...	.009	.018	.024	.008	.02	.020	.041	736	154	15	e2.3	--
21...	.013	.015	.027	.007	.02	.016	.055	842	157	16	e2.9	--
23...	.019	.019	.032	.009	.03	.022	.080	1390	111	51	e12	--
28...	.019	.015	.029	.011	.03	.021	.088	1430	248	51	e16	64
30...	.020	.011	.026	.014	.03	.026	.090	1430	248	49	e18	--
JUN												
07...	.009	.005	.015	.009	.02	.017	.047	701	91	21	e6.7	--
10...	.007	.007	.015	.009	.02	.018	.038	572	96	18	e5.5	--
JUL												
09...	.004	.007	.011	.009	.01	.020	.035	343	104	7	e.74	--
AUG												
08...	.004	.008	.009	.009	.01	.015	.026	444	175	5	e.33	--
SEP												
03...	.009	.006	.010	.011	.02	.025	.030	373	166	4	e.20	--

[1] Hydrazine method used to determine nitrate plus nitrite concentrations was found to have interferences caused by other common ions in water samples. Values may be adjusted in the future to correct for these interferences.

< Actual value is known to be less than value shown.

e Estimated.

10336790 TROUT CREEK AT SOUTH LAKE TAHOE, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.5	5.5	7.0	2.5	0.0	---	1.0	0.0	---	0.0	0.0	0.0
2	7.5	4.0	6.0	2.5	0.0	---	2.0	0.0	---	0.0	0.0	0.0
3	8.0	3.0	5.5	3.5	0.0	---	1.0	0.0	0.5	0.0	0.0	0.0
4	8.0	6.0	7.5	3.0	0.0	---	1.5	0.0	---	0.0	0.0	0.0
5	9.5	5.0	7.5	3.0	0.0	---	1.0	0.0	---	0.0	0.0	0.0
6	10.0	5.5	8.0	3.0	0.0	---	1.5	0.0	---	0.0	0.0	0.0
7	10.0	5.5	8.0	4.5	0.5	2.5	1.5	0.0	---	0.0	0.0	0.0
8	10.0	5.5	8.0	3.5	3.0	3.0	0.5	0.0	---	0.0	0.0	0.0
9	10.0	5.5	8.0	4.0	1.0	2.5	0.5	0.0	---	0.0	0.0	0.0
10	10.0	7.0	8.5	1.5	0.0	0.5	3.0	0.0	1.5	0.0	0.0	0.0
11	9.0	6.5	7.5	4.0	0.0	1.5	1.0	0.0	---	0.0	0.0	0.0
12	8.0	4.5	6.5	4.5	0.0	2.5	1.0	0.0	---	0.5	0.0	0.5
13	8.0	4.5	6.5	5.5	2.5	3.5	2.0	0.0	1.0	1.5	0.0	1.0
14	8.0	5.0	6.5	5.0	1.0	2.5	2.0	0.0	1.5	1.5	0.0	0.5
15	8.0	5.0	6.5	3.5	0.0	1.5	0.0	0.0	0.0	0.5	0.0	---
16	7.5	5.0	6.0	4.0	0.0	2.0	0.0	0.0	0.0	1.0	0.0	---
17	7.0	4.0	6.0	4.5	1.0	2.5	0.0	0.0	0.0	1.0	0.0	---
18	7.0	4.0	6.0	3.0	0.0	1.5	0.0	0.0	0.0	1.5	0.0	---
19	7.0	3.5	5.5	3.5	0.0	1.5	0.0	0.0	0.0	2.0	0.0	---
20	7.0	3.5	5.5	4.5	0.5	2.0	0.0	0.0	0.0	2.0	0.0	---
21	6.5	3.5	5.0	4.5	1.0	2.5	0.0	0.0	0.0	2.0	0.0	1.0
22	6.5	3.0	5.0	4.5	1.5	3.0	0.0	0.0	0.0	4.5	1.0	2.5
23	7.5	2.0	4.5	5.0	2.5	3.5	0.0	0.0	0.0	4.0	1.5	3.0
24	6.5	1.0	4.0	4.0	1.0	2.5	0.0	0.0	0.0	3.0	0.5	2.0
25	7.0	2.5	4.5	2.5	0.0	1.5	0.0	0.0	0.0	4.5	1.5	3.0
26	7.0	1.5	4.0	1.5	0.0	0.5	0.0	0.0	0.0	4.0	1.5	2.5
27	7.0	1.5	4.0	1.0	0.0	---	0.0	0.0	0.0	4.5	2.5	3.0
28	6.0	1.5	4.0	1.0	0.0	---	0.0	0.0	0.0	4.5	1.0	2.5
29	4.5	0.5	2.5	0.5	0.0	---	0.0	0.0	0.0	4.0	0.5	2.0
30	5.5	0.5	3.0	0.0	0.0	---	0.0	0.0	0.0	4.5	1.0	2.5
31	4.5	0.0	2.0	---	---	---	0.0	0.0	0.0	4.5	1.0	3.0
MONTH	10.0	0.0	5.8	5.5	0.0	---	3.0	0.0	---	4.5	0.0	---

		FEBRUARY			MARCH			APRIL			MAY	
1	4.0	1.5	2.5	5.5	0.5	2.0	6.0	2.0	4.5	7.5	2.5	5.0
2	3.0	0.0	1.5	4.5	0.0	---	3.0	0.0	1.5	6.5	4.0	5.0
3	2.0	0.0	---	3.5	0.0	---	4.0	0.0	1.5	9.0	3.0	5.5
4	1.0	0.0	---	4.5	0.5	2.5	3.5	0.0	1.0	8.5	3.0	5.5
5	1.0	0.0	0.0	6.5	0.0	3.0	6.5	0.0	3.0	10.5	2.5	6.0
6	1.0	0.0	0.0	6.5	0.5	3.0	3.5	0.5	2.0	7.5	3.0	5.5
7	1.0	0.0	0.0	7.0	0.5	3.5	8.5	0.5	4.5	6.5	4.0	5.5
8	1.0	0.0	0.0	7.0	0.5	3.5	10.0	1.5	5.5	5.5	2.0	4.0
9	1.0	0.0	0.0	7.0	1.0	3.5	9.5	2.5	6.0	5.5	1.0	3.0
10	1.0	0.0	0.0	7.5	2.0	4.0	8.5	3.0	6.0	9.5	2.5	5.5
11	1.0	0.0	0.5	7.5	1.5	4.0	10.0	3.5	6.5	11.0	3.0	7.0
12	1.5	0.0	---	8.5	2.0	5.0	7.0	2.5	5.0	12.0	4.0	8.0
13	4.0	1.0	2.0	8.5	2.0	5.0	2.5	0.0	0.5	12.0	5.0	8.5
14	5.0	0.5	2.5	7.0	2.5	4.5	1.5	0.0	0.5	10.0	5.0	7.5
15	4.0	0.0	2.0	5.5	2.0	3.5	5.5	0.0	2.5	11.5	4.5	8.0
16	2.5	0.0	1.0	5.0	0.5	2.5	4.0	0.5	2.0	10.5	4.0	7.0
17	2.0	0.0	---	5.0	1.0	2.5	7.0	1.5	3.5	11.5	4.0	7.5
18	2.0	0.0	---	7.5	0.5	3.5	7.5	2.0	4.5	10.5	3.5	7.0
19	3.0	0.0	---	7.0	0.0	3.0	9.0	1.5	5.0	11.0	4.0	7.0
20	5.5	0.5	2.5	8.0	1.0	4.0	6.5	2.0	4.5	11.5	4.5	8.0
21	4.5	0.0	---	8.5	1.5	4.5	6.0	2.5	4.0	12.0	5.0	8.5
22	4.5	0.0	---	8.5	2.0	5.0	5.5	1.0	3.0	12.0	5.0	8.5
23	4.0	0.0	---	6.0	3.5	4.5	9.0	2.0	5.0	10.5	5.0	8.0
24	4.0	1.0	2.5	8.5	2.5	5.0	6.5	3.5	5.0	11.5	5.0	8.0
25	4.5	1.5	3.0	8.0	2.0	5.0	7.5	1.5	4.0	10.0	5.5	7.5
26	4.5	0.0	---	8.5	3.5	5.5	9.0	1.0	4.5	11.0	4.5	7.5
27	3.5	0.5	2.0	7.5	2.0	4.5	8.0	3.0	5.0	12.0	5.5	9.0
28	3.5	0.0	---	7.0	1.0	3.5	8.5	2.5	5.0	12.5	6.0	9.0
29	---	---	---	8.5	1.0	4.5	7.5	2.0	4.5	12.5	6.0	9.5
30	---	---	---	9.5	2.0	5.5	8.5	2.0	5.0	12.5	6.5	9.5
31	---	---	---	9.5	3.0	6.0	---	---	---	12.0	5.5	8.5
MONTH	5.5	0.0	---	9.5	0.0	---	10.0	0.0	3.8	12.5	1.0	7.1

10336790 TROUT CREEK AT SOUTH LAKE TAHOE, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	12.0	5.5	9.0	15.0	8.5	12.0	15.5	13.0	14.5	16.0	8.5	12.0
2	12.5	6.5	9.5	15.5	8.0	11.5	14.0	12.5	13.5	17.0	10.5	13.5
3	13.0	7.0	10.0	16.5	9.0	12.5	15.5	11.0	13.0	14.5	11.5	12.5
4	13.5	7.5	10.5	15.5	8.5	12.0	18.5	11.5	14.5	15.0	10.0	12.0
5	13.0	7.5	10.0	15.5	8.5	12.0	17.5	11.0	14.0	17.0	10.0	13.0
6	13.0	7.0	10.0	16.0	9.0	12.5	17.0	10.5	13.5	16.0	10.0	13.0
7	14.0	8.0	11.0	15.5	8.5	12.0	17.0	10.0	13.5	15.0	10.0	12.5
8	13.5	8.5	11.0	16.5	8.5	12.5	17.0	10.5	13.5	14.5	10.5	12.0
9	13.5	8.5	11.0	17.0	9.5	13.0	16.5	10.0	13.0	12.0	9.0	10.5
10	13.0	7.5	10.5	17.5	10.5	14.0	17.0	10.0	13.5	13.5	7.5	10.5
11	12.0	7.5	10.0	17.0	10.0	13.5	17.5	11.0	14.0	14.5	8.0	11.0
12	12.0	7.0	9.5	17.0	10.5	13.5	17.5	11.0	14.0	15.0	9.0	12.0
13	12.5	8.0	10.0	17.5	10.0	13.5	16.5	11.0	13.5	15.0	9.5	12.0
14	12.5	7.0	10.0	17.0	10.0	13.5	17.0	10.5	13.5	14.5	8.5	11.5
15	12.5	8.0	10.5	17.5	10.5	14.0	18.5	12.0	15.0	14.5	9.0	11.5
16	14.0	8.5	11.0	18.0	11.0	14.5	19.0	12.0	15.0	14.0	9.5	11.5
17	14.0	10.0	12.0	18.5	12.0	15.0	19.0	12.0	15.0	13.0	8.0	10.0
18	13.5	10.0	11.5	17.5	12.5	15.0	19.0	12.0	15.0	12.5	7.0	9.5
19	13.5	8.5	11.0	19.0	13.0	15.5	19.0	12.5	15.5	13.0	7.0	10.0
20	13.0	8.0	10.5	19.0	14.0	16.5	18.5	12.5	15.0	13.5	7.5	10.5
21	12.5	7.5	10.0	20.5	13.5	16.5	15.5	13.5	14.5	13.5	7.5	10.5
22	12.5	7.0	9.5	20.0	14.0	16.5	17.5	12.0	14.5	13.5	8.0	10.5
23	9.5	7.0	8.0	17.5	14.0	15.5	18.0	11.5	14.5	14.0	8.5	11.0
24	12.0	5.5	8.5	19.0	13.0	15.5	18.5	12.0	14.5	14.0	8.5	11.5
25	13.5	6.5	10.0	19.0	13.0	16.0	18.5	11.0	14.0	14.0	8.5	11.5
26	14.5	8.0	11.0	18.5	13.0	15.5	17.0	12.5	14.5	13.0	8.0	10.5
27	15.5	9.0	12.0	17.0	13.5	15.0	18.0	11.5	14.5	13.0	7.5	10.5
28	16.5	10.0	13.0	18.0	12.0	15.0	18.0	11.5	14.5	13.5	8.0	11.0
29	16.5	10.5	13.0	20.0	13.5	16.5	17.0	10.5	13.5	13.5	8.5	11.0
30	15.5	9.0	12.0	20.0	14.5	17.0	17.0	10.0	13.0	14.0	8.5	11.0
31	---	---	---	18.5	15.5	16.5	14.0	10.5	11.5	---	---	---
MONTH	16.5	5.5	10.5	20.5	8.0	14.3	19.0	10.0	14.0	17.0	7.0	11.3

10337000 LAKE TAHOE AT TAHOE CITY, CA

LOCATION.—Lat 39° 10'51", long 120° 07'06", in NE 1/4 NE 1/4 sec.5, T.15 N., R.17 E., Placer County, Hydrologic Unit 16050101, on U.S. Coast Guard pier at Lake Forest, 1.1 mi northeast of Tahoe City, and 1.8 mi northeast of Lake Tahoe outlet dam on Truckee River, at Tahoe City.

DRAINAGE AREA.—506 mi^2, at lake outlet.

PERIOD OF RECORD.—April 1900 to current year. Monthend elevations only for October 1943 to September 1957, published in WSP 1734. Prior to October 1961, published as "at Tahoe."
CHEMICAL DATA: Water year 1969, bimonthly; 1978, biannually; 1979, annually.

REVISED RECORDS.—WDR CA-78-3: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 6,220.00 ft above U.S. Bureau of Reclamation datum, 6,218.86 ft above the NGVD of 1929. Prior to Oct. 1, 1957, nonrecording gages at several sites near outlet of lake at same datum except for water years 1907 and 1908, which were at datum 5.5 ft higher. Oct. 1, 1957, to May 8, 1958, water-stage recorder on left wingwall of dam at outlet of lake at same datum. May 9, 1958, to Sept. 30, 1968, water-stage recorder on pier, 1,000 ft east of dam at lake outlet.

REMARKS.—Lake levels regulated by a 17-gate concrete dam at outlet of lake; storage began about 1874. Monthly figures given represent usable contents. Usable capacity, 744,600 acre-ft, between elevations 6,223 ft, natural rim of lake, and 6,229.1 ft, maximum permissible elevation by Federal Court decree. Lake elevations referred to U.S. Bureau of Reclamation datum because that datum is used as the official reference point by all local, State, and Federal agencies. There are minor diversions for domestic purposes, irrigation, and power. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum elevation, 6,231.26 ft, July 14, 15, 17, 18, 1907; minimum, 6,220.26 ft, Nov. 30, 1992.

EXTREMES FOR CURRENT YEAR.—Maximum elevation, 6,224.89 ft, June 17, 23; minimum, 6,222.97 ft, Nov. 6.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on topographic information available in April 1959)

6,223	0	6,225	243,000	6,227	486,800	6,229.1	744,600
6,224	121,400	6,226	364,800	6,228	609,300		

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.51	3.07	3.15	3.61	3.72	3.71	3.80	4.12	4.65	4.83	4.56	4.11
2	3.47	3.06	3.15	3.63	3.71	3.68	3.84	4.13	4.68	4.82	4.56	4.09
3	3.44	3.05	3.14	3.62	3.71	3.69	3.82	4.16	4.71	4.80	4.54	4.09
4	3.44	3.04	3.13	3.61	3.72	3.68	3.86	4.16	4.72	4.80	4.52	4.11
5	3.43	3.02	3.13	3.63	3.69	3.69	3.86	4.17	4.76	4.79	4.48	4.09
6	3.42	2.97	3.13	3.60	3.69	3.67	3.86	4.17	4.78	4.78	4.43	4.06
7	3.41	3.14	3.12	3.60	3.67	3.67	3.86	4.18	4.80	4.75	4.44	4.03
8	3.40	3.27	3.12	3.60	3.66	3.66	3.86	4.18	4.81	4.76	4.39	3.99
9	3.39	3.30	3.11	3.62	3.66	3.66	3.87	4.20	4.83	4.74	4.39	3.97
10	3.35	3.32	3.11	3.62	3.66	3.66	3.86	4.20	4.83	4.75	4.34	3.95
11	3.36	3.33	3.10	3.62	3.66	3.66	3.87	4.21	4.84	4.73	4.34	3.93
12	3.34	3.31	3.09	3.63	3.66	3.66	3.95	4.21	4.85	4.71	4.28	3.92
13	3.32	3.32	3.16	3.62	3.68	3.67	4.04	4.22	4.86	4.70	4.29	3.88
14	3.33	3.30	3.27	3.62	3.69	3.65	4.06	4.24	4.86	4.68	4.26	3.88
15	3.31	3.31	3.26	3.61	3.64	3.73	4.05	4.24	4.88	4.66	4.26	3.84
16	3.29	3.28	3.46	3.61	3.71	3.73	4.07	4.25	4.88	4.66	4.25	3.81
17	3.28	3.27	3.48	3.60	3.71	3.71	4.07	4.27	4.89	4.66	4.23	3.76
18	3.27	3.27	3.45	3.61	3.71	3.72	4.08	4.28	4.88	4.65	4.23	3.76
19	3.27	3.26	3.50	3.60	3.71	3.72	4.07	4.30	4.87	4.64	4.21	3.74
20	3.25	3.26	3.52	3.60	3.70	3.73	4.07	4.31	4.86	4.65	4.20	3.73
21	3.24	3.26	3.51	3.61	3.70	3.72	4.09	4.33	4.85	4.62	4.27	3.73
22	3.23	3.27	3.51	3.63	3.70	3.70	4.08	4.36	4.84	4.64	4.25	3.71
23	3.21	3.25	3.48	3.65	3.70	3.74	4.08	4.39	4.89	4.64	4.22	3.71
24	3.21	3.26	3.47	3.66	3.70	3.75	4.10	4.41	4.87	4.63	4.24	3.71
25	3.19	3.25	3.47	3.67	3.70	3.76	4.13	4.43	4.87	4.60	4.20	3.70
26	3.18	3.21	3.49	3.69	3.70	3.78	4.11	4.46	4.88	4.62	4.21	3.68
27	3.17	3.19	3.48	3.69	3.71	3.80	4.11	4.49	4.88	4.59	4.19	3.68
28	3.16	3.16	3.55	3.70	3.71	3.79	4.12	4.53	4.88	4.59	4.14	3.67
29	3.12	3.16	3.57	3.70	---	3.79	4.12	4.56	4.84	4.59	4.15	3.66
30	3.11	3.16	3.56	3.71	---	3.80	4.12	4.59	4.84	4.56	4.13	3.63
31	3.09	---	3.62	3.71	---	3.82	---	4.62	---	4.57	4.12	---
MEAN	3.30	3.21	3.33	3.63	3.69	3.72	4.00	4.30	4.83	4.68	4.30	3.85
MAX	3.51	3.33	3.62	3.71	3.72	3.82	4.13	4.62	4.89	4.83	4.56	4.11
MIN	3.09	2.97	3.09	3.60	3.64	3.65	3.80	4.12	4.65	4.56	4.12	3.63
a	10,900	19,400	72,300	82,100	82,100	95,600	134,400	195,800	222,300	190,100	134,400	73,400
b	-51,600	+8,500	+52,900	+9,800	0	+13,500	+38,800	+61,400	+26,500	-32,200	-55,700	-61,000

CAL YR 2002 MEAN 4.16 MAX 5.11 MIN 2.97 b -65,500
WTR YR 2003 MEAN 3.91 MAX 4.89 MIN 2.97 b +10,900

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

10337500 TRUCKEE RIVER AT TAHOE CITY, CA

LOCATION.—Lat 39° 09'59", long 120° 08'36", in NE 1/4 NW 1/4 sec.7, T.15 N., R.17 E., Placer County, Hydrologic Unit 16050102, on left bank, 510 ft downstream from dam at outlet of Lake Tahoe, at Tahoe City.

DRAINAGE AREA.—507 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—July 1895 to February 1896, March 1900 to current year. Monthly discharge only for some periods, published in WSP 1314 and 1734. Prior to October 1961, published as "at Tahoe."

REVISED RECORDS.—WDR CA-78-3: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 6,216.59 ft above NGVD of 1929. Prior to Nov. 12, 1912, nonrecording gage at site 370 ft upstream at different datum. Nov. 12, 1912, to Sept. 30, 1937, nonrecording gage; Oct. 1, 1937, to Aug. 21, 1957, water-stage recorder at datum 2.26 ft higher; and Aug. 22, 1957, to July 10, 1960, at datum 2.42 ft higher; all at site 270 ft upstream.

REMARKS.—Records good. Flow completely regulated by dam at outlet of Lake Tahoe (station 10337000), 510 ft upstream. There are several diversions for irrigation, power, and domestic water supply. In addition, sewer effluent is pumped from the Lake Tahoe Basin. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,690 ft^3/s, Jan. 2, 1997, gage height, 9.59 ft; no flow for parts of many years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	10	e9.0	56	54	57	71	69	81	161	359	267
2	46	10	e8.0	76	53	55	79	69	80	187	358	264
3	41	11	e7.6	83	53	55	74	70	73	219	358	261
4	39	10	e7.5	83	53	54	72	72	64	219	356	265
5	35	10	e7.5	89	52	58	72	73	64	236	352	268
6	33	9.9	e7.4	89	52	59	71	72	65	240	349	257
7	31	15	e7.3	79	52	59	70	73	66	240	346	239
8	31	28	e7.0	79	52	59	70	73	66	247	351	225
9	29	25	e6.9	82	53	58	69	73	67	261	369	208
10	26	29	e8.1	85	51	58	69	74	67	273	363	202
11	25	30	e7.0	85	54	57	69	74	66	271	355	193
12	21	28	e6.1	81	56	56	69	75	67	270	349	189
13	21	28	e5.8	84	57	57	71	74	67	270	343	185
14	20	27	e6.9	82	58	55	70	71	67	281	335	167
15	20	25	e12	81	58	59	70	77	67	295	333	159
16	19	24	e14	81	58	56	69	79	67	312	326	143
17	17	22	15	80	58	55	70	79	68	362	321	135
18	17	21	15	81	57	54	70	80	68	362	319	127
19	16	20	33	81	57	54	70	81	67	361	313	120
20	15	20	46	81	61	54	70	80	67	360	310	120
21	14	20	41	79	59	54	70	80	67	360	318	114
22	14	20	42	73	59	54	69	82	67	359	327	113
23	13	21	41	60	59	55	69	82	68	361	325	111
24	12	22	38	57	59	54	70	83	68	362	316	106
25	12	30	37	53	59	54	70	84	67	360	313	105
26	11	23	37	55	59	57	69	83	76	359	313	101
27	10	23	39	57	59	55	69	84	96	359	302	100
28	9.7	17	40	58	58	53	69	86	96	360	296	97
29	8.2	e11	45	55	---	53	70	82	95	359	288	91
30	5.1	e10	45	53	---	53	70	80	130	359	274	91
31	8.5	---	60	53	---	53	---	81	---	359	275	---
TOTAL	674.5	599.9	702.1	2271	1570	1724	2110	2395	2194	9384	10212	5023
MEAN	21.8	20.0	22.6	73.3	56.1	55.6	70.3	77.3	73.1	303	329	167
MAX	55	30	60	89	61	59	79	86	130	362	369	268
MIN	5.1	9.9	5.8	53	51	53	69	69	64	161	274	91
AC-FT	1340	1190	1390	4500	3110	3420	4190	4750	4350	18610	20260	9960

e Estimated.

10337500 TRUCKEE RIVER AT TAHOE CITY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	180	194	230	238	293	258	177	166	235	276	313	265
MAX	413	1575	2209	2561	2375	2235	1806	1746	1673	1071	638	687
(WY)	1910	1983	1984	1997	1997	1986	1983	1958	1969	1983	1918	1983
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1932	1927	1925	1925	1925	1925	1919	1919	1921	1931	1931	1931

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1909 - 2003	
ANNUAL TOTAL	39400.5		38859.5			
ANNUAL MEAN	108		106		233	
HIGHEST ANNUAL MEAN					1150	1983
LOWEST ANNUAL MEAN					0.15	1994
HIGHEST DAILY MEAN	379	Jul 26	369	Aug 9	2630	Jan 3 1997
LOWEST DAILY MEAN	5.1	Oct 30	5.1	Oct 30	0.00	Jan 4 1914
ANNUAL SEVEN-DAY MINIMUM	6.8	Dec 8	6.8	Dec 8	0.00	Jan 23 1914
MAXIMUM PEAK FLOW			378	Aug 9	2690	Jan 2 1997
MAXIMUM PEAK STAGE			4.30	Aug 9	9.59	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	78150		77080		169000	
10 PERCENT EXCEEDS	297		317		470	
50 PERCENT EXCEEDS	70		68		140	
90 PERCENT EXCEEDS	15		15		0.00	

10337500 TRUCKEE RIVER AT TAHOE CITY, CA—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.— January 2002 to current year.

INSTRUMENTATION.—Heated tipping-bucket gage.

EXTREMES FOR PERIOD OF RECORD.—Maximum recorded daily precipitation, 2.75 in., Nov. 8, 2002; no precipitation for many days each year.

EXTREMES FOR CURRENT YEAR.—Maximum daily precipitation, 2.75 in., Nov. 8; no precipitation for many days.

PRECIPITATION, INCHES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.24	0.00	0.16	0.00	0.00	0.00	0.08	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.16	0.00	0.00	0.16	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.31	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.24	0.00	0.00	0.00	0.04
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	1.73	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00
8	0.00	2.75	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00
9	0.00	0.63	0.04	0.24	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
10	0.00	0.83	0.04	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.04	0.00	1.02	0.00	0.00	0.00	0.00	0.00
13	0.00	0.04	1.77	0.00	0.28	0.04	1.14	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	1.02	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.24	0.00	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	1.38	0.00	0.55	0.00	0.08	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.16	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.08	0.16	0.00	0.00	0.12	0.00	0.00	0.00	0.83	0.00
22	0.00	0.00	0.00	0.28	0.00	0.08	0.00	0.00	0.00	0.00	0.04	0.00
23	0.00	0.00	0.00	0.39	0.00	0.28	0.00	0.00	0.47	0.08	0.00	0.00
24	0.00	0.00	0.00	0.00	0.12	0.00	0.24	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.04	0.47	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.24	0.00	0.12	0.63	0.04	0.00	0.00	0.00	0.12	0.00
27	0.00	0.00	0.12	0.43	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.59	0.00	0.04	0.00	0.20	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.31	0.00	---	0.00	0.08	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.28	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.39	0.00	---	0.00	---	0.00	---	0.20	0.00	---
TOTAL	0.00	5.98	7.52	1.78	1.43	2.29	4.53	0.99	0.47	0.28	1.23	0.04
MAX	0.00	2.75	1.77	0.43	0.55	0.90	1.14	0.31	0.47	0.20	0.83	0.04
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

10337500 TRUCKEE RIVER AT TAHOE CITY, CA—Continued

AIR TEMPERATURE RECORDS

PERIOD OF RECORD.—Water years 1978–81, 1994, 2002 to current year.
CHEMICAL DATA.—Water years 1978–81.
WATER TEMPERATURE.—June 1993 to September 1994.
AIR TEMPERATURE.—July 2002 to current year.

INSTRUMENTATION.—Air temperature sensor and digital recorder.

REMARKS.—Instrument failure Sept. 24–30.

EXTREMES FOR PERIOD OF RECORD.—Maximum recorded temperature, 32.7° C, July 30, 2003; minimum recorded, –13.9° C, Dec. 24, 2002.

EXTREMES FOR CURRENT YEAR.—Maximum temperature, 32.7° C, July 30; minimum, –13.9° C, Dec. 24.

AIR TEMPERATURE, DEGREES C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.0	-1.5	5.2	-7.6	6.8	-4.1	-0.1	-10.5	9.9	-5.3	2.1	-4.7
2	9.3	-2.6	11.4	-7.7	7.5	-3.1	6.2	-2.6	1.7	-8.3	7.3	-7.4
3	13.9	-2.3	10.5	-3.7	8.0	-5.2	11.2	-1.9	4.0	-8.0	3.7	-3.7
4	12.8	2.6	11.8	-4.7	8.3	-3.8	10.9	-2.7	4.3	-8.9	3.6	-5.7
5	15.5	0.2	12.8	-4.5	8.7	-3.6	10.9	-3.5	2.2	-8.2	9.2	-6.2
6	18.1	1.3	13.6	-4.3	7.2	-2.4	6.9	-4.1	-2.0	-10.7	9.0	-3.1
7	19.3	1.9	8.2	0.1	7.8	-4.1	10.4	-6.9	-1.2	-10.5	8.6	-5.2
8	18.9	0.4	6.1	1.2	6.1	-6.2	8.8	-5.8	2.1	-13.1	11.9	-5.6
9	22.1	1.9	2.5	-0.7	6.0	-3.1	4.5	-0.7	5.1	-9.9	11.5	-4.4
10	17.4	5.9	2.5	-0.3	3.6	-4.6	3.2	0.1	7.3	-8.0	8.6	-1.5
11	14.3	-1.0	7.4	-1.9	7.1	-6.3	4.7	-2.5	6.8	-3.9	10.7	-2.6
12	15.5	-2.6	11.5	-1.3	8.5	-4.0	8.4	-0.9	5.1	-4.0	12.6	-1.9
13	18.3	-0.7	9.0	-1.0	5.0	0.1	9.0	-1.2	5.8	0.1	12.5	3.9
14	18.9	1.6	9.4	-2.6	8.8	-2.1	8.3	-4.0	6.6	-2.2	8.2	0.8
15	18.7	-0.2	8.3	-4.2	1.6	-2.8	4.6	-7.3	7.9	-1.8	3.0	-4.6
16	17.7	1.3	11.7	-0.9	-0.2	-3.0	5.8	-6.2	0.8	-6.7	4.0	-6.7
17	18.3	1.5	9.2	-2.8	-1.6	-7.0	7.3	-4.5	3.0	-8.0	2.4	-4.9
18	18.6	-1.2	8.4	-3.9	-2.5	-11.8	7.5	-4.4	5.1	-9.4	5.5	-6.8
19	17.2	-1.1	11.9	-2.4	-0.7	-12.6	6.6	-4.2	1.0	-5.4	10.1	-7.3
20	16.9	-1.6	14.1	-1.3	-1.2	-5.8	9.4	-4.6	5.0	-5.8	5.9	-2.0
21	12.1	-1.4	10.3	-1.4	-0.4	-6.9	4.1	-1.5	8.6	-7.1	9.9	-3.3
22	12.9	-1.5	11.5	-0.1	-2.2	-10.5	8.0	0.8	8.8	-4.7	10.6	-0.8
23	12.2	-1.1	10.8	-0.9	-2.0	-13.6	6.3	-0.6	8.9	-7.1	6.3	1.6
24	12.4	-3.3	8.6	-2.8	-0.5	-13.9	4.8	-2.0	4.9	-1.1	9.4	-1.5
25	10.7	1.7	4.1	-1.0	1.4	-11.7	9.3	-0.9	1.8	-2.4	11.3	-2.1
26	12.0	-1.4	8.0	-1.5	2.5	-2.9	6.8	-1.0	3.5	-8.2	6.1	1.0
27	11.8	-1.8	8.6	-1.0	6.4	1.8	9.6	-0.3	1.1	-6.9	6.1	-2.9
28	13.7	-1.8	9.8	-3.8	5.1	-4.0	5.3	-2.6	2.0	-10.9	6.8	-1.1
29	11.4	-3.3	8.8	-5.5	-1.1	-6.9	7.1	-3.5	---	---	13.3	-3.1
30	11.0	-4.0	7.0	-4.3	1.2	-6.5	9.2	-1.4	---	---	17.1	-1.9
31	12.4	-5.6	---	---	0.8	-9.3	9.6	-1.5	---	---	15.8	-0.2
MONTH	22.1	-5.6	14.1	-7.7	8.8	-13.9	11.2	-10.5	9.9	-13.1	17.1	-7.4

10337500 TRUCKEE RIVER AT TAHOE CITY, CA—Continued

AIR TEMPERATURE, DEGREES C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.2	-4.0	8.7	-3.2	24.5	3.8	21.7	7.9	23.8	11.9	24.2	6.2
2	0.0	-6.3	6.4	1.3	25.9	5.2	22.5	7.8	15.9	10.3	27.4	7.6
3	-1.0	-7.6	5.4	0.6	27.1	6.0	22.9	6.9	22.6	8.7	22.3	10.2
4	-1.8	-9.3	3.9	-1.3	26.7	7.7	26.4	3.3	23.0	10.4	21.5	8.4
5	0.7	-11.1	9.3	-2.9	26.5	5.8	25.8	4.1	21.5	7.5	24.4	9.7
6	3.3	-5.1	9.2	-3.3	26.8	5.4	24.9	4.2	20.6	6.2	24.0	6.7
7	10.4	-5.7	7.2	-0.7	27.7	7.8	24.0	3.3	22.8	4.8	21.1	8.1
8	14.1	-2.9	1.2	-3.1	25.2	7.2	26.1	4.3	22.9	5.7	17.2	6.2
9	13.9	-1.7	3.8	-4.3	22.5	5.5	29.0	5.4	24.8	4.7	14.6	4.3
10	11.2	-1.7	8.8	-1.4	21.5	4.8	26.9	7.7	25.5	7.4	17.6	2.1
11	10.3	2.7	13.2	-2.3	21.0	4.0	28.4	5.7	25.7	10.9	22.4	3.8
12	5.5	-1.4	16.6	-1.3	20.2	2.6	25.8	5.7	25.0	7.7	24.5	6.2
13	0.4	-5.0	19.1	0.0	20.2	4.2	26.2	7.3	25.1	8.2	19.2	4.3
14	2.8	-6.0	17.9	2.2	23.6	2.1	27.8	5.5	26.8	6.6	24.6	3.8
15	4.2	-8.6	16.1	0.2	24.8	2.3	28.0	5.4	27.2	9.6	21.8	5.5
16	3.0	-3.0	16.8	-2.1	27.6	7.7	28.2	8.9	26.7	8.1	18.8	3.6
17	4.8	-1.4	16.9	-0.9	27.9	9.2	30.2	9.7	28.6	7.5	15.2	0.8
18	5.4	-2.5	17.1	-2.6	24.4	9.3	28.9	10.5	30.0	9.0	20.1	0.8
19	8.4	-1.2	16.0	-2.1	20.4	4.7	31.4	13.9	28.2	10.7	22.6	2.4
20	8.8	-2.9	20.8	-0.2	18.1	4.0	29.8	14.2	27.3	10.5	23.2	2.9
21	2.9	-3.4	23.2	1.8	18.0	2.0	31.3	12.8	18.3	12.9	25.0	3.6
22	7.2	-4.5	24.6	2.5	17.8	1.3	32.0	11.9	20.0	9.8	25.0	4.5
23	7.0	-3.0	25.3	3.9	12.7	1.5	26.1	14.9	23.5	7.2	26.2	5.1
24	2.8	-1.8	22.5	4.4	18.2	0.1	27.0	13.8	26.1	8.3	---	---
25	2.1	-3.8	18.1	5.3	22.5	2.0	25.5	11.2	27.8	6.7	---	---
26	4.8	-4.8	21.6	3.3	25.7	4.4	26.7	9.8	21.6	11.1	---	---
27	5.9	-3.2	27.3	4.1	27.5	6.2	26.9	12.2	24.5	8.7	---	---
28	3.6	-2.9	27.4	6.3	29.0	7.7	30.1	10.6	24.1	8.4	---	---
29	3.1	-2.2	26.7	7.7	24.3	7.5	31.9	12.2	24.1	6.2	---	---
30	7.5	-5.6	21.7	8.0	23.3	3.2	32.7	13.6	27.0	5.8	---	---
31	---	---	22.7	3.4	---	---	26.4	14.2	22.4	8.8	---	---
MONTH	14.1	-11.1	27.4	-4.3	29.0	0.1	32.7	3.3	30.0	4.7	---	---

10337500 TRUCKEE RIVER AT TAHOE CITY, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—February 1978 to September 1980, June 1983, December 2000 to September 2001.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: June 1993 to September 1994.

REMARKS.—In December 2000, station was incorporated into the expanded Lake Tahoe Interagency Monitoring Program to monitor nutrient and sediment outflow from Lake Tahoe. Samples were analyzed by the University of California, Davis, Tahoe Research Group. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum, 22.0°C, July 24, 27, Aug. 2, 1993; minimum, freezing point on several days in February 1994.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	[1]Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
DEC 2002													
05...	1215	7.5	610	10.4	106	93	--	6.5	.10	.11	.004	.002	.001
MAR 2003													
21...	1030	54	610	10.2	105	92	5.5	7.0	.04	.06	<.003	.003	.001
JUN													
17...	1010	68	609	8.2	106	92	18.0	16.5	.09	.09	<.003	.002	.001
SEP													
19...	1550	120	608	8.0	108	92	--	18.8	.05	.09	<.003	.002	.001

Date	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
DEC 2002				
05...	.005	.006	1	.02
MAR 2003				
21...	--	.005	<1	<.15
JUN				
17...	.005	.007	1	.18
SEP				
19...	.004	.008	1	.32

[1] Hydrazine method used to determine nitrate plus nitrite concentrations was found to have interferences caused by other common ions in water samples. Values may be adjusted in the future to correct for these interferences.
< Actual value is known to be less than value shown.

10338000 TRUCKEE RIVER NEAR TRUCKEE, CA

LOCATION.—Lat 39° 17'47", long 120° 12'16", in SW 1/4 NE 1/4 sec.28, T.17 N., R.16 E., Placer County, Hydrologic Unit 16050102, Tahoe National Forest, on left bank, 1.4 mi downstream from Cabin Creek, and 2.5 mi southwest of Truckee.

DRAINAGE AREA.—553 mi^2.

PERIOD OF RECORD.—December 1944 to September 1961, June 1977 to September 1982, October 1992 to September 1995, October 1996 to current year. Monthly discharge only for some periods, published in WSP 1314.
CHEMICAL DATA: Water years 1951–66.
SPECIFIC CONDUCTANCE: July 1977 to September 1982.
WATER TEMPERATURE: July 1977 to September 1982, March 1993 to September 1994.

REVISED RECORDS.—WDR CA-77-3: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 5,857.66 ft above NGVD of 1929.

REMARKS.—Records good. Flow regulated by Lake Tahoe (station 10337000), operating capacity, 744,600 acre-ft. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,900 ft^3/s, Jan. 2, 1997, gage height, 9.97 ft, from rating curve extended above 3,100 ft^3/s, on basis of slope-area measurements at gage heights 7.62 ft and 7.92 ft; minimum daily, 3.4 ft^3/s, several days in August 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	9.2	22	99	184	89	260	183	504	221	361	266
2	56	9.0	22	117	171	87	244	187	507	231	364	265
3	47	8.8	21	130	154	88	217	204	493	267	362	265
4	45	8.4	20	122	145	87	205	228	495	262	358	264
5	43	8.2	20	125	134	88	186	219	444	275	354	272
6	40	7.9	20	135	125	91	177	225	420	281	351	261
7	39	13	19	121	116	93	176	224	444	277	346	242
8	37	231	18	119	108	94	189	227	430	277	346	230
9	36	151	19	123	104	95	205	208	396	287	368	210
10	33	69	20	130	99	98	216	203	359	301	362	207
11	31	57	18	130	98	102	232	212	317	299	353	195
12	29	59	17	123	98	113	246	239	291	296	348	195
13	26	71	59	125	108	139	240	292	272	291	340	191
14	25	66	358	126	108	161	214	375	250	297	334	173
15	24	56	121	116	106	234	204	440	235	315	332	169
16	22	49	91	116	109	174	192	428	241	317	327	152
17	21	44	93	118	99	151	189	399	256	380	324	145
18	20	42	72	117	96	140	186	387	251	377	320	136
19	20	40	53	119	96	134	187	375	217	374	315	133
20	20	40	72	124	97	134	194	395	197	375	308	129
21	18	42	86	128	95	131	203	467	182	373	325	122
22	17	42	82	137	95	142	191	540	169	369	335	119
23	16	41	83	259	94	264	191	623	164	379	328	118
24	15	38	79	251	95	226	223	655	156	373	319	115
25	14	40	74	191	94	207	209	592	149	368	321	112
26	14	41	67	183	93	414	203	530	148	365	318	110
27	13	32	104	241	92	326	195	582	178	364	308	106
28	12	30	137	263	90	254	196	661	178	363	300	104
29	12	25	104	205	---	226	190	664	172	359	286	100
30	10	23	94	179	---	226	182	649	182	359	277	98
31	10	---	90	176	---	247	---	541	---	361	274	---
TOTAL	824	1393.5	2155	4648	3103	5055	6142	12154	8697	10033	10264	5204
MEAN	26.6	46.5	69.5	150	111	163	205	392	290	324	331	173
MAX	59	231	358	263	184	414	260	664	507	380	368	272
MIN	10	7.9	17	99	90	87	176	183	148	221	274	98
AC-FT	1630	2760	4270	9220	6150	10030	12180	24110	17250	19900	20360	10320

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2003, BY WATER YEAR (WY)

MEAN	195	201	281	331	359	339	400	557	480	309	290	256
MAX	387	551	1483	3190	2537	1421	1734	2403	1843	635	492	453
(WY)	1948	1951	1997	1997	1997	1952	1958	1958	1998	1998	1959	1954
MIN	7.27	11.3	14.2	8.82	12.2	58.1	98.3	122	34.5	6.40	3.56	4.72
(WY)	1995	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1945 - 2003	
ANNUAL TOTAL	67646.5		69672.5			
ANNUAL MEAN	185		191		338	
HIGHEST ANNUAL MEAN					941	1997
LOWEST ANNUAL MEAN					32.4	1994
HIGHEST DAILY MEAN	498	Apr 14	664	May 29	8900	Jan 1 1997
LOWEST DAILY MEAN	7.9	Nov 6	7.9	Nov 6	3.4	Aug 18 1994
ANNUAL SEVEN-DAY MINIMUM	8.8	Oct 31	8.8	Oct 31	3.4	Aug 22 1994
MAXIMUM PEAK FLOW			827	May 29	11900	Jan 2 1997
MAXIMUM PEAK STAGE			2.76	May 29	9.97	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	134200		138200		244600	
10 PERCENT EXCEEDS	372		368		552	
50 PERCENT EXCEEDS	153		174		246	
90 PERCENT EXCEEDS	24		24		52	

10338400 DONNER LAKE NEAR TRUCKEE, CA

LOCATION.—Lat 39° 19'30", long 120° 16'53", in SE 1/4 NW 1/4 sec.14, T.17 N., R.15 E., Nevada County, Hydrologic Unit 16050102, on north shore, 2.5 mi upstream from outlet gates, and 4.9 mi west of Truckee.

DRAINAGE AREA.—14.0 mi^2.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.—January 1989 to current year.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Westpac Utilities).

REMARKS.—Lake levels regulated by a concrete dam at the outlet constructed in 1928. Usable capacity, 9,490 acre-ft, between elevations 5,923.8 ft and 5,935.8 ft, maximum storage level. Water is used for irrigation and power development downstream. Records, including extremes, represent usable contents. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 12,800 acre-ft, Jan. 2, 1997, elevation, 5,938.64 ft; minimum, 2,510 acre-ft, Jan. 24, 28–31, 1991, elevation, 5,927.23 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 9,750 acre-ft, May 24, elevation, 5,936.09 ft; minimum, 3,260 acre-ft, Dec. 12, elevation, 5,928.20 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Westpac Utilities, dated Aug. 22, 1980)

5,923.8	0	5,930.0	4,690	5,934	7,970	5,938	12,000
5,926.0	1,600	5,932	6,310	5,936	9,670	5,940	14,700
5,928.0	3,120						

RESERVOIR STORAGE, ACRE-FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5600	5330	3550	4000	e4390	3680	4660	5880	9360	9550	9300	8880
2	5540	5360	3530	3980	e4380	3670	4650	6010	9380	9550	9300	8870
3	5540	5290	3410	3890	4330	3650	4580	6190	9470	9540	9290	8850
4	5540	5270	3380	3870	4270	3630	4550	6380	9550	9550	9270	8850
5	5530	5230	3330	3830	4230	3620	4460	6520	9590	9540	9260	8830
6	5530	5240	3320	3810	4180	3600	4400	6660	9610	9540	9230	8810
7	5510	5290	3340	3780	4120	3590	4340	6800	9620	9530	9210	8780
8	5510	5460	3320	3770	4080	3590	4320	6940	9620	9530	9190	8750
9	5480	5390	3320	3770	4040	3590	4320	7050	9580	9520	9170	8710
10	5480	5330	3320	3790	4000	3590	4340	7150	9550	9510	9150	8660
11	5460	5180	3320	3780	3960	3590	4370	7280	9550	9500	9120	8570
12	5480	5050	3260	3760	3930	3620	4510	7470	9570	9490	9100	8460
13	5460	4960	3460	3750	3950	3690	4600	7720	9590	9470	9090	8350
14	5460	4780	3850	3730	3940	3810	4520	8070	9590	9460	9070	8240
15	5500	4640	4010	3710	3930	4020	4460	8410	9590	9440	9050	8130
16	5430	4460	4120	3700	3950	4030	4420	8690	9600	9430	9040	8010
17	5430	4330	4100	3740	3930	4020	4420	8920	9600	9420	9030	7900
18	5450	4230	4060	3700	3900	3990	4450	9100	9590	9410	9010	7800
19	5430	4090	4040	3670	3870	3980	4510	9190	9560	9400	8990	7690
20	5380	4040	4020	3660	3840	3970	4600	9300	9540	9400	8990	7590
21	5370	3990	3990	3700	3820	3970	4710	9470	9500	9400	9030	7490
22	5380	3910	3910	3770	3800	4020	4800	9630	9470	9390	9010	7390
23	5400	3870	3860	4060	3770	4230	4880	9730	9470	9380	8990	7300
24	5400	3820	3820	4150	3760	4280	5090	9750	9470	9370	8990	7200
25	5410	3720	3780	4190	3740	4300	5270	9570	9490	9350	8970	7100
26	5380	3710	3770	4220	3730	4690	5380	9460	9520	9340	8970	6990
27	5370	3670	3870	e4340	3720	4710	5470	9520	9530	9330	8960	6880
28	5340	3630	3990	e4430	3710	4670	5600	9620	9540	9310	8940	6780
29	5350	3590	3970	e4420	---	4610	5700	9650	9540	9310	8920	6680
30	5320	3550	4010	e4420	---	4600	5780	9620	9550	9290	8910	6580
31	e5320	---	4060	e4410	---	4610	---	9490	---	9300	8890	---
MAX	5600	5460	4120	4430	4390	4710	5780	9750	9620	9550	9300	8880
MIN	5320	3550	3260	3660	3710	3590	4320	5880	9360	9290	8890	6580
a		5928.58	5929.21		5928.77	5929.90	5931.37	5935.80	5935.87	5935.58	5935.10	5932.34
b	-370	-1770	+510	+350	-700	+900	+1170	+3710	+60	-250	-410	-2310

CAL YR 2002 MAX 9620 MIN 3260 b +530
WTR YR 2003 MAX 9750 MIN 3260 b +890

e Estimated.
a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

10338400 DONNER LAKE NEAR TRUCKEE, CA—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.—October 2001 to current year.

INSTRUMENTATION.—Heated tipping-bucket gage.

REMARKS.—Instrument failure Nov. 7–11.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily precipitation, 3.20 in., Dec. 13, 2002; no precipitation for many days.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.35	0.00	0.31	0.00	0.00	0.00	0.07	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.20	0.00	0.00	0.28	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.47	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.19	0.00	0.00	0.00	0.04
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
7	0.00	---	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00
8	0.00	---	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00
9	0.00	---	0.11	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	---	0.08	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	---	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.08	0.00	0.15	0.00	0.00	1.64	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	3.20	0.00	0.66	0.04	1.48	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	2.03	0.00	0.00	0.93	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.54	0.00	0.04	1.33	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	1.87	0.00	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.31	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.03	0.00	0.04	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.43	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.19	0.00	0.00	0.08	0.04	0.00	0.00	0.00	0.00	0.01
21	0.00	0.00	0.08	0.28	0.00	0.00	0.11	0.00	0.00	0.00	0.58	0.00
22	0.00	0.00	0.00	0.74	0.00	0.67	0.00	0.00	0.00	0.00	0.08	0.00
23	0.00	0.00	0.00	0.70	0.00	0.50	0.00	0.00	0.19	0.00	0.00	0.00
24	0.00	0.00	0.00	0.04	0.00	0.00	0.94	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.04	0.00	0.08	0.78	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.31	0.00	0.16	0.82	0.00	0.00	0.00	0.00	0.16	0.00
27	0.00	0.00	0.78	0.35	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.70	0.00	0.04	0.00	0.47	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.43	0.00	---	0.00	0.07	0.00	0.00	0.00	0.00	0.00
30	0.00	0.04	0.20	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.70	0.00	---	0.00	---	0.00	---	0.20	0.00	---
TOTAL	0.00	---	11.96	3.16	1.99	4.60	6.82	1.14	0.19	0.20	1.17	0.05

10338500 DONNER CREEK AT DONNER LAKE, NEAR TRUCKEE, CA

LOCATION.—Lat 39° 19'25", long 120° 14'00", in SW 1/4 NW 1/4 sec.17, T.17 N., R.16 E., Nevada County, Hydrologic Unit 16050102, in Donner Memorial State Park, on left bank, 10 ft downstream from bridge on Donner Memorial State Park road, 0.2 mi downstream from outlet of Donner Lake, 0.7 mi upstream from Cold Creek, and 2.5 mi west of Truckee.

DRAINAGE AREA.—14.3 mi^2.

PERIOD OF RECORD.—November 1909 to August 1910, January 1929 to October 1935, January 1936 to March 1938, July to October 1938, January 1939 to February 1943, June 1943 to December 1953, May 1955 to December 1957, October 1958 to current year. Monthly discharge only prior to October 1958, published in WSP 1314 and 1734.

REVISED RECORDS.—WDR CA-79-3: Drainage area.

GAGE.—Water-stage recorder and concrete control, completed Oct. 3, 1989. Datum of gage is 5,924.40 ft above NGVD of 1929. Nov. 1, 1909, to Aug. 31, 1910, nonrecording gage at different datum. January 1929 to December 1957, water-stage recorder at same site at unknown datum.

REMARKS.—Records good. Flow completely regulated at dam at outlet of Donner Lake (station 10338400) since 1928. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 863 ft^3/s, Jan. 2, 1997, gage height, 6.69 ft; no flow at times in many years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	2.5	15	42	71	27	96	3.6	252	2.3	e2.3	3.3
2	4.1	2.0	14	40	70	25	96	3.6	129	2.7	e2.3	3.3
3	1.8	1.7	13	39	67	25	93	3.7	78	3.1	2.3	3.2
4	1.4	5.9	12	37	64	24	89	3.9	70	2.7	2.3	3.2
5	0.63	13	11	37	60	23	85	3.9	83	2.8	2.0	3.1
6	0.45	32	11	35	56	23	79	3.9	83	2.8	2.2	3.0
7	1.0	64	11	34	53	22	73	3.9	83	2.8	2.4	2.8
8	1.9	85	10	33	50	22	71	3.9	82	2.8	2.4	5.0
9	2.3	82	9.4	32	47	22	70	3.8	83	2.9	3.2	9.4
10	2.0	79	9.1	32	45	22	71	3.9	71	2.9	4.2	20
11	1.8	76	9.1	33	42	22	73	3.9	48	2.9	2.3	41
12	1.6	72	9.1	32	40	23	78	3.8	32	2.7	2.3	51
13	1.6	69	12	32	40	25	90	3.9	27	2.8	2.2	51
14	2.0	80	31	32	40	31	89	4.7	27	2.4	2.2	50
15	2.1	87	43	31	39	43	85	5.4	27	1.9	2.2	51
16	2.0	82	50	30	41	48	70	9.7	27	1.8	2.2	51
17	1.7	70	52	30	39	48	51	20	27	1.8	2.3	52
18	1.8	61	48	29	38	46	35	39	28	1.9	2.6	52
19	1.7	55	45	29	36	45	21	69	28	1.8	2.8	51
20	1.5	49	43	28	35	45	12	86	27	1.6	2.9	51
21	2.3	43	41	29	33	44	8.4	87	27	1.5	2.8	51
22	3.1	39	39	30	32	45	6.5	123	27	1.5	2.9	50
23	2.8	35	36	42	31	56	3.8	211	20	1.9	3.0	50
24	2.4	31	33	56	30	64	1.7	277	9.1	2.6	3.0	52
25	2.3	28	31	59	29	67	1.3	347	4.1	2.6	2.6	54
26	2.0	25	29	61	28	85	1.3	277	2.4	2.6	2.4	55
27	1.7	22	31	65	28	101	1.1	189	2.3	2.5	2.4	55
28	2.3	19	36	75	27	99	1.5	169	2.7	2.6	2.4	54
29	3.2	18	41	76	---	95	2.5	200	2.7	2.5	3.0	53
30	3.5	16	41	73	---	92	3.6	255	2.4	2.4	3.4	53
31	3.3	---	44	71	---	92	---	277	---	2.5	3.4	---
TOTAL	75.28	1344.1	859.7	1304	1211	1451	1458.7	2695.5	1411.7	74.6	80.9	1084.3
MEAN	2.43	44.8	27.7	42.1	43.2	46.8	48.6	87.0	47.1	2.41	2.61	36.1
MAX	13	87	52	76	71	101	96	347	252	3.1	4.2	55
MIN	0.45	1.7	9.1	28	27	22	1.1	3.6	2.3	1.5	2.0	2.8
AC-FT	149	2670	1710	2590	2400	2880	2890	5350	2800	148	160	2150

e Estimated.

10338500 DONNER CREEK AT DONNER LAKE, NEAR TRUCKEE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	29.5	27.3	30.3	33.1	32.8	37.5	53.2	84.9	46.4	12.0	7.72	25.6
MAX	85.7	195	214	284	198	182	144	243	244	67.2	52.7	99.1
(WY)	1973	1951	1951	1997	1986	1986	1940	1952	1983	1934	1932	1983
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1930	1930	1930	1929	1929	1929	1929	1929	1929	1937	1936	1930

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1929 - 2003	
ANNUAL TOTAL	10501.54		13050.78			
ANNUAL MEAN	28.8		35.8		35.9	
HIGHEST ANNUAL MEAN					83.3	1982
LOWEST ANNUAL MEAN					7.71	1977
HIGHEST DAILY MEAN	151	Apr 15	347	May 25	820	Jan 2 1997
LOWEST DAILY MEAN	0.45	Oct 6	0.45	Oct 6	0.00	Jan 1 1929
ANNUAL SEVEN-DAY MINIMUM	1.3	May 17	1.4	Oct 3	0.00	Jan 1 1929
MAXIMUM PEAK FLOW			378	May 25	863	Jan 2 1997
MAXIMUM PEAK STAGE			5.02	May 25	6.69	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	20830		25890		25970	
10 PERCENT EXCEEDS	76		82		98	
50 PERCENT EXCEEDS	22		27		15	
90 PERCENT EXCEEDS	1.7		2.2		0.20	

10338700 DONNER CREEK AT HIGHWAY 89, NEAR TRUCKEE, CA

LOCATION.—Lat 39° 19'16", long 120° 12'25", in NE 1/4 SW 1/4 sec.16, T.17 N., R.16 E., Nevada County, Hydrologic Unit 16050102, on right bank, 50 ft upstream from State Highway 89 bridge, 0.5 mi upstream from mouth, and 1.4 mi southwest of Truckee.

DRAINAGE AREA.—29.1 mi^2.

PERIOD OF RECORD.—March 1993 to current year.
WATER TEMPERATURE: August 1993 to September 1994.

GAGE.—Water-stage recorder. Elevation of gage is 5,870 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good. About half the drainage area is regulated at dam at outlet of Donner Lake (station 10338400) 2.0 mi upstream. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, about 2,500 ft^3/s, Jan. 2, 1997, gage height, 12.76 ft, backwater from debris, on the basis of the flood routing the peak discharge between Truckee River near Truckee and Truckee River above Prosser Creek; minimum daily, 2.3 ft^3/s, Aug. 21, 22, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	5.0	20	63	139	43	197	46	525	31	7.3	5.5
2	6.9	4.8	19	60	130	42	179	48	404	29	7.9	5.5
3	4.2	4.5	18	57	120	41	165	55	328	28	8.3	5.4
4	3.9	8.6	17	55	112	39	154	64	319	25	7.4	5.5
5	3.2	17	17	53	105	38	143	61	296	24	6.9	5.3
6	2.9	36	16	52	97	38	134	65	286	22	6.7	5.0
7	3.1	75	16	50	90	37	126	64	298	21	6.9	4.8
8	3.9	129	15	49	85	37	128	66	295	20	6.6	6.3
9	4.4	105	14	48	80	37	133	59	267	19	6.4	9.9
10	4.0	93	15	50	75	37	143	56	230	18	6.3	20
11	3.8	86	14	50	71	39	154	60	186	17	5.8	41
12	3.7	83	14	49	67	43	159	74	160	16	e5.2	55
13	3.8	80	21	50	69	53	163	96	147	15	e4.8	54
14	3.9	91	107	48	70	70	157	129	134	14	4.6	53
15	4.1	99	77	47	67	102	148	157	126	13	4.6	53
16	4.0	93	71	45	67	93	129	160	130	12	4.5	52
17	3.7	80	73	45	63	85	107	168	139	11	4.5	52
18	3.8	70	67	44	60	80	88	185	130	11	4.6	51
19	3.8	61	61	44	58	77	71	216	111	10	4.6	50
20	3.5	54	59	43	56	77	61	253	100	9.5	4.5	50
21	4.1	49	56	45	54	77	58	291	93	9.7	6.0	50
22	5.0	46	52	49	53	82	52	373	85	8.8	5.1	50
23	4.8	42	47	113	51	150	49	538	74	8.7	4.8	49
24	4.4	38	44	124	50	149	54	670	57	9.1	4.7	53
25	4.3	34	41	114	48	143	50	725	44	8.5	4.6	55
26	4.2	31	40	116	47	251	51	580	40	8.1	4.8	55
27	4.1	28	54	136	47	222	47	522	42	7.7	4.6	54
28	4.3	25	81	159	45	195	48	562	43	7.5	4.6	53
29	5.3	23	72	141	---	180	46	626	40	7.2	5.0	52
30	5.6	22	66	133	---	181	46	685	34	6.9	5.6	51
31	5.5	---	66	131	---	195	---	586	---	8.9	5.5	---
TOTAL	141.2	1612.9	1350	2263	2076	2933	3240	8240	5163	456.6	173.7	1106.2
MEAN	4.55	53.8	43.5	73.0	74.1	94.6	108	266	172	14.7	5.60	36.9
MAX	15	129	107	159	139	251	197	725	525	31	8.3	55
MIN	2.9	4.5	14	43	45	37	46	46	34	6.9	4.5	4.8
AC-FT	280	3200	2680	4490	4120	5820	6430	16340	10240	906	345	2190

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2003, BY WATER YEAR (WY)

MEAN	30.4	25.7	42.7	85.6	73.7	103	145	234	159	45.2	10.2	41.2
MAX	49.0	53.8	201	438	200	251	220	379	398	180	38.1	60.2
(WY)	2000	2003	1997	1997	1996	1995	1993	1995	1995	1995	1995	1993
MIN	4.55	8.35	9.73	8.37	11.6	30.9	39.8	64.8	12.4	4.48	3.24	11.6
(WY)	2003	1994	2000	2001	1994	1994	1994	1994	2001	2001	1994	2000

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1993 - 2003	
ANNUAL TOTAL	20570.3		28755.6			
ANNUAL MEAN	56.4		78.8		80.4	
HIGHEST ANNUAL MEAN					142	1995
LOWEST ANNUAL MEAN					25.9	1994
HIGHEST DAILY MEAN	310	Apr 14	725	May 25	2380	Jan 2 1997
LOWEST DAILY MEAN	2.9	Oct 6	2.9	Oct 6	2.3	Aug 21 1994
ANNUAL SEVEN-DAY MINIMUM	3.6	Oct 5	3.6	Oct 5	2.5	Aug 19 1994
MAXIMUM PEAK FLOW			934	May 24	2500	Jan 2 1997
MAXIMUM PEAK STAGE			6.18	May 24	12.76	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	40800		57040		58230	
10 PERCENT EXCEEDS	137		161		200	
50 PERCENT EXCEEDS	41		50		44	
90 PERCENT EXCEEDS	4.1		4.8		6.6	

e Estimated.

10339400 MARTIS CREEK NEAR TRUCKEE, CA

LOCATION.—Lat 39° 19'44", long 120° 07'00", in NE 1/4 NW 1/4 sec.17, T.17 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank, 0.2 mi downstream from Martis Creek Lake Dam, 1.8 mi upstream from mouth, and 3.5 mi east of Truckee.

DRAINAGE AREA.—39.9 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1958 to November 1990, June 1993 to current year.

REVISED RECORDS.—WDR CA-79-3: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 5,730 ft above NGVD of 1929, from topographic map. Prior to July 10, 1972, at site 1.0 mi downstream at different datum.

REMARKS.—Records good. Flow is completely regulated by Martis Creek Lake since Oct. 7, 1971. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,880 ft^3/s, Feb. 1, 1963, gage height, 6.16 ft, site and datum then in use; minimum, 1.3 ft^3/s, July 30, 1961. Maximum discharge since construction of Martis Creek Lake Dam in 1971, 663 ft^3/s, Feb. 28, 1986, gage height, 5.66 ft, maximum gage height, 6.01 ft, Apr. 2, 1974; minimum daily, 0.20 ft^3/s, Nov. 9–14, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	4.6	6.8	15	51	15	49	37	21	5.3	4.9	3.8
2	4.0	4.6	6.8	15	50	14	48	37	20	5.2	7.6	3.9
3	4.1	4.7	6.6	15	36	14	45	41	18	5.2	6.5	3.9
4	4.3	4.9	6.7	14	28	14	42	47	16	5.2	5.5	5.2
5	4.4	5.1	6.6	e15	23	14	40	43	15	5.2	4.8	8.1
6	4.3	5.0	6.8	15	21	15	37	41	14	5.2	4.3	5.7
7	4.2	6.8	6.8	13	18	16	34	40	13	5.2	4.2	4.6
8	4.1	37	6.5	13	16	17	34	40	12	5.0	4.2	4.1
9	4.1	40	6.8	13	16	17	34	39	11	5.1	4.0	4.1
10	4.1	20	7.1	14	15	18	34	36	11	5.1	3.7	4.2
11	3.8	15	7.1	14	15	20	35	35	10	5.1	3.5	3.7
12	3.8	12	7.1	14	14	23	39	35	10	5.0	3.4	4.7
13	3.9	12	9.1	15	17	27	48	37	9.6	4.9	3.1	4.3
14	4.0	11	29	16	21	40	44	41	9.3	4.9	3.4	4.1
15	4.0	9.6	21	15	21	66	46	45	9.0	4.8	3.4	4.0
16	4.0	8.8	17	13	24	73	46	45	8.8	4.6	3.4	3.8
17	3.9	7.9	11	13	20	72	50	42	8.3	4.6	3.3	3.6
18	4.0	7.5	10	12	17	70	54	41	8.0	4.6	3.4	3.9
19	4.0	7.4	11	12	17	47	48	39	7.7	4.5	3.5	4.1
20	4.1	7.3	11	e12	16	39	47	37	7.4	4.5	2.4	4.1
21	4.1	7.3	11	13	16	36	48	37	7.1	4.5	3.3	4.1
22	4.2	7.0	12	14	16	36	45	38	7.2	4.5	6.1	4.1
23	4.3	6.9	11	36	15	53	43	40	7.7	4.9	5.4	4.2
24	4.5	6.9	10	61	17	57	44	41	8.9	6.2	4.4	4.1
25	4.5	6.7	e9.8	46	16	51	46	39	7.8	5.4	4.1	3.9
26	4.4	6.5	e10	40	15	62	48	36	7.1	4.9	4.1	3.9
27	4.4	6.5	14	54	16	71	47	33	6.7	4.5	4.1	3.9
28	4.4	6.5	e30	69	15	64	43	32	6.2	4.4	3.8	3.9
29	4.4	6.2	29	48	---	49	41	29	5.6	4.2	3.6	4.1
30	4.5	6.2	22	39	---	45	39	26	5.3	4.1	3.7	4.1
31	4.5	---	17	38	---	47	---	24	---	4.0	3.7	---
TOTAL	129.2	297.9	376.6	736	582	1202	1298	1173	308.7	150.8	128.8	128.2
MEAN	4.17	9.93	12.1	23.7	20.8	38.8	43.3	37.8	10.3	4.86	4.15	4.27
MAX	4.5	40	30	69	51	73	54	47	21	6.2	7.6	8.1
MIN	3.8	4.6	6.5	12	14	14	34	24	5.3	4.0	2.4	3.6
AC-FT	256	591	747	1460	1150	2380	2570	2330	612	299	255	254

e Estimated.

10339400 MARTIS CREEK NEAR TRUCKEE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1971, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.05	12.0	18.5	30.6	28.0	36.5	60.2	59.5	22.6	6.40	4.90	5.51
MAX	16.4	18.0	86.5	116	83.4	78.8	148	202	96.6	18.0	10.8	10.1
(WY)	1963	1971	1965	1970	1963	1967	1969	1967	1967	1967	1967	1967
MIN	3.73	4.81	5.38	4.28	9.60	11.1	15.4	9.80	3.21	1.79	1.81	2.37
(WY)	1962	1962	1962	1962	1964	1961	1961	1961	1960	1961	1964	1960

SUMMARY STATISTICS	WATER YEARS 1959 - 1971		
ANNUAL MEAN	24.4		
HIGHEST ANNUAL MEAN	47.2		1969
LOWEST ANNUAL MEAN	6.89		1961
HIGHEST DAILY MEAN	903	Jan 31	1963
LOWEST DAILY MEAN	1.3	Jul 30	1961
ANNUAL SEVEN-DAY MINIMUM	1.4	Jul 29	1961
MAXIMUM PEAK FLOW	1880	Feb 1	1963
MAXIMUM PEAK STAGE	6.16	Feb 1	1963
ANNUAL RUNOFF (AC-FT)	17650		
10 PERCENT EXCEEDS	57		
50 PERCENT EXCEEDS	11		
90 PERCENT EXCEEDS	2.7		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.95	16.1	20.3	29.4	35.0	46.5	52.0	55.5	33.7	13.9	9.73	8.77
MAX	20.8	80.0	95.5	214	149	181	139	219	169	75.0	76.0	40.2
(WY)	1983	1984	1982	1997	1986	1986	1982	1983	1983	1986	1995	1995
MIN	3.09	1.57	1.25	6.42	8.10	8.35	8.52	7.40	3.96	2.67	2.01	2.40
(WY)	1972	1978	1978	1978	1994	1974	1980	1994	1994	1994	1994	1994

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1972 - 2003	
ANNUAL TOTAL	5061.3		6511.2			
ANNUAL MEAN	13.9		17.8		27.5	
HIGHEST ANNUAL MEAN					74.5	1983
LOWEST ANNUAL MEAN					6.90	1977
HIGHEST DAILY MEAN	64	Apr 5	73	Mar 16	626	Mar 1 1986
LOWEST DAILY MEAN	2.5	Aug 13	2.4	Aug 20	0.20	Nov 9 1977
ANNUAL SEVEN-DAY MINIMUM	3.0	Aug 7	3.2	Aug 15	0.21	Nov 9 1977
MAXIMUM PEAK FLOW			79	Jan 28	663	Feb 28 1986
MAXIMUM PEAK STAGE			3.06	Jan 28	6.01	Apr 2 1974
ANNUAL RUNOFF (AC-FT)	10040		12910		19910	
10 PERCENT EXCEEDS	33		45		68	
50 PERCENT EXCEEDS	8.0		10		12	
90 PERCENT EXCEEDS	3.4		4.0		4.3	

10339400 MARTIS CREEK NEAR TRUCKEE, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1975 to current year.
CHEMICAL DATA: Water years 1975–95.
WATER TEMPERATURE: Water years 1975 to current year.
SEDIMENT DATA: Water years 1975–95.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: October 1974 to current year.

INSTRUMENTATION.—Digital water-temperature recorder since October 1974.

REMARKS.—Records good. Interruption in record was due to recording equipment failure. Water temperature is affected by regulation from Martis Creek Lake Dam (station 10339380). Unpublished chemical, water-temperature, and sediment data prior to October 1974, available at the U.S. Geological Survey office in Carson City, NV.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum recorded, 25.5° C, July 11, 12, 1993; minimum recorded, 0.0° C, Feb. 16, 17, 1982, Jan. 11–13, 16, 1995, Feb. 10, 1999.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 23.0° C, July 28, 30, 31; minimum recorded, 1.0° C, Dec. 16.

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.0	11.5	9.0	---	5.5	4.0	---	---	---	---	5.0	4.0
2	14.0	11.0	9.0	---	5.5	4.0	---	---	---	---	5.5	3.5
3	14.0	10.5	8.5	6.0	5.5	4.0	---	---	---	---	5.0	4.0
4	14.0	11.0	8.5	5.5	5.5	4.0	---	---	---	---	5.5	3.5
5	14.0	11.0	8.0	5.5	5.5	4.0	---	---	3.5	2.5	5.5	3.5
6	14.0	10.5	8.0	5.5	5.0	4.0	---	---	3.5	2.5	5.5	4.0
7	14.5	10.5	7.5	5.5	5.5	4.0	---	---	3.5	2.5	5.5	4.0
8	14.0	10.5	6.0	5.5	5.5	4.0	---	---	3.5	2.5	5.5	4.0
9	14.0	10.5	6.0	5.0	5.5	4.0	---	---	4.0	2.5	6.0	4.0
10	14.5	11.0	5.5	5.0	5.0	4.0	---	---	4.0	2.5	5.5	4.5
11	13.5	10.5	6.0	5.0	5.0	4.0	---	---	4.0	3.0	6.0	4.5
12	13.5	10.0	6.5	5.0	5.5	4.0	---	---	3.5	3.0	6.0	4.5
13	13.5	10.0	6.5	5.5	4.5	4.0	---	---	4.0	3.0	6.5	4.0
14	13.0	10.0	6.5	5.0	4.5	3.0	---	---	4.0	3.0	5.5	4.0
15	13.0	10.0	6.5	5.0	3.5	3.0	---	---	4.0	3.0	5.0	4.5
16	13.0	9.5	6.5	5.0	3.0	1.0	---	---	4.0	2.5	5.5	4.5
17	12.5	9.5	6.5	5.0	2.0	1.5	---	---	4.0	3.0	5.0	4.5
18	12.5	9.0	6.5	4.5	2.5	1.5	---	---	4.0	3.0	5.0	4.5
19	12.5	9.0	6.5	5.0	---	---	---	---	4.0	3.0	6.5	4.5
20	12.5	9.0	6.5	5.0	2.5	1.5	---	---	4.0	3.0	6.5	5.0
21	11.5	9.0	6.5	5.0	2.5	2.0	---	---	4.0	3.0	6.5	5.5
22	12.0	9.0	6.0	5.0	2.5	1.5	---	---	4.5	3.0	8.0	6.0
23	12.0	8.5	6.5	5.0	---	---	---	---	4.5	3.0	7.5	6.5
24	11.0	8.5	6.5	5.0	---	---	---	---	4.5	3.5	8.0	7.0
25	10.5	9.0	6.0	4.5	---	---	---	---	4.5	3.5	9.5	7.5
26	11.0	8.5	6.0	4.0	---	---	---	---	5.0	3.5	9.5	8.5
27	11.0	8.5	6.0	4.0	---	---	---	---	4.5	3.5	8.5	8.0
28	10.5	8.5	5.5	4.0	---	---	---	---	5.0	3.5	9.0	7.5
29	10.5	8.0	5.5	4.0	---	---	---	---	---	---	8.5	7.5
30	10.5	7.5	5.0	4.0	---	---	---	---	---	---	9.5	8.0
31	10.0	7.0	---	---	---	---	---	---	---	---	10.5	8.5
MONTH	15.0	7.0	9.0	---	---	---	---	---	---	---	10.5	3.5

10339400 MARTIS CREEK NEAR TRUCKEE, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.5	8.5	9.5	7.5	19.0	16.5	20.5	16.0	21.5	19.0	20.5	16.0
2	8.5	7.0	8.5	8.0	19.0	16.5	20.5	16.5	20.5	19.5	20.5	16.0
3	8.5	7.0	9.5	8.0	19.5	16.5	20.5	16.5	22.0	19.0	20.0	16.5
4	7.5	6.0	9.5	8.0	19.0	17.0	20.5	16.5	22.0	19.0	19.5	16.5
5	7.0	6.0	10.0	8.5	19.5	16.5	20.5	16.0	22.0	18.0	20.0	17.0
6	7.0	6.0	10.0	---	19.5	17.0	20.5	16.0	21.5	18.0	20.0	16.5
7	8.0	6.0	10.5	9.5	20.5	17.5	20.5	---	21.5	18.0	19.5	16.5
8	9.0	6.5	10.0	9.0	20.5	17.5	20.5	16.5	21.0	17.5	19.0	16.0
9	9.5	7.5	9.0	8.0	20.0	17.5	21.0	16.5	21.0	17.0	18.5	15.5
10	10.0	8.0	9.5	8.0	20.0	17.5	21.0	16.5	21.0	17.0	19.0	15.0
11	10.0	8.5	11.0	8.0	20.5	17.5	21.0	16.5	21.0	17.0	19.5	15.0
12	9.0	8.0	11.5	9.0	19.5	17.0	21.0	16.5	21.0	16.5	18.5	15.0
13	8.0	7.0	12.5	---	20.0	17.0	21.5	17.0	22.0	16.5	18.0	14.5
14	8.0	6.0	13.5	11.0	20.0	17.0	21.5	17.0	21.0	16.5	18.5	14.5
15	8.5	6.0	14.0	12.0	20.0	17.0	21.5	16.5	21.0	16.5	18.0	14.5
16	7.5	6.5	14.5	---	20.0	17.0	21.5	17.0	21.0	16.5	18.0	14.5
17	7.5	6.5	14.5	12.5	20.5	17.5	22.0	17.0	21.5	---	17.5	13.5
18	7.5	6.5	---	---	20.5	17.5	22.0	17.5	21.5	16.5	17.5	13.5
19	9.0	6.5	---	---	20.5	17.0	22.0	18.0	21.0	16.5	17.0	13.0
20	9.5	8.0	15.0	---	20.5	17.5	22.5	18.0	22.5	16.5	17.5	13.0
21	10.0	8.5	16.0	13.0	20.0	17.0	22.5	18.0	20.0	17.5	17.0	13.0
22	9.0	8.0	16.5	14.0	19.5	16.5	22.5	18.0	21.0	18.0	17.0	13.0
23	9.0	8.0	17.0	14.5	18.0	16.5	22.0	18.5	21.0	17.5	17.5	13.5
24	9.0	8.0	17.0	14.5	19.0	16.0	22.0	19.0	21.0	17.5	17.5	13.5
25	8.5	7.5	16.5	15.0	19.0	15.5	22.0	19.0	21.5	17.0	17.5	13.5
26	8.5	7.0	16.5	15.0	19.5	15.5	22.5	18.5	21.0	18.0	17.0	13.0
27	8.5	7.5	17.0	15.0	19.5	15.5	22.5	19.0	21.5	17.5	17.0	13.5
28	9.0	7.5	18.0	15.5	20.0	16.0	23.0	18.5	21.5	17.5	17.0	13.5
29	8.5	7.5	18.5	16.0	20.0	16.0	22.5	18.5	21.0	17.0	16.5	13.5
30	9.0	7.5	18.5	16.5	20.5	16.0	23.0	19.0	21.0	16.5	17.0	13.5
31	---	---	18.0	16.5	---	---	23.0	19.0	20.0	16.5	---	---
MONTH	10.0	6.0	---	---	20.5	15.5	23.0	---	22.5	---	20.5	13.0

CROSS-SECTIONAL ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Depth at sample location, feet (81903)	Sampling depth, feet (00003)	Turbidity, water, unfltrd field, NTU (61028)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JUN							
02...*	1358	1.40	1.00	1.4	8.7	97	18.4
02...*	1359	1.70	1.00	1.6	8.7	97	18.4
02...*	1400	1.60	1.00	1.2	8.7	97	18.4
02...*	1401	1.50	1.00	1.1	8.7	97	18.4
02...*	1402	1.20	.80	1.0	8.7	97	18.4
02...*	1403	1.10	.80	1.1	8.7	97	18.4
02...*	1404	1.20	.80	1.0	8.7	97	18.4
02...*	1405	1.20	.80	1.0	8.7	97	18.5
02...*	1406	1.10	.80	1.0	8.8	97	18.7
30...*	1515	1.20	1.10	1.2	9.3	120	19.8
30...*	1516	1.40	.80	1.4	9.3	120	19.8
30...*	1517	1.10	.80	1.9	9.3	120	19.7
30...*	1518	1.20	.80	1.2	9.3	120	19.7
30...*	1519	.85	.60	1.6	9.3	120	19.7
30...*	1520	.90	.60	1.4	9.3	120	19.8
30...*	1521	1.00	.60	.9	9.3	120	19.8

* Instantaneous discharge at time of cross-sectional measurement: June 2, 21 ft^3/s; June 30, 5.7 ft^3/s.

10340300 PROSSER CREEK RESERVOIR NEAR TRUCKEE, CA

LOCATION.—Lat 39° 22'46", long 120° 08'12", in NW 1/4 SW 1/4 sec.30, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, in control house on Prosser Creek Dam on Prosser Creek, 1.4 mi upstream from mouth, and 4.2 mi northeast of Truckee.

DRAINAGE AREA.—50.3 mi^2.

PERIOD OF RECORD.—January 1963 to current year. January 1963 to September 1987 (monthend elevations and contents only). Prior to October 1976, published as "near Boca."

REVISED RECORDS.—WDR CA-76-3: 1975. WDR CA-79-3: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.—Records good. Reservoir is formed by rolled-earth and rockfill dam. Storage began Jan. 30, 1963. Usable capacity, 28,641 acre-ft, between elevations 5,660.6 ft, top of inactive contents, and 5,741.2 ft, crest of spillway. Inactive contents, 1,201 acre-ft, includes 83 acre-ft dead contents below elevation 5,637.0 ft. Figures given represent total contents at 0800 hours. Reservoir is used for flood control, enhancement of fishery, and recreation. See schematic diagram of Truckee River Basin.

EXTREMES (at 0800 hours) FOR PERIOD OF RECORD.—Maximum contents, 33,719 acre-ft, May 19, 1996, elevation, 5,746.11 ft; minimum since reservoir first filled, 66 acre-ft, Oct. 10–12, 1983, elevation, 5,635.75 ft.

EXTREMES (at 0800 hours) FOR CURRENT YEAR.—Maximum contents, 30,600 acre-ft, June 12–19, maximum elevation, 5,742.28 ft, June 13; minimum, 7,380 acre-ft, Jan.22, elevation, 5,695.72 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by U.S. Bureau of Reclamation, dated August 1962)

5,630	17	5,670	2,230	5,700	8,636	5,730	22,220
5,640	143	5,680	3,791	5,710	12,147	5,740	28,949
5,650	491	5,690	5,901	5,720	16,643	5,750	37,046
5,660	1,148						

RESERVOIR STORAGE, ACRE-FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13100	8820	7790	7730	8630	9240	11400	14200	26300	29900	26900	23000
2	13000	8670	7800	7730	8670	9220	11400	14300	26800	29900	26900	22800
3	12900	8530	7800	7730	8660	9200	11400	14400	27300	29800	26800	22600
4	12700	8390	7840	7720	e8710	9180	11400	14600	27800	29800	26800	22400
5	12600	e8240	7860	7700	8740	9190	11500	14700	28400	29700	26700	22200
6	12500	8090	7900	7680	8820	9190	11500	14900	28800	29700	26600	21900
7	12400	8010	7920	7660	8900	9200	11500	15000	29200	29600	26500	21700
8	12200	8060	7930	7640	8960	9220	11500	15200	29700	29500	26400	21400
9	12100	8310	7940	7630	9030	9240	11600	15300	29700	29500	26300	21100
10	12000	e8350	7970	7610	9090	9270	11600	15400	30400	29400	26200	20800
11	11800	8360	7990	7610	9160	9310	11700	15500	30500	29300	26100	20600
12	11700	8330	8010	7590	9230	9380	11800	15600	30600	29200	26000	e20300
13	11500	8310	8040	7570	9240	9500	12000	15800	30600	29100	25900	e20000
14	11400	8200	8300	7550	9260	9730	12100	16100	30600	29000	25700	e19800
15	11200	e8030	e8750	7530	9280	10000	12200	16500	30600	28900	25600	e19500
16	11100	e7860	8960	7490	e9320	10400	12200	17000	30600	28700	25400	19300
17	11000	7690	e9020	7470	9330	e10600	12400	17300	30600	28600	25300	19000
18	10800	7560	e9140	7450	9330	10700	12500	17700	30600	28400	25100	18800
19	10700	7510	9210	7420	9330	10900	12600	18100	30600	28300	24900	18500
20	10500	7520	9310	7400	9320	11000	12800	18400	30500	28200	24800	18300
21	10400	7550	9150	7390	9320	11100	12900	18800	30400	28000	24600	18000
22	10300	7590	8950	7380	9310	11200	13100	19300	30300	27900	24600	17700
23	10100	7640	8620	7430	9300	11300	13200	19900	30200	27700	24600	17400
24	9970	7680	8250	7740	9300	11500	13300	20700	30100	e27600	24400	17200
25	9830	7720	7900	7920	9290	11500	13500	21500	30000	e27500	24200	16900
26	9680	7740	7570	8070	9270	11400	13600	22100	29900	e27400	24100	16700
27	9530	7770	7500	8200	9270	11800	13800	22700	29900	e27300	24000	16400
28	9390	7780	7560	8460	9250	11800	13900	23500	29900	e27200	23900	16200
29	9250	7790	7680	8580	---	11700	14000	24300	29900	27100	23700	15900
30	9100	7790	7720	8610	---	e11500	14100	25100	29900	27000	23500	15600
31	8960	---	7750	8610	---	11400	---	25800	---	26900	23300	---
MEAN	11100	8000	8200	7750	9120	10300	12400	18100	29700	28600	25300	19400
MAX	13100	8820	9310	8610	9330	11800	14100	25800	30600	29900	26900	23000
MIN	8960	7510	7500	7380	8630	9180	11400	14200	26300	26900	23300	15600
a	5701.06	5697.18	5697.06	5699.93	5701.97	5708.16	5714.71	5735.51	5741.32	5737.21	5731.68	5717.98
b	-4340	-1170	-40	+860	+640	+2150	+2700	+11700	+4100	-3000	-3600	-7700

CAL YR 2002 MEAN 13300 MAX 22600 MIN 7500 b -470
WTR YR 2003 MEAN 15700 MAX 30600 MIN 7380 b +2300

e Estimated.
a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.

10340500 PROSSER CREEK BELOW PROSSER CREEK DAM, NEAR TRUCKEE, CA

LOCATION.—Lat 39° 22'24", long 120° 07'50", in NW 1/4 NE 1/4 sec.31, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank, 300 ft downstream from Station Creek, 0.5 mi downstream from Prosser Creek Dam, 0.9 mi upstream from mouth, and 4.2 mi northeast of Truckee.

DRAINAGE AREA.—52.9 mi^2.

PERIOD OF RECORD.—October 1902 to June 1903 (gage heights only), October 1942 to December 1950, June 1951 to current year. Prior to October 1976, published as "near Boca." Monthly discharge only for October 1942 to December 1950 published in WSP 1734; daily discharge in files of U.S. Geological Survey. Records for April 1889 to November 1890, published in the 11th and 12th Annual Reports, Part 2, have been found to be unreliable and should not be used.

WATER TEMPERATURE: Water years 1993–98.

REVISED RECORDS.—WDR CA-79-3: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 5,602.31 ft above NGVD of 1929 (levels by U.S. Bureau of Reclamation). See WSP 2127 for history of changes prior to September 1956. October 1956 to May 1976, water-stage recorder at site 0.8 mi downstream at datum 29.69 ft lower.

REMARKS.—Records good. Flow regulated by Prosser Creek Reservoir (station 10340300) since Jan. 30, 1963. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Water years 1943–63, prior to construction of Prosser Creek Dam, maximum discharge, 4,560 ft^3/s, Dec. 23, 1955, gage height, 10.13 ft, present datum, from rating curve extended above 910 ft^3/s, on basis of slope-area measurement of peak flow, maximum gage height, 11.0 ft, from floodmarks, present datum, Nov. 20, 1950; minimum discharge, 0.4 ft^3/s, July 18, 1961, result of work on dam upstream. Maximum discharge since construction of Prosser Creek Dam in 1963, 2,030 ft^3/s, Jan. 3, 1997, gage height, 6.72 ft, from rating curve extended above 880 ft^3/s, on basis of valve setting at Prosser Creek Dam; minimum daily, 0.02 ft^3/s, Jan. 2, 1975, result of temporary closing of Prosser Creek Dam for spillway maintenance.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	65	17	47	97	46	183	58	61	90	44	101
2	67	65	12	47	97	46	150	57	62	90	44	101
3	67	64	8.2	47	77	46	120	57	62	89	45	107
4	68	64	7.8	46	52	40	103	58	62	90	42	117
5	68	65	7.6	46	37	38	104	57	63	90	38	117
6	67	49	8.0	46	26	38	103	57	62	89	38	116
7	66	41	8.1	46	26	38	105	57	63	89	42	115
8	65	43	8.2	46	26	38	105	57	63	89	46	125
9	67	42	7.8	46	27	39	105	56	85	89	46	130
10	71	42	8.2	46	26	39	105	57	127	89	46	130
11	71	42	7.9	46	26	39	105	57	152	89	45	130
12	71	41	7.9	46	37	40	106	57	159	89	56	129
13	71	61	9.2	46	47	39	107	57	162	89	66	129
14	71	94	11	46	47	40	107	57	162	89	71	128
15	71	93	11	46	47	43	96	57	161	88	76	128
16	70	93	28	46	47	41	68	57	159	88	77	127
17	69	82	12	46	47	40	58	58	160	88	75	127
18	69	52	11	46	47	32	58	58	165	89	75	127
19	69	26	11	46	47	15	57	58	166	89	75	127
20	68	12	68	46	47	13	57	58	161	89	81	127
21	68	9.3	122	46	46	27	57	58	155	89	89	127
22	68	9.2	153	47	46	82	57	59	148	88	72	126
23	68	9.4	172	48	46	99	57	38	142	88	59	126
24	67	9.4	171	49	46	135	57	20	139	88	59	125
25	67	9.4	171	49	46	198	57	19	134	88	58	125
26	66	9.5	112	49	46	214	58	19	113	88	59	124
27	66	11	47	50	46	215	57	20	98	89	59	123
28	66	16	47	74	46	216	57	20	93	64	75	123
29	66	17	46	97	---	214	57	20	92	44	96	125
30	66	16	46	97	---	212	57	44	92	44	101	129
31	66	---	47	97	---	212	---	61	---	45	101	---
TOTAL	2107	1252.2	1403.9	1626	1298	2574	2573	1523	3523	2596	1956	3691
MEAN	68.0	41.7	45.3	52.5	46.4	83.0	85.8	49.1	117	83.7	63.1	123
MAX	71	94	172	97	97	216	183	61	166	90	101	130
MIN	65	9.2	7.6	46	26	13	57	19	61	44	38	101
AC-FT	4180	2480	2780	3230	2570	5110	5100	3020	6990	5150	3880	7320

10340500 PROSSER CREEK BELOW PROSSER CREEK DAM, NEAR TRUCKEE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1962, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.1	34.5	47.9	36.1	45.1	75.4	203	261	157	48.5	12.1	8.45
MAX	22.4	268	321	155	89.7	175	406	669	395	176	44.5	19.6
(WY)	1946	1951	1956	1956	1943	1943	1952	1952	1952	1952	1952	1952
MIN	6.63	8.62	9.81	10.0	11.0	20.0	94.5	106	55.9	10.0	3.79	3.90
(WY)	1961	1960	1960	1948	1948	1948	1955	1959	1947	1961	1961	1947

SUMMARY STATISTICS	WATER YEARS 1943 - 1962	
ANNUAL MEAN	76.8	
HIGHEST ANNUAL MEAN	162	1952
LOWEST ANNUAL MEAN	38.1	1961
HIGHEST DAILY MEAN	3490	Dec 23 1955
LOWEST DAILY MEAN	2.7	Aug 24 1961
ANNUAL SEVEN-DAY MINIMUM	3.1	Aug 19 1947
MAXIMUM PEAK FLOW	4560	Dec 23 1955
MAXIMUM PEAK STAGE	11.00	Nov 20 1950
ANNUAL RUNOFF (AC-FT)	55620	
10 PERCENT EXCEEDS	212	
50 PERCENT EXCEEDS	27	
90 PERCENT EXCEEDS	7.0	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

MEAN	89.6	39.2	54.6	76.4	72.7	115	123	204	109	59.6	49.3	107
MAX	282	214	361	564	397	371	372	545	494	167	151	477
(WY)	1983	1982	1965	1997	1986	1986	1969	1983	1983	1985	1995	1983
MIN	5.41	6.84	5.32	7.96	17.5	27.1	21.7	17.2	8.39	6.33	2.55	1.96
(WY)	1989	1989	1989	1989	1991	1977	1977	1985	1966	1966	1994	1992

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1964 - 2003	
ANNUAL TOTAL	22845.1		26123.1			
ANNUAL MEAN	62.6		71.6		91.7	
HIGHEST ANNUAL MEAN					214	1983
LOWEST ANNUAL MEAN					24.4	1977
HIGHEST DAILY MEAN	199	Apr 7	216	Mar 28	1790	Feb 21 1986
LOWEST DAILY MEAN	7.6	Dec 5	7.6	Dec 5	0.02	Jan 2 1975
ANNUAL SEVEN-DAY MINIMUM	8.0	Dec 3	8.0	Dec 3	0.30	Apr 13 1977
MAXIMUM PEAK FLOW			219	Mar 27	2030	Jan 3 1997
MAXIMUM PEAK STAGE			3.80	Mar 27	6.72	Jan 3 1997
ANNUAL RUNOFF (AC-FT)	45310		51820		66410	
10 PERCENT EXCEEDS	94		128		206	
50 PERCENT EXCEEDS	61		61		50	
90 PERCENT EXCEEDS	19		20		9.5	

10342900 INDEPENDENCE LAKE NEAR TRUCKEE, CA

LOCATION.—Lat 39° 27'07", long 120° 17'23", in NW 1/4 SW 1/4 sec.35, T.19 N., R.15 E., Sierra County, Hydrologic Unit 16050102, on right bank of outlet channel, 60 ft upstream from outlet gates, and 10.5 mi northwest of Truckee.

DRAINAGE AREA.—7.51 mi^2.

PERIOD OF RECORD.—November 1988 to current year.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Sierra Pacific Power Co.).

REMARKS.—Lake levels regulated by an earthfill dam at the outlet constructed in 1939. Usable capacity, 17,300 acre-ft, between elevations 6,921.0 ft, invert of outlet gate and 6,949.0 ft, normal maximum storage level. Water is used for irrigation and power development downstream. Records, including extremes, represent usable contents. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 18,300 acre-ft, June 5, 2002, elevation, 6,950.38 ft; minimum, 4,750 acre-ft, Nov. 10, 11, 1988, elevation, 6,929.39 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 17,800 acre-ft, May 27, 28, maximum elevation, 6,949.70 ft, May 28; minimum, 14,300 acre-ft, Dec. 23–26, minimum elevation, 6944.65 ft, Dec. 24, 25.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Sierra Pacific Power Co., dated Nov. 5, 1941)

6,921	0	6,930	5,110	6,940	11,240	6,950	18,000
6,925	2,220	6,935	8,110	6,945	14,530		

RESERVOIR STORAGE, ACRE-FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15200	14700	15200	14600	15400	15800	15800	15600	17400	17500	17600	17400
2	15200	14700	15200	14700	15400	15800	15800	15600	17300	17400	17600	17400
3	15100	14700	15200	14700	15400	15800	15700	15700	17300	17400	17600	17400
4	15100	14700	15200	14700	15500	15900	15700	15700	17300	17400	17600	17400
5	15100	14700	15200	14700	15500	15900	15600	15700	17400	17500	17600	17400
6	15000	14700	15200	14700	15500	15900	15600	15800	17500	17500	17600	17400
7	15000	14800	15200	14700	15500	15900	15600	15800	17500	17500	17600	17400
8	15000	15000	15200	14700	15600	15900	15500	15900	17600	17500	17600	17400
9	14900	15100	15200	14700	15600	15900	15500	15900	17600	17500	17600	17300
10	14900	15200	15200	14800	15600	15900	15400	15900	17600	17500	17600	17300
11	14900	15200	15200	14800	15600	15900	15400	15900	17600	17500	17600	17300
12	14900	15200	15100	14800	15600	15900	15500	16000	17500	17500	17500	17300
13	14900	15200	15200	14800	15600	15900	15600	16000	17500	17500	17500	17300
14	14900	15200	15300	14800	15600	16000	15500	16200	17500	17500	17500	17300
15	14800	15200	15300	14900	15700	16100	15500	16300	17400	17500	17500	17300
16	14800	15200	15300	14900	15700	16100	15500	16400	17400	17500	17500	17300
17	14800	15200	15300	14900	15700	16100	15500	16500	17400	17500	17500	17200
18	14800	15200	15100	14900	15700	16200	15500	16600	17500	17500	17500	17200
19	14800	15200	14900	14900	15700	16200	15500	16700	17500	17500	17500	17100
20	14800	15200	14800	14900	15800	16200	15400	16800	17500	17500	17500	17100
21	14800	15200	14600	14900	15800	16200	15400	17000	17500	17500	17500	17100
22	14800	15200	14500	15000	15800	16300	15400	17200	17500	17500	17500	17000
23	14800	15200	14300	15000	15800	16300	15400	17300	17500	17600	17500	17000
24	14800	15200	14300	15000	15800	16300	15500	17500	17500	17600	17500	17000
25	14800	15200	14300	15100	15800	16400	15600	17600	17600	17600	17500	16900
26	14800	15200	14300	15200	15800	16500	15600	17600	17600	17600	17500	16900
27	14800	15200	14400	15200	15800	16400	15600	17800	17600	17600	17500	16900
28	14800	15200	14500	15200	15800	16300	15600	17800	17600	17600	17500	16800
29	14700	15200	14500	15300	---	16100	15600	17700	17500	17600	17500	16800
30	14700	15200	14600	15300	---	15900	15600	17700	17500	17600	17500	16800
31	14700	---	14600	15400	---	15800	---	17600	---	17600	17400	---
MAX	15200	15200	15300	15400	15800	16500	15800	17800	17600	17600	17600	17400
MIN	14700	14700	14300	14600	15400	15800	15400	15600	17300	17400	17400	16800
a	6945.26	6945.98	6945.15	6946.24	6946.88	6946.89	6946.56	6949.37	6949.29	6949.41	6949.21	6948.23
b	-700	+500	-600	+800	+400	0	-200	+2000	-100	+100	-200	-600

CAL YR 2002 MAX 18300 MIN 14300 b -1100
WTR YR 2003 MAX 17800 MIN 14300 b +1400

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

10343000 INDEPENDENCE CREEK NEAR TRUCKEE, CA

LOCATION.—Lat 39° 27'24", long 120° 17'10", in SW 1/4 NW 1/4 sec.35, T.19 N., R.15 E., Sierra County, Hydrologic Unit 16050102, on left bank, 0.4 mi downstream from Independence Lake outlet, and 10.5 mi northwest of Truckee.

DRAINAGE AREA.—8.10 mi^2.

PERIOD OF RECORD.—November 1902 to September 1907, November 1909 to June 1910, August 1968 to current year.

REVISED RECORDS.—WDR CA-79-3: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 6,920 ft above NGVD of 1929, from topographic map. July 1, 1904, to June 30, 1910, nonrecording gage 75 ft downstream from Independence Lake outlet; prior to July 1, 1904, nonrecording gage 600 ft downstream at approximately same datum.

REMARKS.—Records good. Flow regulated by Independence Lake (station 10342900) since 1939. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 325 ft^3/s, Jan. 3, 1997, gage height, 6.17 ft; maximum gage height, 8.16 ft, Apr. 16, 1993, backwater from snow and ice; no flow Sept. 28 to Nov. 10, 1905, June 1, 1906.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	2.4	1.3	1.9	e2.0	4.2	e73	6.9	205	34	1.9	1.8
2	47	2.4	1.3	1.7	e2.0	4.2	e63	3.3	198	32	1.8	1.9
3	26	2.3	1.3	1.7	e1.9	4.2	e56	3.2	146	17	1.5	2.0
4	16	2.3	1.3	1.7	e1.9	4.2	52	3.2	81	6.5	2.1	3.0
5	16	2.2	1.5	1.7	e1.7	4.2	52	3.2	76	6.5	2.3	2.1
6	16	2.0	1.6	1.6	2.8	4.0	52	3.0	77	6.4	2.1	0.82
7	15	1.9	1.6	1.6	4.1	4.1	52	3.0	77	5.9	2.0	0.87
8	10	1.8	1.6	1.6	4.1	4.2	51	2.9	77	5.3	2.0	1.7
9	5.2	1.4	1.6	1.6	4.0	4.2	51	2.6	89	4.7	2.1	2.5
10	5.2	1.4	1.5	1.7	4.0	4.1	e46	2.7	105	4.5	2.1	2.4
11	5.2	1.4	8.8	1.7	4.0	4.0	41	3.0	105	3.9	2.0	2.4
12	5.2	13	32	1.7	4.0	4.2	41	3.5	89	3.7	2.0	2.3
13	5.0	2.4	54	1.7	4.1	4.4	42	4.0	79	3.6	2.0	2.3
14	5.2	2.4	68	1.7	4.0	4.4	38	4.5	79	3.8	2.0	2.1
15	4.2	2.3	70	1.7	3.9	4.4	35	4.6	79	e3.8	2.0	2.1
16	3.0	2.2	71	1.7	3.9	4.3	31	6.0	72	e3.7	2.0	7.5
17	2.6	e2.2	78	1.7	4.0	4.4	29	8.3	54	e3.6	2.1	16
18	2.4	e2.8	89	1.7	4.0	4.2	26	8.1	38	3.5	2.1	22
19	2.2	e3.1	105	1.7	4.2	4.2	23	10	35	3.2	2.0	18
20	2.0	3.0	106	1.7	4.2	4.2	23	13	35	3.0	2.1	16
21	1.9	3.2	98	2.2	4.2	4.2	18	15	35	2.9	2.1	16
22	1.7	2.9	98	3.2	4.2	4.3	13	30	35	3.0	2.1	16
23	1.7	2.9	76	2.5	4.2	4.7	13	55	35	2.7	2.1	16
24	1.6	2.9	e22	2.0	4.2	4.5	13	67	35	2.3	2.1	16
25	1.6	2.8	e4.0	2.0	4.2	9.1	13	67	34	2.2	2.2	16
26	1.6	2.2	e2.7	2.0	4.2	33	13	67	34	2.3	2.2	16
27	1.6	1.3	2.2	2.2	4.2	73	13	97	34	2.3	2.1	16
28	2.1	1.3	2.0	2.3	4.2	105	13	156	34	2.5	2.1	16
29	2.8	1.3	2.0	2.3	---	110	12	194	34	2.2	2.1	16
30	2.7	1.3	1.9	e2.3	---	109	12	205	34	2.0	2.1	16
31	2.5	---	14	e2.2	---	e98	---	206	---	1.8	1.8	---
TOTAL	275.2	77.0	1019.2	59.0	102.4	639.1	1010	1258.0	2140	184.8	63.2	269.79
MEAN	8.88	2.57	32.9	1.90	3.66	20.6	33.7	40.6	71.3	5.96	2.04	8.99
MAX	60	13	106	3.2	4.2	110	73	206	205	34	2.3	22
MIN	1.6	1.3	1.3	1.6	1.7	4.0	12	2.6	34	1.8	1.5	0.82
AC-FT	546	153	2020	117	203	1270	2000	2500	4240	367	125	535

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

MEAN	15.0	19.8	12.5	12.6	11.4	15.1	20.9	43.5	55.1	25.3	18.7	20.9
MAX	45.8	97.6	58.2	161	58.0	94.5	72.9	112	188	89.2	114	133
(WY)	1976	1984	1982	1997	1986	1996	1986	1982	1983	1983	1988	1973
MIN	0.47	1.36	0.70	1.04	1.07	1.45	1.50	1.51	2.09	1.78	2.04	0.58
(WY)	1980	1989	1993	1993	1974	1977	1977	1977	1977	1977	2003	1979

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1968 - 2003	
ANNUAL TOTAL	6916.6		7097.69			
ANNUAL MEAN	18.9		19.4		22.6	
HIGHEST ANNUAL MEAN					46.7	1983
LOWEST ANNUAL MEAN					7.07	2001
HIGHEST DAILY MEAN	106	Dec 20	206	May 31	295	Jan 4 1997
LOWEST DAILY MEAN	1.3	Nov 27	0.82	Sep 6	0.02	Sep 26 1973
ANNUAL SEVEN-DAY MINIMUM	1.3	Nov 27	1.3	Nov 27	0.02	Sep 26 1973
MAXIMUM PEAK FLOW			246	Nov 12	325	Jan 3 1997
MAXIMUM PEAK STAGE			5.46	Nov 12	8.16	Apr 16 1993
ANNUAL RUNOFF (AC-FT)	13720		14080		16340	
10 PERCENT EXCEEDS	61		69		61	
50 PERCENT EXCEEDS	4.4		4.0		11	
90 PERCENT EXCEEDS	2.0		1.7		2.1	

e Estimated.

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA
(Hydrologic Benchmark Station)

LOCATION.—Lat 39° 25'54", long 120° 14'13", in NE 1/4 NE 1/4 sec.7, T.18 N., R.16 E., Nevada County, Hydrologic Unit 16050102, on left bank, 2.2 mi upstream from bridge on State Highway 89, and 7.5 mi north of Truckee.

DRAINAGE AREA.—10.5 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1953 to current year.
PRECIPITATION DATA: Water years 1990–96.

REVISED RECORDS.—WDR CA-79-3: Drainage area.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 6,320 ft above NGVD of 1929, from topographic map. Prior to Dec. 2, 1953, nonrecording gage at site 100 ft upstream at different datum.

REMARKS.—Records good. No storage or diversion upstream from station. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,230 ft^3/s, Jan. 1, 1997, gage height, 5.20 ft, from poor high-water mark on gage house, rating curve extended above 160 ft^3/s, on basis of slope-area measurement at gage height 4.28 ft; minimum daily, 1.0 ft^3/s, Sept. 13, 1960.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 24	1815	65	2.77

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.9	2.4	4.0	8.9	3.9	24	13	39	5.7	3.4	2.0
2	1.7	1.9	2.4	3.9	8.3	4.0	17	14	37	5.4	4.2	1.9
3	1.7	1.9	2.4	3.8	7.4	3.8	16	17	35	5.2	3.6	1.9
4	1.8	1.9	2.4	3.9	7.6	3.7	14	20	33	4.9	2.8	2.1
5	1.7	1.9	2.4	3.9	7.2	3.7	13	20	31	4.7	2.7	2.0
6	1.7	1.9	2.4	3.8	7.6	3.8	12	20	29	4.5	2.6	1.9
7	1.7	4.0	2.4	3.8	6.7	4.0	13	20	28	4.3	2.5	1.8
8	1.7	18	2.3	3.6	5.7	4.1	16	19	27	4.1	2.4	1.9
9	1.7	7.4	2.4	3.6	5.3	4.2	17	17	26	3.9	2.3	1.9
10	1.7	4.3	2.4	3.7	5.0	4.5	19	18	24	3.7	2.2	1.9
11	1.7	3.8	2.4	3.8	4.7	5.3	21	21	22	3.5	2.2	1.9
12	1.7	4.0	2.4	3.7	4.5	6.5	20	25	19	3.4	2.1	1.8
13	1.7	4.5	8.1	3.8	5.2	9.7	16	30	17	3.3	2.1	1.8
14	1.7	3.7	19	3.7	5.4	11	16	37	16	3.2	2.1	1.8
15	1.7	3.2	7.0	3.6	5.1	14	15	41	14	3.1	2.1	1.8
16	1.7	3.1	4.2	3.6	5.0	11	14	40	13	3.0	2.0	1.8
17	1.7	3.0	5.8	3.5	4.7	8.9	13	40	13	2.9	2.1	1.8
18	1.7	2.9	5.1	3.5	4.8	8.0	13	39	12	2.9	1.9	1.8
19	1.7	2.8	4.3	3.5	4.5	7.7	13	38	11	2.8	2.0	1.8
20	1.7	2.8	3.9	3.6	4.3	7.7	14	40	11	2.7	2.0	1.8
21	1.8	2.9	3.7	3.7	4.3	7.8	15	44	10	2.7	2.6	1.8
22	1.8	3.1	3.5	4.3	4.2	9.4	14	49	9.4	3.0	2.9	1.8
23	1.8	3.1	3.4	9.8	4.1	17	14	52	9.9	3.8	2.4	1.7
24	1.8	2.9	3.3	9.3	4.1	15	15	54	9.6	3.7	2.2	1.7
25	1.8	2.7	3.2	7.6	4.1	15	13	51	8.5	3.0	2.1	1.7
26	1.8	2.6	3.1	7.1	4.0	31	13	48	7.7	2.8	2.3	1.7
27	1.9	2.5	5.5	9.1	4.0	25	13	48	7.2	2.8	2.2	1.7
28	1.9	2.5	6.7	10	3.9	19	13	49	6.8	2.8	2.0	1.7
29	1.9	2.4	5.3	8.3	---	19	13	48	6.4	2.6	2.0	1.7
30	1.9	2.4	4.5	7.6	---	21	13	47	6.0	2.5	1.9	1.7
31	1.9	---	4.3	7.8	---	25	---	42	---	2.8	2.0	---
TOTAL	54.4	106.0	132.6	158.9	150.6	333.7	452	1061	538.5	109.7	73.9	54.6
MEAN	1.75	3.53	4.28	5.13	5.38	10.8	15.1	34.2	17.9	3.54	2.38	1.82
MAX	1.9	18	19	10	8.9	31	24	54	39	5.7	4.2	2.1
MIN	1.7	1.9	2.3	3.5	3.9	3.7	12	13	6.0	2.5	1.9	1.7
AC-FT	108	210	263	315	299	662	897	2100	1070	218	147	108

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA—Continued
(Hydrologic Benchmark Station)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.41	5.04	7.03	8.46	8.08	10.7	24.3	43.2	25.0	7.14	3.11	2.72
MAX	11.9	27.7	44.0	87.3	51.0	50.1	51.6	117	142	37.4	11.8	7.56
(WY)	1963	1984	1965	1997	1963	1986	1986	1969	1983	1983	1983	1983
MIN	1.46	1.83	2.03	1.81	2.54	2.74	6.13	3.45	1.82	1.36	1.20	1.11
(WY)	1995	1993	1977	1962	1994	1962	1975	1988	1992	1994	1994	1960

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1954 - 2003	
ANNUAL TOTAL	2427.1		3225.9			
ANNUAL MEAN	6.65		8.84		12.4	
HIGHEST ANNUAL MEAN					30.0	1983
LOWEST ANNUAL MEAN					2.65	1977
HIGHEST DAILY MEAN	44	Apr 14	54	May 24	800	Jan 1 1997
LOWEST DAILY MEAN	1.5	Aug 18	1.7	Oct 1	1.0	Sep 13 1960
ANNUAL SEVEN-DAY MINIMUM	1.5	Aug 30	1.7	Oct 5	1.1	Sep 9 1960
MAXIMUM PEAK FLOW			65	May 24	1230	Jan 1 1997
MAXIMUM PEAK STAGE			2.77	May 24	5.20	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	4810		6400		8960	
10 PERCENT EXCEEDS	20		21		32	
50 PERCENT EXCEEDS	3.2		3.9		4.5	
90 PERCENT EXCEEDS	1.6		1.8		1.9	

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—
CHEMICAL DATA: Water years 1968–72, 1986–96.
SPECIFIC CONDUCTANCE: November 2000 to current year.
WATER TEMPERATURE: Water years 1970–1974, November 2000 to current year.
SEDIMENT DATA: Water years 1968–75, 1981–96.

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: November 2000 to current year.
WATER TEMPERATURE: October 1970 to September 1974, November 2000 to current year.

INSTRUMENTATION.—Water-temperature and specific conductance recorder since November 2000.

REMARKS.—Specific conductance records rated good. Temperature records are excellent. Interruptionsin record due to malfunction of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum recorded, 212 microsiemens, Aug. 6, 2002; minimum recorded, 42 microsiemens, May 28, 2003.
WATER TEMPERATURE: Maximum recorded, 20.5° C, June 28, 30, 1973; minimum recorded, –0.5° C, many days in November 2000 through March 2001.

EXTREMES FOR CURRENT YEAR.—
SPECIFIC CONDUCTANCE: Maximum recorded, 150 microsiemens, Sept. 27; minimum recorded, 42 microsiemens, May 28.
WATER TEMPERATURE: Maximum recorded, 20.0° C, July 21, 22; minimum recorded, 0.0° C, many days November to April.

SPECIFIC CONDUCTANCE, MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	138	135	134	130	124	119	108	104	85	81	105	102
2	137	135	134	129	124	121	109	107	86	82	108	102
3	137	134	132	129	124	120	109	106	88	86	105	103
4	137	134	132	129	124	120	107	105	88	86	106	103
5	137	134	131	129	124	119	109	106	91	86	106	104
6	137	134	131	128	122	118	108	106	92	87	105	103
7	136	134	145	124	121	119	109	107	95	88	104	101
8	137	134	124	82	122	120	109	107	96	89	104	101
9	137	133	103	83	122	119	109	107	95	92	103	101
10	137	135	107	102	121	117	109	107	95	94	102	100
11	137	135	113	107	121	119	109	106	97	95	102	95
12	137	135	114	106	121	118	110	108	98	96	100	90
13	137	134	108	106	121	68	114	108	98	91	91	80
14	137	134	111	108	81	66	112	109	95	92	81	79
15	137	133	114	111	84	81	112	109	96	94	80	73
16	136	133	115	113	92	84	113	108	97	93	81	79
17	136	133	116	113	93	88	112	110	106	97	83	80
18	136	132	116	115	95	90	112	110	108	98	83	82
19	136	132	117	115	100	95	112	110	100	97	84	82
20	136	132	117	115	103	99	111	109	100	99	84	82
21	135	131	117	114	108	101	110	106	101	99	84	81
22	134	131	115	112	108	106	109	95	101	100	82	75
23	134	130	116	112	111	107	95	84	102	100	75	70
24	134	130	117	114	112	108	90	85	102	101	72	70
25	134	129	120	115	113	108	91	90	103	101	72	67
26	134	130	118	115	111	107	92	90	103	101	68	57
27	135	130	121	116	107	89	91	78	103	101	61	58
28	133	129	123	118	94	90	85	80	104	102	62	60
29	133	129	123	118	102	94	87	84	---	---	64	61
30	133	130	123	119	103	101	88	87	---	---	63	59
31	132	129	---	---	105	99	88	85	---	---	60	56
MONTH	138	129	145	82	124	66	114	78	108	81	108	56

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA—Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	60	56	66	64	48	45	82	79	123	110	141	138
2	62	59	65	63	49	46	84	80	116	111	142	139
3	62	60	64	59	49	47	86	81	---	---	146	139
4	67	62	61	59	49	47	88	82	---	---	146	132
5	66	64	61	58	50	47	89	84	127	122	146	141
6	67	65	60	59	50	48	92	86	128	124	146	141
7	70	65	60	58	51	48	91	86	130	125	147	140
8	67	60	60	59	51	47	94	87	130	127	148	140
9	65	60	60	59	51	49	96	89	131	128	147	141
10	65	61	61	59	52	50	98	91	132	129	147	140
11	62	58	60	56	53	51	99	93	133	130	147	140
12	61	58	59	53	55	52	101	94	134	130	147	141
13	64	58	56	51	56	53	102	95	135	131	148	141
14	66	62	53	49	58	55	103	97	136	132	146	141
15	66	62	51	47	60	58	105	99	137	134	147	140
16	67	66	50	48	60	59	107	100	137	135	148	141
17	67	66	50	47	61	59	109	102	---	---	148	141
18	67	64	50	47	62	60	112	104	---	---	148	141
19	67	63	49	47	64	61	114	107	139	136	147	140
20	65	63	49	45	65	63	116	108	139	136	147	141
21	67	63	48	45	67	64	117	110	141	134	147	141
22	67	64	49	45	67	66	---	---	134	129	---	---
23	68	62	48	45	67	66	115	103	137	131	---	---
24	62	59	47	44	70	66	115	104	137	135	148	142
25	63	61	47	45	73	69	118	112	139	136	148	141
26	65	61	47	44	75	71	120	115	140	135	148	142
27	65	63	48	44	77	73	121	116	138	136	150	143
28	65	63	47	42	79	74	123	117	139	137	149	142
29	65	64	46	43	80	76	125	120	140	137	148	142
30	66	65	46	44	81	77	127	122	141	138	149	142
31	---	---	47	45	---	---	127	117	141	138	---	---
MONTH	70	56	66	42	81	45	---	---	---	---	---	---

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.0	3.5	2.0	0.0	3.0	0.5	1.5	0.0	3.0	1.0	3.5	0.5
2	7.0	2.5	3.0	0.0	2.5	1.0	2.5	1.5	2.0	0.0	3.0	0.0
3	7.5	2.0	3.5	0.5	2.5	0.5	2.5	1.5	2.0	0.0	3.0	1.0
4	9.0	5.5	3.5	0.0	2.5	1.0	3.0	2.0	1.5	0.0	3.5	0.0
5	8.5	3.5	3.5	0.0	3.0	0.5	2.5	1.5	1.0	0.0	3.5	0.0
6	9.0	4.0	4.0	0.5	3.5	1.5	2.0	0.5	0.5	0.0	4.0	1.0
7	9.0	4.0	3.5	0.0	2.5	0.5	1.5	0.0	0.5	0.0	4.0	0.5
8	9.0	3.5	2.0	0.5	2.0	0.0	2.0	0.5	0.5	0.0	4.0	0.5
9	9.0	4.0	3.0	0.0	3.0	1.0	3.0	2.0	1.5	0.0	4.5	0.5
10	10.0	6.5	2.5	0.0	4.0	2.0	3.0	1.5	2.0	0.0	5.0	2.0
11	8.0	4.0	3.5	2.0	2.5	0.0	3.0	1.5	2.5	0.5	5.0	1.0
12	7.0	2.5	4.0	2.0	3.0	0.5	3.0	2.0	3.0	0.5	5.5	1.0
13	7.5	2.5	4.5	2.5	2.5	1.0	3.5	2.0	3.0	2.0	4.5	2.0
14	8.0	3.0	3.5	1.5	1.5	0.0	3.0	2.0	3.5	1.0	3.0	0.0
15	7.5	3.0	3.5	0.5	0.0	0.0	2.0	0.5	3.5	1.5	2.0	0.5
16	7.0	2.5	4.0	2.0	0.0	0.0	2.0	0.5	2.5	0.0	3.5	0.0
17	7.0	2.5	3.5	2.0	0.0	0.0	2.5	1.0	2.5	0.0	3.0	1.0
18	7.0	2.5	3.5	1.0	0.0	0.0	2.5	1.0	2.5	0.0	4.0	0.0
19	7.0	2.5	3.5	1.0	0.0	0.0	2.5	1.0	3.0	0.5	4.5	0.0
20	6.5	2.5	4.0	1.5	0.5	0.0	2.5	0.5	3.5	1.5	4.0	1.0
21	6.0	2.5	4.5	1.5	2.0	0.5	3.0	2.0	3.0	0.0	5.0	1.0
22	5.5	2.0	5.0	2.5	1.5	0.0	3.5	2.0	3.0	0.0	5.0	1.5
23	6.0	2.0	4.0	2.5	1.5	0.0	2.5	1.0	3.5	0.0	3.5	1.5
24	5.5	2.0	3.5	1.5	1.5	0.0	3.0	1.0	3.5	1.5	5.0	1.5
25	6.5	3.5	2.5	1.0	1.5	0.0	3.0	1.5	3.0	1.5	5.5	1.0
26	6.5	3.0	2.0	0.0	2.0	1.5	3.5	1.5	3.0	0.0	2.5	1.0
27	6.0	2.5	2.5	0.0	2.0	1.5	3.0	1.0	3.0	1.0	4.5	1.0
28	6.0	3.0	2.5	0.5	2.0	0.0	2.5	1.0	3.0	0.0	5.0	0.5
29	5.0	1.5	2.0	0.0	1.5	0.0	3.0	1.0	---	---	6.0	0.5
30	4.5	1.0	3.0	0.0	2.0	1.0	3.5	1.5	---	---	6.5	1.0
31	3.5	0.5	---	---	1.5	0.0	3.5	1.5	---	---	6.5	1.5
MONTH	10.0	0.5	5.0	0.0	4.0	0.0	3.5	0.0	3.5	0.0	6.5	0.0

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	2.5	1.0	7.0	1.0	13.0	5.0	16.0	8.0	14.5	11.0	14.0	7.5
2	2.0	0.0	5.0	2.0	13.0	5.5	16.5	8.0	13.0	11.5	15.0	8.0
3	3.5	0.0	7.5	2.0	13.0	5.5	17.0	7.5	---	10.0	12.5	8.5
4	2.0	0.0	7.5	1.5	13.5	6.0	16.5	6.5	17.5	---	12.5	8.0
5	4.0	0.0	8.5	1.5	13.0	6.0	16.5	6.5	16.5	10.0	14.0	8.0
6	4.0	1.0	6.0	1.5	13.5	5.5	16.5	7.0	16.0	9.5	14.0	7.0
7	6.0	0.5	6.5	2.0	13.0	6.5	16.5	6.5	16.0	8.0	13.0	9.0
8	6.5	1.0	6.0	1.0	14.0	6.5	17.0	7.0	16.0	8.0	12.0	7.5
9	6.5	1.0	4.0	1.5	14.0	6.0	18.0	7.5	16.0	7.5	12.0	7.5
10	6.0	1.0	8.0	2.0	13.5	6.0	18.0	8.5	16.5	9.0	11.5	5.5
11	4.5	2.5	9.0	1.5	13.5	5.5	18.0	7.5	16.5	9.0	12.5	5.5
12	2.5	0.0	9.5	2.0	13.5	5.5	17.5	7.5	15.5	7.5	13.0	6.5
13	0.0	0.0	9.5	2.0	13.5	6.5	18.0	9.5	16.5	8.0	12.0	6.0
14	3.5	0.0	9.5	2.5	14.0	5.5	18.0	7.5	16.0	7.5	12.0	5.5
15	4.0	0.0	9.5	2.5	14.5	5.5	17.5	7.5	16.5	9.0	12.0	6.0
16	3.0	0.5	9.0	2.0	15.0	7.5	18.5	8.5	16.5	8.5	11.5	7.0
17	4.0	1.5	9.5	2.5	15.5	8.0	18.5	9.5	---	7.5	10.0	4.5
18	5.5	1.0	9.5	2.0	15.0	8.5	18.5	10.0	16.5	---	10.5	4.0
19	6.5	0.5	9.5	2.0	14.5	7.0	19.5	11.5	16.5	9.0	11.0	4.5
20	5.5	1.0	10.5	3.0	14.0	7.0	18.5	11.5	15.5	9.0	11.5	5.0
21	5.5	1.5	11.0	3.0	14.0	6.0	20.0	11.0	13.0	11.0	11.5	5.0
22	4.5	1.0	11.5	3.5	13.0	6.0	20.0	11.0	15.0	10.0	11.5	5.5
23	6.5	1.0	10.5	3.5	9.0	5.5	17.0	12.0	15.0	8.0	12.0	6.0
24	3.0	1.0	11.0	4.0	13.5	5.0	19.0	11.5	15.5	8.0	12.0	6.0
25	3.0	0.0	10.0	4.5	15.0	5.5	18.5	10.5	15.0	7.5	11.5	5.5
26	5.5	0.0	11.0	4.5	16.0	6.5	18.5	10.0	14.5	10.0	11.0	5.0
27	6.0	1.0	12.5	4.5	16.5	7.5	16.5	10.5	15.0	8.0	11.5	5.0
28	6.0	1.0	12.5	5.0	17.5	8.5	17.5	9.5	15.0	8.0	11.5	6.0
29	5.5	1.0	12.0	5.5	16.5	8.5	19.5	10.5	14.0	7.0	11.5	6.0
30	6.0	1.0	12.0	5.5	16.5	6.5	18.5	11.0	14.0	7.0	11.5	5.5
31	---	---	12.5	5.0	---	---	17.0	11.5	12.0	8.0	---	---
MONTH	6.5	0.0	12.5	1.0	17.5	5.0	20.0	6.5	---	---	15.0	4.0

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA—Continued

CROSS SECTION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Depth at sample location, feet (81903)	Sampling depth, feet (00003)	Specif. conduct-ance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR						
30...*	1620	1.40	.70	65	6.0	5.00
30...*	1621	1.50	.75	65	6.0	6.00
30...*	1622	1.60	.80	65	6.0	7.00
30...*	1623	1.75	.80	65	6.0	8.00
30...*	1624	1.90	.95	65	6.0	9.00
30...*	1625	1.80	.90	65	6.0	10.0
30...*	1626	1.60	.80	65	6.0	11.0
30...*	1627	1.40	.70	65	6.0	12.0
30...*	1628	1.35	.70	65	6.0	13.0
30...*	1629	1.30	.65	65	6.0	14.0
30...*	1630	1.35	.65	65	6.0	15.0
30...*	1631	1.20	.60	65	6.0	16.0
30...*	1632	1.10	.55	65	6.0	17.0

* Instantaneous discharge at the time of cross-sectional measurements: Apr. 30, 13.0 ft^3/s.

10344300 STAMPEDE RESERVOIR NEAR TRUCKEE, CA

LOCATION.—Lat 39° 28'14", long 120° 06'11", in SE 1/4 NE 1/4 sec.29, T.19 N., R.17 E., Sierra County, Hydrologic Unit 16050102, Tahoe National Forest, in control house near base of spillway of Stampede Dam, on Little Truckee River, 0.2 mi upstream from Worn Mill Canyon, and 11.0 mi northeast of Truckee.

DRAINAGE AREA.—136 mi^2.

PERIOD OF RECORD.—August 1969 to current year. August 1969 to September 1977, monthend elevations and contents only. October 1977 to September 1987, daily contents. Prior to October 1976, published as "near Boca."

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.—Records good. Reservoir is formed by rolled-earth and rockfill dam. Storage began Aug. 1, 1969. Total capacity, 226,500 acre-ft, at elevation 5,948.7 ft, spillway crest. Inactive contents, 5,010 acre-ft, includes 660 acre-ft dead contents below elevation 5,798.3 ft. Figures given, including extremes, represent total contents at 0800 hours. Reservoir is used for flood control, municipal water supply, enhancement of fishery, and recreation. See schematic diagram of Truckee River Basin.

EXTREMES (at 0800 hours) FOR PERIOD OF RECORD.—Maximum contents, 254,493 acre-ft, June 1, 1983, elevation, 5,956.55 ft; minimum since reservoir first filled, 30,772 acre-ft, Jan. 31, Feb. 1, 1978, elevation, 5,853.60 ft.

EXTREMES (at 0800 hours) FOR CURRENT YEAR.—Maximum contents, 158,000 acre-ft, June 26–29, maximum elevation, 5,926.66 ft, June 27; minimum, 108,300 acre-ft, Dec. 11, 12, minimum elevation, 5,906.68 ft, Dec. 12.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by U.S. Bureau of Reclamation, dated July 1971)

5,850	27,915	5,880	60,185	5,910	115,865	5,940	197,630
5,860	36,470	5,890	76,008	5,920	140,141	5,950	231,005
5,870	47,090	5,900	94,535	5,930	167,355	5,960	267,386

RESERVOIR STORAGE, ACRE-FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110100	108700	108600	113200	116300	114700	125800	128000	141000	157000	148000	143500
2	110200	108600	108600	113300	116200	114800	126000	128000	143000	156600	147900	143400
3	110100	108600	108500	113400	116100	114900	127000	128000	144000	156300	147800	143300
4	110100	108600	108500	113500	115900	114900	127000	128000	145000	155900	147700	143100
5	110100	e108500	108500	113600	115700	115000	127000	128000	146000	155600	147500	143200
6	110000	108500	108500	113600	115500	115000	127000	128000	147000	155200	147400	143000
7	110000	108500	108400	113600	115300	115100	127000	127000	148000	154900	147200	142900
8	110000	108900	108400	113700	114900	115100	127000	127000	149000	154400	147000	142700
9	110000	109200	108400	113800	114700	115200	127000	127000	150000	154100	146900	142500
10	109900	e109500	108400	113900	114400	115300	128000	127000	151000	153700	146800	142300
11	109800	109500	108300	114000	114200	115500	128000	127000	152000	153300	146600	142000
12	109700	109500	108300	114100	114000	115600	128000	127000	153000	152900	146500	141900
13	109700	109500	108500	114200	113900	115900	128000	127000	153000	152500	146300	141800
14	109600	109500	108900	114200	113800	116400	129000	127000	154000	152100	146200	141600
15	109600	109500	e109500	114200	113800	117000	129000	127000	154000	151700	146000	141500
16	109500	109500	110200	114200	e113900	117600	129000	127000	155000	151300	145900	141300
17	109500	109500	e110400	114300	113900	118000	129000	128000	155000	151000	145800	141100
18	109400	109300	e110700	114300	113800	118200	129000	128000	156000	150700	145800	140900
19	109400	e109300	110900	114400	113900	118400	129000	128000	156000	150400	145500	140800
20	109300	109200	111300	114500	114000	118700	129000	129000	157000	150100	145300	140600
21	109300	109100	111600	114500	114000	118900	129000	129000	157000	149800	145200	140500
22	109200	109100	111800	114600	114200	119200	129000	129000	157000	149600	145200	140400
23	109100	109100	112000	114800	114300	119600	129000	130000	157000	149400	145000	140300
24	109100	109000	112200	115000	114400	120100	128000	131000	157000	149200	144800	140200
25	109000	108900	112200	115200	114500	120600	128000	132000	157000	148900	144700	140100
26	109000	108800	112200	115400	114500	121200	128000	133000	158000	148700	144600	139900
27	108900	108700	112400	115600	114600	122200	128000	134000	158000	148400	144400	139800
28	108900	108700	112500	115900	114600	123100	128000	135000	158000	148200	144200	139700
29	108800	108700	112900	116200	---	123700	128000	136000	158000	148100	144100	139600
30	108800	108600	112900	116200	---	e124500	128000	138000	157000	148000	143900	139400
31	108700	---	113200	116300	---	125200	---	140000	---	147900	143700	---
MAX	110200	109500	113200	116300	116300	125200	129000	140000	158000	157000	148000	143500
MIN	108700	108500	108300	113200	113800	114700	125800	127000	141000	147900	143700	139400
a	5906.86	5906.83	5908.86	5910.20	5909.48	5914.06	5915.24	5919.89	5926.50	5923.03	5921.43	5919.72
b	-1400	-100	+4600	+3100	-1700	+10600	+2800	+12000	+17000	-9100	-4200	-4300

CAL YR 2002 MAX 154600 MIN 108300 b -41000
WTR YR 2003 MAX 158000 MIN 108300 b +29300

e Estimated.
a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

10344400 LITTLE TRUCKEE RIVER ABOVE BOCA RESERVOIR, NEAR TRUCKEE, CA

LOCATION.—Lat 39° 26'09", long 120° 05'00", in SW 1/4 SW 1/4 sec.3, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank, 1 mi upstream from Boca Reservoir, 1.5 mi upstream from Dry Creek, 3.0 mi downstream from Stampede Dam, and 5.5 mi northeast of Truckee.

DRAINAGE AREA.—146 mi^2.

PERIOD OF RECORD.—June 1903 to October 1910, September 1939 to current year. Monthly discharge only for some periods, published in WSP 1314 and 1734. Published as "at Pine Station," June 1903 to December 1907, as "at Starr," January 1908 to October 1910, and as "near Boca," September 1939 to September 1976.

REVISED RECORDS.—WSP 1564: 1903–04, 1906–07, 1910, drainage area at site used in 1903–07.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 5,618.67 ft above NGVD of 1929 (U.S. Bureau of Reclamation Benchmark). June 1903 to October 1910, nonrecording gages at different sites and datums.

REMARKS.—Records good. Flow regulated by Independence Lake (station 10342900) since 1939 and Stampede Reservoir (station 10344300) since 1969. There is one transbasin diversion to Sierra Valley. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Water years 1939–68, prior to construction of Stampede Dam, maximum discharge, 13,300 ft^3/s, Feb. 1, 1963, gage height, 9.00 ft, from rating curve extended above 1,600 ft^3/s, on basis of slope-area measurement of peak flow; minimum daily, 3.0 ft^3/s, Nov. 30, 1954. Maximum discharge since construction of Stampede Dam in 1969, 3,850 ft^3/s, Jan. 3, 1997, gage height, 5.26 ft; minimum daily, 0.30 ft^3/s, Sept. 16–21, 1969.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	16	32	e34	219	36	146	266	107	191	62	78
2	32	16	31	33	217	36	146	266	92	191	63	78
3	32	16	31	33	215	35	172	266	67	191	63	78
4	32	16	31	33	215	35	213	267	57	191	62	79
5	32	19	31	33	215	36	228	265	56	191	62	78
6	32	31	31	34	214	36	228	264	56	191	61	78
7	32	35	31	e34	213	37	227	263	56	191	61	78
8	32	39	31	e34	212	37	227	263	56	191	61	78
9	32	33	31	33	212	38	227	263	45	191	61	78
10	32	34	31	33	212	38	248	263	32	191	60	78
11	32	33	31	33	190	39	262	262	32	191	61	78
12	32	32	31	33	174	42	263	262	32	191	61	78
13	32	32	32	34	175	45	248	262	31	191	61	77
14	32	32	33	34	135	49	266	262	31	191	61	78
15	32	41	33	e33	96	60	270	262	31	191	61	78
16	32	52	37	e33	97	51	269	262	31	167	61	77
17	32	52	34	e33	95	46	268	262	31	148	61	77
18	32	52	32	33	81	43	268	262	31	148	70	77
19	31	52	e32	33	54	41	268	262	31	148	78	78
20	31	50	32	34	37	41	268	262	31	144	79	77
21	31	54	32	34	36	41	269	262	31	138	80	77
22	31	52	e32	35	36	42	267	262	31	134	79	77
23	31	52	31	62	36	45	267	262	31	128	78	77
24	31	53	e32	87	36	44	266	263	31	122	78	77
25	31	52	33	87	36	43	267	263	31	106	78	77
26	31	52	32	87	36	45	259	262	42	113	78	77
27	31	41	35	88	36	44	267	262	81	114	78	77
28	31	32	36	88	36	55	267	226	132	92	78	77
29	32	32	36	129	---	70	266	174	175	63	78	77
30	27	31	35	160	---	70	266	128	191	62	78	77
31	16	---	35	194	---	103	---	107	---	62	78	---
TOTAL	961	1134	1007	1718	3566	1423	7373	7737	1712	4754	2131	2326
MEAN	31.0	37.8	32.5	55.4	127	45.9	246	250	57.1	153	68.7	77.5
MAX	32	54	37	194	219	103	270	267	191	191	80	79
MIN	16	16	31	33	36	35	146	107	31	62	60	77
AC-FT	1910	2250	2000	3410	7070	2820	14620	15350	3400	9430	4230	4610

e Estimated.

10344400 LITTLE TRUCKEE RIVER ABOVE BOCA RESERVOIR, NEAR TRUCKEE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1968, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	76.0	83.5	123	87.3	131	170	399	543	310	78.1	29.8	25.8
MAX	394	630	725	264	835	374	855	1304	1045	433	180	76.5
(WY)	1963	1951	1965	1956	1963	1967	1952	1952	1967	1967	1940	1959
MIN	13.5	13.0	11.6	9.45	22.0	39.0	106	171	45.7	6.06	4.45	5.93
(WY)	1962	1940	1960	1962	1948	1948	1961	1961	1954	1949	1949	1948

SUMMARY STATISTICS	WATER YEARS 1939 - 1968		
ANNUAL MEAN	170		
HIGHEST ANNUAL MEAN	321		1952
LOWEST ANNUAL MEAN	58.9		1961
HIGHEST DAILY MEAN	8810	Feb 1	1963
LOWEST DAILY MEAN	3.0	Nov 30	1954
ANNUAL SEVEN-DAY MINIMUM	4.0	Jul 17	1949
MAXIMUM PEAK FLOW	13300	Feb 1	1963
MAXIMUM PEAK STAGE	9.00	Feb 1	1963
ANNUAL RUNOFF (AC-FT)	123200		
10 PERCENT EXCEEDS	454		
50 PERCENT EXCEEDS	70		
90 PERCENT EXCEEDS	13		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	71.7	42.3	71.9	104	87.8	137	307	534	324	170	114	58.4
MAX	503	132	711	1089	400	418	923	1371	1733	1301	573	359
(WY)	1974	1975	1984	1997	1996	1996	1986	1969	1983	1983	1975	1971
MIN	0.56	0.75	2.85	16.7	10.6	13.8	25.6	30.6	28.1	24.1	1.65	0.47
(WY)	1970	1970	1970	1980	1970	1970	1970	1988	1988	1981	1969	1969

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1969 - 2003	
ANNUAL TOTAL	58135		35842			
ANNUAL MEAN	159		98.2		169	
HIGHEST ANNUAL MEAN					427	1983
LOWEST ANNUAL MEAN					53.4	1992
HIGHEST DAILY MEAN	786	Apr 29	270	Apr 15	2590	Jan 12 1997
LOWEST DAILY MEAN	16	Oct 31	16	Oct 31	0.30	Sep 16 1969
ANNUAL SEVEN-DAY MINIMUM	18	Oct 30	18	Oct 30	0.31	Sep 15 1969
MAXIMUM PEAK FLOW			301	Apr 15	3850	Jan 3 1997
MAXIMUM PEAK STAGE			1.69	Apr 15	5.26	Jan 3 1997
ANNUAL RUNOFF (AC-FT)	115300		71090		122500	
10 PERCENT EXCEEDS	540		262		464	
50 PERCENT EXCEEDS	67		61		54	
90 PERCENT EXCEEDS	32		31		28	

10344490 BOCA RESERVOIR NEAR TRUCKEE, CA

LOCATION.—Lat 39° 23'20", long 120° 05'43", in NE 1/4 NW 1/4 sec.28, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, in control house at Boca Dam, on Little Truckee River, 1,800 ft upstream from mouth, and 6.3 mi northeast of Truckee.

DRAINAGE AREA.—172 mi^2.

PERIOD OF RECORD.—December 1938 to current year. Prior to October 1976 published as "at Boca." Monthend contents only for December 1938 to September 1957, published in WSP 1734.

REVISED RECORDS.—WSP 1634: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is NFVD of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.—Reservoir is formed by earthfill, rock-faced dam. Storage began Dec. 8, 1938. Usable capacity, 40,868 acre-ft, between elevations 5,521 ft, outlet sill, and 5,605 ft, top of spillway gates. Elevation of spillway (gate open) is 5,589.01 ft. Dead contents, 241 acre-ft. Records, including extremes, represent usable contents at 0800 hours. Water is used for irrigation in the State of Nevada and for power development. See schematic diagram of Truckee River Basin.

EXTREMES (at 0800 hours) FOR PERIOD OF RECORD.—Maximum contents, 41,440 acre-ft, Dec. 23, 1955, elevation, 5,605.55 ft; minimum, 37 acre-ft, Mar. 4–9, 1955, elevation, 5,521.65 ft.

EXTREMES (at 0800 hours) FOR CURRENT YEAR.—Maximum contents, 31,500 acre-ft, Aug. 23, elevation, 5,594.78 ft; minimum, 3,860 acre-ft, Dec. 4, elevation, 5,546.32 ft.

Capacity table (elevation, in feet, and contents in acre-feet)
(Based on table provided by U.S. Bureau of Reclamation, dated November 1970)

5,540	2,356	5,555	6,725	5,580	20,002	5,600	36,128
5,545	3,513	5,560	8,778	5,590	27,488	5,605	40,868
5,550	4,970	5,570	13,768				

RESERVOIR STORAGE, ACRE-FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27400	10300	3960	4820	8870	16200	19300	23500	30000	30800	31000	31300
2	26900	9950	3930	4840	9400	16200	19300	23300	30200	30800	31100	31300
3	26300	9590	e3890	4860	9870	16200	19400	23000	30400	30700	31100	31300
4	25800	9220	3860	4930	10300	16200	19400	22700	30500	30700	31100	31300
5	25300	e8830	3870	5010	10800	16200	19300	22600	30600	30700	31200	31300
6	24800	8440	3940	5090	11300	16100	19200	22600	30600	30700	31200	31200
7	24300	8040	4000	5170	11700	16100	19200	22700	30700	30800	31200	31200
8	23700	7770	4070	5250	12200	16200	19100	22900	30800	30800	31200	31200
9	23100	7830	4130	5300	12600	16200	19000	23100	30900	30800	31200	31100
10	22600	7930	4200	5350	13000	16200	19000	23300	31000	30800	31200	31000
11	22100	7900	4260	5430	13500	16200	19000	23500	31000	30800	31200	30900
12	21500	7790	4330	5500	13900	16300	19000	23600	e31000	30800	31200	30700
13	21000	7610	4400	5580	14300	16500	19100	23800	e31100	30800	31300	30600
14	20400	7430	4460	5660	14600	16700	19200	24000	31100	30800	31300	30400
15	19800	7250	4570	5730	14800	16900	19300	24000	31100	30900	31300	30300
16	19300	7100	4700	5800	15100	17300	19400	24200	31200	30900	31300	30100
17	18700	7020	4800	5880	15300	17500	19500	24500	31200	31000	31300	29900
18	18200	6890	4730	5950	15500	17600	19600	24800	31300	31100	31300	29700
19	17600	6670	4640	6030	15600	17700	19900	25100	31300	31100	31300	29500
20	17000	6420	4620	6100	15700	17900	20200	25400	31300	31100	31300	29300
21	16500	6120	4600	6170	15800	18000	20500	25600	31400	31100	31400	29100
22	15900	5840	4570	6250	15900	18100	20800	26000	31400	31100	31400	28800
23	15300	5570	4540	6350	15900	18300	21200	26400	31400	31200	31500	28600
24	14800	5300	4510	6560	16000	18500	21700	26900	31400	31200	31400	28400
25	14200	5000	4480	6770	16000	18600	22200	27400	31400	31200	31400	28100
26	13600	4690	4450	7000	16100	18800	22700	27900	31300	31100	31400	27900
27	13000	4390	4430	7210	16100	18900	23100	28500	31200	31100	31400	27600
28	12500	4170	4430	7450	16200	19100	23500	29000	31100	31000	31400	27300
29	11900	4030	4550	7660	---	19200	23700	29400	31100	31000	31300	27100
30	11400	3990	4650	8000	---	e19200	23600	29600	31000	31000	31300	26800
31	10800	---	4770	8360	---	19300	---	29800	---	31000	31300	---
MAX	27400	10300	4800	8360	16200	19300	23700	29800	31400	31200	31500	31300
MIN	10800	3990	3860	4820	8870	16100	19000	22600	30000	30700	31000	26800
a	5564.46	5546.80	5549.43	5559.11	5574.13	5578.96	5585.09	5592.90	5594.22	5594.27	5594.62	5589.22
b	-17100	-6810	+780	+3590	+7840	+3100	+4300	+6200	+1200	0	+300	-4500

CAL YR 2002 MAX 40100 MIN 3860 b -1850
WTR YR 2003 MAX 31500 MIN 3860 b -1100

e Estimated.
a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

10344500 LITTLE TRUCKEE RIVER BELOW BOCA DAM, NEAR TRUCKEE, CA

LOCATION.—Lat 39° 23'13", long 120° 05'40", in NE 1/4 NW 1/4 sec.28, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on right bank, 800 ft upstream from mouth, 1,000 ft downstream from Boca Dam, and 6.2 mi northeast of Truckee.

DRAINAGE AREA.—173 mi^2.

PERIOD OF RECORD.—April to October 1890 (monthly discharge only), January 1911 to September 1915, January 1939 to current year. Prior to October 1976 published as "at Boca." Monthly discharge only for January 1939 to September 1957, published in WSP 1734.
WATER TEMPERATURE: Water years 1993–98.

REVISED RECORDS.—WDR CA-79-3: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 5,500 ft above NGVD of 1929, from topographic map. Jan. 1, 1911, to Sept. 30, 1915, nonrecording gage at site 650 ft downstream at different datum. January 1939 to September 1957, records computed from daily log of rated settings of needle valve in dam and from computed flow over spillway.

REMARKS.—Records good. Flow regulated by Boca Reservoir (station 10344490) since 1938, Independence Lake (station 10342900) since 1939, and Stampede Reservoir (station 10344300) since 1969. There is one transmountain diversion to Sierra Valley of about 6,000 acre-ft per year. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,800 ft^3/s, Dec. 24, 1955, from records of Washoe County Water Conservation District; no flow for many days in many years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	284	228	51	31	0.47	34	152	370	0.77	232	45	79
2	297	216	51	31	0.47	34	152	445	0.80	219	45	79
3	306	218	50	17	0.45	34	178	444	0.79	198	36	79
4	305	217	37	2.7	0.45	50	265	397	0.75	188	29	79
5	303	220	12	0.35	0.45	56	297	320	0.71	188	43	79
6	311	237	0.41	0.31	0.43	56	322	259	0.72	188	49	79
7	319	238	0.37	0.28	0.42	50	292	188	0.74	188	49	79
8	320	113	0.35	10	0.42	48	272	182	0.85	188	49	87
9	318	0.54	0.33	15	0.41	40	271	192	0.91	188	49	125
10	317	49	0.33	5.7	0.40	35	271	211	1.3	188	45	145
11	319	91	0.33	0.36	0.40	29	270	216	1.3	188	43	144
12	320	119	0.33	0.33	0.40	15	271	190	1.4	188	43	144
13	320	131	5.2	0.35	0.44	3.4	271	178	1.3	188	43	143
14	320	131	10	0.35	0.43	0.43	272	244	1.4	154	43	143
15	320	131	0.46	0.35	0.42	0.55	272	212	1.4	136	43	143
16	318	107	0.59	0.32	0.47	0.44	273	148	1.4	136	43	158
17	325	108	51	0.30	0.43	0.42	273	130	1.5	126	56	177
18	329	149	79	0.30	0.42	0.38	208	130	1.5	130	65	182
19	329	171	61	0.31	0.42	0.38	175	131	1.6	130	65	182
20	326	192	51	0.32	0.42	0.38	162	131	1.6	131	65	191
21	324	201	51	0.33	0.42	0.38	154	117	1.6	131	65	196
22	329	199	51	0.36	8.4	0.38	136	79	1.7	131	65	196
23	329	197	51	0.47	14	0.39	53	59	21	131	74	196
24	327	195	50	0.47	14	0.39	41	0.50	29	131	81	196
25	324	197	50	0.46	14	0.38	80	0.65	49	131	81	195
26	321	200	50	0.45	14	0.41	104	0.89	95	131	80	194
27	320	167	50	0.46	14	0.39	104	1.1	130	131	80	200
28	324	121	19	0.47	19	0.38	157	1.1	138	118	80	204
29	318	71	0.49	0.46	---	52	269	0.92	207	55	80	203
30	310	51	0.38	0.45	---	83	337	0.77	268	45	79	190
31	296	---	7.9	0.46	---	116	---	0.77	---	45	79	---
TOTAL	9828	4665.54	842.47	121.47	106.44	741.48	6354	4979.70	963.04	4652	1792	4487
MEAN	317	156	27.2	3.92	3.80	23.9	212	161	32.1	150	57.8	150
MAX	329	238	79	31	19	116	337	445	268	232	81	204
MIN	284	0.54	0.33	0.28	0.40	0.38	41	0.50	0.71	45	29	79
AC-FT	19490	9250	1670	241	211	1470	12600	9880	1910	9230	3550	8900

10344500 LITTLE TRUCKEE RIVER BELOW BOCA DAM, NEAR TRUCKEE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1915, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22.8	38.1	29.2	83.4	75.5	196	721	790	582	169	36.5	26.3
MAX	34.2	58.4	39.3	283	173	558	1367	1260	1211	435	66.3	35.7
(WY)	1915	1913	1914	1914	1914	1914	1914	1911	1911	1911	1911	1912
MIN	14.1	28.4	23.2	20.5	28.4	56.3	106	379	212	50.7	20.1	14.4
(WY)	1914	1915	1912	1913	1912	1912	1912	1912	1913	1912	1915	1915

SUMMARY STATISTICS	WATER YEARS 1911 - 1915	
ANNUAL MEAN	193	
HIGHEST ANNUAL MEAN	387	1914
LOWEST ANNUAL MEAN	94.7	1912
HIGHEST DAILY MEAN	2360	Apr 15 1914
LOWEST DAILY MEAN	.00	Sep 26 1911
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 26 1911
ANNUAL RUNOFF (AC-FT)	140100	
10 PERCENT EXCEEDS	800	
50 PERCENT EXCEEDS	49	
90 PERCENT EXCEEDS	16	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1969, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	89.7	106	144	156	160	132	264	426	315	159	146	120
MAX	303	611	856	649	606	442	808	1647	974	389	408	414
(WY)	1968	1951	1951	1965	1963	1967	1952	1952	1967	1967	1958	1952
MIN	.000	.12	.20	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1940	1967	1960	1939	1939	1939	1939	1939	1939	1939	1939	1939

SUMMARY STATISTICS	WATER YEARS 1939 - 1969	
ANNUAL MEAN	190	
HIGHEST ANNUAL MEAN	435	1952
LOWEST ANNUAL MEAN	65.8	1961
HIGHEST DAILY MEAN	5520	Dec 24 1955
LOWEST DAILY MEAN	.00	Jan 1 1939
ANNUAL SEVEN-DAY MINIMUM	.00	Jan 1 1939
MAXIMUM PEAK FLOW	8800	Dec 24 1955
ANNUAL RUNOFF (AC-FT)	137700	
10 PERCENT EXCEEDS	430	
50 PERCENT EXCEEDS	107	
90 PERCENT EXCEEDS	.02	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	113	79.6	94.2	113	88.9	123	275	470	301	203	150	116
MAX	441	327	568	1296	433	522	975	1148	1788	1131	585	418
(WY)	1972	1984	1984	1997	1997	1996	1986	1985	1983	1983	1975	1971
MIN	0.000	0.020	0.11	0.001	1.60	0.13	0.39	0.31	2.63	0.75	13.6	0.55
(WY)	1995	1991	1978	1995	1995	1995	1988	1988	1977	1981	1984	1970

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL TOTAL	62017.72		39533.14			
ANNUAL MEAN	170		108		178	
HIGHEST ANNUAL MEAN					470	1983
LOWEST ANNUAL MEAN					55.6	1992
HIGHEST DAILY MEAN	744	Jun 1	445	May 2	2530	Jan 9 1997
LOWEST DAILY MEAN	0.33	Dec 9	0.28	Jan 7	0.00	Sep 13 1994
ANNUAL SEVEN-DAY MINIMUM	0.35	Dec 6	0.32	Jan 15	0.00	Sep 13 1994
MAXIMUM PEAK FLOW			445	May 1	2720	Jan 8 1997
MAXIMUM PEAK STAGE			3.21	May 1	6.14	Jan 8 1997
ANNUAL RUNOFF (AC-FT)	123000		78410		128800	
10 PERCENT EXCEEDS	406		297		448	
50 PERCENT EXCEEDS	94		71		90	
90 PERCENT EXCEEDS	19		0.41		0.58	

10344505 TRUCKEE RIVER AT BOCA BRIDGE, NEAR TRUCKEE, CA

LOCATION.—Lat 39° 23'07", long 120° 05'12", in SE 1/4 NE 1/4 sec.28, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on right bank, 0.4 mi downstream from mouth of Little Truckee River, 0.7 mi southeast of Boca Dam, 6.5 mi northeast of Truckee, and 10.6 mi north of Kings Beach.

DRAINAGE AREA.—173 mi^2.

PERIOD OF RECORD.—August 2002 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 5,527 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good. Flow regulated by Lake Tahoe and Donner, Martis Creek, and Independence Lakes, and Prosser Creek, Stampede, and Boca Reservoirs (stations 10337000, 10338400, 10339380, 10342900, 10340300, 10344300, and 10344490, respectively), and by several powerplants. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,590 ft^3/s, May 29, 2003, gage height, 7.89 ft; minimum daily, 50 ft^3/s, Dec. 11, 12, 2002.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	450	328	137	290	529	e295	974	821	1120	620	488	491
2	447	314	129	298	514	e287	896	918	1040	610	498	486
3	441	316	120	299	447	e287	837	941	974	625	483	492
4	438	314	103	276	e410	e291	887	951	957	609	468	505
5	432	324	75	273	e376	e292	885	827	902	613	478	512
6	439	342	58	288	e342	e301	890	768	849	623	480	501
7	441	370	54	274	e321	e300	831	677	886	618	480	481
8	439	513	51	276	e304	e297	791	683	872	613	480	486
9	441	450	56	284	e295	e297	851	662	836	617	501	524
10	443	312	53	286	e283	e295	830	665	806	636	496	546
11	440	327	50	284	e275	e299	898	676	747	632	481	547
12	441	342	50	274	e278	e305	932	681	690	629	489	561
13	438	383	66	278	e303	e323	952	747	651	622	492	559
14	437	419	512	280	e317	e404	907	948	616	585	496	545
15	436	419	267	270	e309	542	875	1030	584	583	491	541
16	431	379	206	267	e324	487	818	963	580	580	483	538
17	437	353	247	266	e305	436	782	906	606	626	494	546
18	437	350	248	265	e292	400	697	916	605	636	496	543
19	438	333	220	266	e289	347	629	925	553	634	494	537
20	434	331	266	269	e281	336	615	967	514	632	492	541
21	434	332	341	275	e281	339	612	1060	485	632	521	544
22	440	328	373	287	e283	411	578	1150	456	628	524	541
23	438	322	392	466	e289	634	477	1290	459	641	501	537
24	e435	315	380	573	e290	668	511	1320	437	633	500	536
25	431	310	371	459	e288	698	539	1280	426	627	498	534
26	427	314	316	451	e282	1030	558	1140	442	621	493	530
27	424	267	274	503	e283	974	551	1130	490	621	489	533
28	428	223	348	e661	e277	843	604	1250	504	581	495	534
29	422	164	302	e577	---	824	718	1280	571	492	502	532
30	413	140	269	e520	---	844	782	1340	621	479	505	516
31	398	---	267	498	---	918	---	1210	---	489	502	---
TOTAL	13470	9934	6601	10833	9067	15004	22707	30122	20279	18787	15290	15819
MEAN	435	331	213	349	324	484	757	972	676	606	493	527
MAX	450	513	512	661	529	1030	974	1340	1120	641	524	561
MIN	398	140	50	265	275	287	477	662	426	479	468	481
AC-FT	26720	19700	13090	21490	17980	29760	45040	59750	40220	37260	30330	31380

e Estimated.

10345490 GRAY CREEK NEAR FLORISTON, CA

LOCATION.—Lat 39° 22'22", long 120° 01'49", in NE 1/4 NE 1/4 sec.36, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank, about 400 ft upstream from Truckee River, and about 1.6 mi southwest of Floriston.

DRAINAGE AREA.—17.6 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—November 2001 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 5,420 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair, including estimated daily discharges. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 248 ft^3/s, May 28, 2003, gage height, 3.23 ft, maximum gage height, 3.87 ft, backwater from ice, Jan. 24, 2002; minimum daily, 6.7 ft^3/s, Feb. 6, 2002.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 28	1930	248	3.23

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	e7.7	7.4	e9.0	16	11	22	19	108	23	15	11
2	8.0	e7.7	7.4	8.7	15	e11	20	19	107	22	16	11
3	7.9	e7.7	e7.4	8.8	e14	11	19	19	108	21	15	11
4	8.0	e7.7	e7.6	9.2	e14	11	19	19	109	20	15	11
5	7.9	e7.7	e7.7	9.3	e13	11	18	19	114	19	14	11
6	7.8	e7.7	e8.0	e9.5	e13	10	18	19	111	19	13	10
7	7.7	e7.7	e8.0	e10	e13	11	18	19	103	18	13	10
8	7.7	e8.0	e7.8	e10	e12	11	18	19	112	17	13	10
9	7.6	e8.0	e7.6	9.7	e12	11	19	19	93	17	12	9.6
10	7.7	e8.5	7.4	9.9	e12	11	20	19	88	16	12	9.7
11	7.8	9.0	e7.4	9.5	12	11	20	19	72	16	12	9.4
12	7.8	9.4	e7.4	9.3	11	12	20	22	64	15	12	9.6
13	7.8	9.2	8.0	9.5	11	13	20	27	59	15	11	8.4
14	7.7	8.6	8.4	9.5	11	14	19	36	52	14	11	9.0
15	7.6	8.3	7.9	e9.5	11	18	19	43	45	14	11	9.4
16	7.6	8.2	8.5	e9.5	12	16	19	41	44	15	11	9.2
17	7.6	8.0	e8.5	9.8	e12	15	19	41	43	13	11	9.3
18	7.6	8.5	e8.5	10	e11	14	19	42	39	14	10	9.2
19	7.5	7.9	e8.5	10	11	14	19	41	36	14	11	9.1
20	7.7	8.5	e8.5	10	11	13	19	41	34	17	11	9.3
21	7.7	8.4	8.5	10	e11	13	20	52	32	14	15	9.2
22	7.8	8.3	e8.5	11	11	15	20	64	31	14	14	9.0
23	7.8	8.1	e8.5	16	e11	17	19	81	33	14	13	9.3
24	7.8	7.9	e8.5	16	11	18	19	94	33	14	12	9.4
25	7.7	7.8	e8.5	15	11	18	19	88	32	14	12	9.5
26	7.8	e7.7	e8.5	15	e11	20	19	86	30	13	12	9.5
27	7.8	e7.7	9.4	16	11	e21	19	102	28	13	12	9.5
28	7.7	e7.7	11	17	e11	20	19	124	27	16	12	9.5
29	7.8	e7.5	9.9	16	---	19	19	116	26	16	12	9.4
30	7.7	e7.5	9.2	15	---	20	19	106	23	15	11	9.2
31	e7.7	---	e9.0	16	---	22	---	120	---	15	11	---
TOTAL	240.3	242.6	257.4	353.7	335	452	576	1576	1836	497	385	289.7
MEAN	7.75	8.09	8.30	11.4	12.0	14.6	19.2	50.8	61.2	16.0	12.4	9.66
MAX	8.0	9.4	11	17	16	22	22	124	114	23	16	11
MIN	7.5	7.5	7.4	8.7	11	10	18	19	23	13	10	8.4
AC-FT	477	481	511	702	664	897	1140	3130	3640	986	764	575

e Estimated.

10345490 GRAY CREEK NEAR FLORISTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.75	8.09	7.97	9.70	9.83	11.9	20.6	43.7	48.4	15.5	11.0	8.82
MAX	7.75	8.09	8.30	11.4	12.0	14.6	22.1	50.8	61.2	16.0	12.4	9.66
(WY)	2003	2003	2003	2003	2003	2003	2002	2003	2003	2003	2003	2003
MIN	7.75	8.09	7.63	7.98	7.69	9.15	19.2	36.5	35.5	14.9	9.51	7.98
(WY)	2003	2003	2002	2002	2002	2002	2003	2002	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2002 - 2003	
ANNUAL TOTAL	5343.8		7040.7			
ANNUAL MEAN	14.6		19.3		19.3	
HIGHEST ANNUAL MEAN					19.3	2003
LOWEST ANNUAL MEAN					19.3	2003
HIGHEST DAILY MEAN	68	May 30	124	May 28	124	May 28 2003
LOWEST DAILY MEAN	6.7	Feb 6	7.4	Dec 1	6.7	Feb 6 2002
ANNUAL SEVEN-DAY MINIMUM	7.0	Feb 2	7.5	Nov 28	7.0	Feb 2 2002
MAXIMUM PEAK FLOW			248	May 28	248	May 28 2003
MAXIMUM PEAK STAGE			3.23	May 28	a3.87	Jan 24 2002
ANNUAL RUNOFF (AC-FT)	10600		13970		13970	
10 PERCENT EXCEEDS	31		36		36	
50 PERCENT EXCEEDS	8.6		12		12	
90 PERCENT EXCEEDS	7.5		7.7		7.7	

a Backwater from ice.

10345490 GRAY CREEK NEAR FLORISTON, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—November 2001 to current year.
pH: December 2001 to current year.
SPECIFIC CONDUCTANCE: December 2001 to current year.
WATER TEMPERATURE: December 2001 to current year.
TURBIDITY: December 2001 to current year.
SEDIMENT: November 2001 to current year.

PERIOD OF DAILY RECORD.—December 2001 to current year.
pH: December 2001 to current year.
SPECIFIC CONDUCTANCE: December 2001 to current year.
WATER TEMPERATURE: December 2001 to current year.
TURBIDITY: December 2001 to current year.

INSTRUMENTATION.—Water-quality monitor since December 2001.

REMARKS.—Water temperature records rated excellent, while pH records are rated good. Specific conductance and turbidity records rated fair. Interruptions in record due to malfunction of recording equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.—
pH: Maximum recorded, 8.8 standard units, several days in 2003; minimum recorded, 7.0 standard units, July 20, 2003.
SPECIFIC CONDUCTANCE: Maximum recorded, 257 microsiemens, July 28, 2003; minimum recorded, 15 microsiemens, May 22, 2003.
WATER TEMPERATURE: Maximum recorded, 21.5°C, July 10, 2002, July 21, 29, 2003; minimum recorded, 0.0°C, several days in December 2001 and many days in 2002, 2003.
TURBIDITY: Maximum recorded, >4000 NTU, July, 20, 21, 28, 29, Aug. 21, 2003; minimum recorded, 0.0 NTU, some days in each year.

EXTREMES FOR CURRENT YEAR.—
pH: Maximum recorded, 8.8 standard units, several days; minimum recorded, 7.0 standard units, July 20.
SPECIFIC CONDUCTANCE: Maximum recorded, 257 microsiemens, July 28; minimum recorded, 15 microsiemens, May 22.
WATER TEMPERATURE: Maximum recorded, 21.5°C, July 21, 29; minimum recorded, 0.0°C, many days.
TURBIDITY: Maximum recorded, >4000 NTU, July, 20, 21, 28, 29, Aug. 21, 2003; minimum recorded, 0.0 NTU, several days in October.

> Actual value is known to be greater than value shown.

pH, WATER, UNFILTERED, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.3	8.2	8.3	8.2	8.3	8.2	8.3	8.2	8.7	8.3	8.7	8.3
2	8.3	8.2	8.3	8.2	8.3	8.2	8.4	8.2	8.6	8.3	8.6	8.3
3	8.3	8.2	8.3	8.2	8.3	8.1	8.4	8.2	8.5	8.3	8.7	8.3
4	8.3	8.2	8.3	8.2	8.3	8.2	8.5	8.2	8.5	8.3	8.7	8.3
5	8.3	8.2	8.3	8.1	8.3	8.1	8.4	8.2	8.5	8.3	8.7	8.3
6	8.3	8.2	8.2	8.1	---	---	8.4	8.2	8.5	8.3	8.7	8.3
7	8.3	8.2	8.2	8.1	8.3	8.2	8.4	8.2	8.5	8.3	8.7	8.3
8	8.3	8.2	8.2	8.1	8.3	8.2	8.4	8.2	8.4	8.3	8.8	8.3
9	8.4	8.2	8.2	8.1	8.3	8.2	8.5	8.2	8.4	8.3	8.8	8.3
10	8.4	8.2	8.2	8.1	8.3	8.2	8.6	8.2	8.5	8.3	8.8	8.3
11	8.3	8.2	8.2	8.1	8.3	8.2	8.6	8.2	8.6	8.3	8.8	8.3
12	8.3	8.2	8.3	8.1	8.3	8.2	8.7	8.2	8.6	8.3	8.8	8.3
13	8.3	8.2	8.3	8.2	8.3	8.2	8.7	8.2	8.6	8.3	8.7	8.3
14	8.3	8.2	8.2	8.1	8.3	8.1	8.6	8.2	8.6	8.3	8.7	8.3
15	8.3	8.2	8.3	8.1	8.3	8.1	8.5	8.2	8.6	8.3	8.5	8.3
16	8.3	8.2	8.3	8.1	8.3	8.1	8.5	8.2	8.5	8.3	8.6	8.3
17	8.3	8.2	8.3	8.1	8.2	8.1	8.6	8.2	8.5	8.3	8.6	8.3
18	8.3	8.2	8.3	8.1	8.2	8.1	8.6	8.2	8.5	8.3	8.7	8.3
19	8.3	8.2	8.3	8.1	8.2	8.1	8.6	8.2	8.6	8.3	8.7	8.2
20	8.3	8.2	8.3	8.1	8.2	8.2	8.6	8.2	8.6	8.3	8.7	8.2
21	8.3	8.2	8.3	8.1	8.3	8.2	8.7	8.2	8.6	8.3	8.8	8.2
22	8.3	8.2	8.3	8.1	8.3	8.2	8.8	8.2	8.6	8.3	8.8	8.2
23	8.3	8.2	8.3	8.1	8.2	8.1	8.7	8.2	8.6	8.3	8.7	8.3
24	8.3	8.2	8.3	8.1	8.2	8.1	8.6	8.2	8.7	8.3	8.7	8.3
25	8.3	8.2	8.3	8.2	8.2	8.1	8.6	8.3	8.6	8.3	8.7	8.3
26	8.3	8.2	8.2	8.1	8.3	8.1	8.6	8.3	8.6	8.3	8.5	8.3
27	8.3	8.2	8.2	8.1	8.3	8.2	8.6	8.3	8.7	8.3	---	---
28	8.3	8.2	8.2	8.1	8.4	8.2	8.5	8.3	8.6	8.3	8.6	8.3
29	8.3	8.2	---	---	8.3	8.2	8.6	8.3	---	---	8.6	8.3
30	8.3	8.2	8.2	8.1	8.4	8.2	8.7	8.3	---	---	8.6	8.3
31	8.3	8.2	---	---	8.4	8.2	8.7	8.3	---	---	8.6	8.2
MONTH	8.4	8.2	---	---	---	---	8.8	8.2	8.7	8.3	---	---

10345490 GRAY CREEK NEAR FLORISTON, CA—Continued

pH, WATER, UNFILTERED, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	8.3	8.6	8.3	7.7	7.5	8.2	8.0	8.3	8.2	8.4	8.2
2	8.5	8.3	8.5	8.3	7.7	7.5	8.2	8.0	8.3	8.2	8.4	8.2
3	8.5	8.3	8.6	8.3	7.6	7.5	8.2	8.0	8.3	8.2	8.4	8.2
4	8.5	8.3	8.6	8.3	8.0	7.6	8.2	8.0	8.4	8.2	8.4	8.3
5	8.6	8.3	8.6	8.3	8.0	7.8	8.2	8.0	8.4	8.2	8.4	8.3
6	8.6	8.3	8.5	8.2	8.0	7.8	8.2	8.0	8.4	8.2	8.4	8.2
7	8.7	8.3	8.5	8.2	8.0	7.8	8.2	8.0	8.4	8.2	8.4	8.3
8	8.7	8.3	8.4	8.2	8.0	7.8	8.3	8.0	8.4	8.2	8.4	8.3
9	8.7	8.3	8.4	8.2	8.0	7.8	8.3	8.0	8.4	8.2	8.4	8.3
10	8.6	8.2	8.5	8.2	8.0	7.8	8.3	8.1	8.4	8.2	8.4	8.3
11	8.6	8.3	8.6	8.2	8.0	7.8	8.3	8.1	8.4	8.2	8.4	8.2
12	8.5	8.2	8.5	8.2	8.0	7.9	8.3	8.1	8.4	8.2	8.4	8.2
13	8.4	8.2	8.4	8.1	8.0	7.9	8.3	8.1	8.4	8.2	8.4	8.3
14	8.5	8.3	8.4	8.1	8.0	7.9	8.3	8.1	8.4	8.2	8.4	8.2
15	8.5	8.3	8.3	8.1	8.1	7.9	8.3	8.1	8.4	8.2	8.4	8.2
16	8.5	8.3	8.3	8.1	8.1	7.9	8.3	8.1	8.4	8.2	8.4	8.3
17	8.5	8.3	8.3	8.1	8.1	7.9	8.3	8.1	8.4	8.2	8.4	8.2
18	8.5	8.3	8.3	8.1	8.1	7.9	8.3	8.1	8.4	8.2	8.4	8.2
19	8.5	8.3	8.3	8.1	8.1	7.9	8.3	8.1	8.4	8.2	8.4	8.2
20	8.5	8.3	8.3	8.0	8.1	7.9	8.3	7.0	8.4	8.2	8.4	8.2
21	8.5	8.3	8.3	8.0	8.1	7.9	8.3	7.5	8.3	7.8	8.4	8.2
22	8.4	8.3	8.2	7.9	8.1	7.9	8.3	8.1	8.3	8.1	8.4	8.2
23	8.5	8.3	8.1	7.9	8.1	7.9	8.3	8.1	8.4	8.2	8.4	8.2
24	8.5	8.3	8.1	7.9	8.2	8.0	8.4	8.1	8.4	8.2	8.4	8.2
25	8.5	8.3	8.1	7.9	8.2	8.0	8.3	8.1	8.4	8.2	8.4	8.2
26	8.5	8.3	8.1	7.9	8.2	8.0	8.3	8.1	8.4	8.2	8.4	8.2
27	8.5	8.3	8.1	7.8	8.2	8.0	8.3	8.2	8.4	8.2	8.4	8.2
28	8.5	8.3	8.0	7.6	8.2	8.0	8.4	7.6	8.4	8.2	8.4	8.3
29	8.5	8.3	8.0	7.7	8.2	8.0	8.3	8.1	8.4	8.2	8.4	8.3
30	8.5	8.3	8.0	7.7	8.2	8.0	8.3	8.1	8.4	8.2	8.4	8.3
31	---	---	7.8	7.6	---	---	8.4	8.2	8.4	8.2	---	---
MONTH	8.7	8.2	8.6	7.6	8.2	7.5	8.4	7.0	8.4	7.8	8.4	8.2

10345490 GRAY CREEK NEAR FLORISTON, CA—Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS/C AT 25 DEG. C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	138	137	170	141	155	152	173	162	192	185	191	185
2	148	137	159	139	153	151	170	167	195	190	195	180
3	148	138	155	140	156	150	171	170	197	162	192	178
4	140	133	155	147	154	151	175	171	198	179	191	182
5	135	130	157	138	---	---	179	175	198	177	191	155
6	134	130	142	127	---	---	181	175	201	178	190	186
7	133	131	135	110	151	138	188	174	200	180	190	186
8	132	123	152	88	153	142	183	153	204	179	189	185
9	131	115	157	129	148	142	182	176	194	179	187	184
10	125	116	148	135	153	144	181	178	199	180	187	182
11	119	113	149	145	151	144	182	179	199	193	187	183
12	132	113	148	145	150	142	182	178	197	192	185	178
13	130	116	150	145	148	135	189	178	193	186	181	175
14	123	115	151	150	145	137	186	182	192	190	185	175
15	133	116	151	148	156	141	187	177	193	188	190	163
16	125	118	150	148	156	134	187	151	192	182	196	190
17	140	123	150	148	155	144	186	182	192	186	197	191
18	143	126	150	145	163	155	195	182	192	178	203	189
19	144	135	148	144	165	156	186	183	194	190	203	171
20	146	138	145	135	160	141	187	183	194	190	190	175
21	149	143	143	135	152	147	186	181	195	188	191	176
22	149	146	144	141	153	148	186	181	195	184	188	176
23	149	146	145	143	155	149	185	169	194	181	189	167
24	154	145	147	145	158	149	195	179	193	189	180	162
25	149	146	155	145	156	152	196	194	193	189	174	160
26	149	147	156	144	159	153	197	192	195	177	181	163
27	149	147	153	145	159	152	196	186	190	185	---	---
28	150	148	155	147	169	159	200	189	194	178	---	---
29	157	145	---	---	173	163	202	197	---	---	---	---
30	159	145	158	148	173	167	199	194	---	---	---	---
31	166	143	---	---	173	162	197	190	---	---	---	---
MONTH	166	113	---	---	---	---	202	151	204	162	---	---

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	86	73	112	111	130	125	142	113
2	---	---	---	---	84	72	114	112	125	120	---	---
3	---	---	---	---	83	70	115	113	129	123	---	---
4	---	---	---	---	81	66	116	114	130	126	---	---
5	---	---	---	---	81	67	118	115	130	125	---	---
6	---	---	---	---	82	68	118	116	128	124	---	---
7	---	---	192	173	80	68	119	117	128	124	---	---
8	---	---	196	187	80	64	120	118	130	124	---	---
9	---	---	197	193	79	67	122	119	131	118	---	---
10	---	---	201	194	80	70	123	120	126	114	---	---
11	---	---	200	191	82	73	124	121	128	123	---	---
12	---	---	196	171	84	75	124	122	131	125	---	---
13	---	---	173	137	85	77	125	123	133	122	---	---
14	---	---	141	118	86	80	126	123	128	123	---	---
15	---	---	133	118	88	81	126	124	130	126	---	---
16	---	---	153	114	88	79	126	124	130	125	151	150
17	---	---	141	120	87	79	126	123	132	126	151	148
18	---	---	132	120	87	79	126	124	134	129	151	149
19	---	---	132	114	87	83	127	125	136	130	151	149
20	---	---	127	108	89	86	161	106	135	132	151	148
21	---	---	118	106	92	89	131	103	---	---	151	148
22	---	---	107	15	95	91	131	104	---	---	151	147
23	---	---	112	31	96	93	131	101	---	---	150	148
24	202	197	97	22	101	96	132	118	---	---	153	147
25	203	199	77	24	103	101	133	103	---	---	154	152
26	---	---	70	25	106	103	134	117	---	---	154	152
27	---	---	94	22	108	106	134	130	---	---	154	151
28	---	---	---	---	109	107	257	131	---	---	152	150
29	---	---	---	---	109	108	147	133	147	118	153	151
30	---	---	84	71	111	109	144	130	136	122	153	152
31	---	---	85	72	---	---	132	126	131	113	---	---
MONTH	---	---	---	---	111	64	257	101	---	---	---	---

10345490 GRAY CREEK NEAR FLORISTON, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.5	3.0	0.5	0.0	2.5	0.5	1.0	0.0	5.5	1.5	5.5	0.0
2	8.5	2.5	0.5	0.0	2.5	0.0	4.0	1.0	3.0	0.0	4.5	0.0
3	9.5	1.5	1.5	0.0	1.5	0.0	3.5	1.5	2.5	0.0	4.0	0.0
4	11.0	6.5	2.0	0.0	2.0	0.0	4.0	2.0	1.5	0.0	4.5	0.0
5	11.0	3.5	3.0	0.0	2.5	0.0	3.0	1.0	0.0	0.0	6.5	0.0
6	12.0	4.5	4.0	0.0	---	---	1.5	0.0	0.0	0.0	7.0	0.5
7	12.0	4.5	4.5	2.5	1.5	0.0	1.0	0.0	0.0	0.0	7.0	0.0
8	11.5	4.0	5.0	3.0	0.5	0.0	2.0	0.0	0.0	0.0	7.5	0.0
9	11.5	4.5	4.5	1.5	3.0	0.0	3.5	2.0	0.0	0.0	6.5	0.5
10	12.0	6.0	4.5	2.0	3.5	0.5	4.5	2.0	2.5	0.0	6.5	2.0
11	9.0	3.0	5.0	2.5	2.5	0.0	4.0	1.5	3.5	0.5	8.0	1.5
12	8.5	1.5	6.5	2.0	2.5	0.0	5.0	1.5	3.5	0.5	9.0	2.0
13	9.5	2.5	6.5	3.0	4.5	1.5	5.0	1.5	5.0	2.5	10.0	3.5
14	9.5	3.5	4.5	1.5	4.5	0.0	3.5	0.5	5.5	2.0	7.5	3.0
15	9.5	2.5	4.0	0.5	1.5	0.0	2.0	0.0	5.5	1.5	5.0	1.5
16	9.0	2.5	5.0	1.5	1.5	0.0	2.0	0.0	3.5	0.0	5.0	0.5
17	9.0	2.5	4.0	1.0	0.0	0.0	3.0	0.5	3.0	0.0	4.5	2.0
18	9.0	2.5	3.0	0.0	0.0	0.0	3.0	0.5	3.5	0.0	6.5	0.0
19	8.5	2.0	4.0	0.5	0.0	0.0	3.5	0.5	4.0	1.0	6.5	0.0
20	8.5	2.5	4.5	1.0	0.0	0.0	3.5	0.5	5.0	0.0	8.0	2.0
21	8.0	2.5	5.5	1.5	2.0	0.0	4.5	1.5	4.5	0.0	10.0	1.5
22	8.0	2.0	6.0	3.0	0.0	0.0	5.5	3.0	5.0	0.0	9.5	3.0
23	7.5	2.5	5.5	2.5	0.0	0.0	6.0	3.0	4.5	0.0	7.5	4.0
24	6.5	2.0	4.0	1.0	0.0	0.0	5.0	2.5	5.0	1.5	9.5	3.5
25	6.0	3.0	2.0	0.0	0.0	0.0	5.5	3.0	3.5	1.0	9.0	2.5
26	7.0	2.0	1.0	0.0	2.0	0.0	6.0	3.0	4.0	0.0	7.5	3.5
27	7.0	2.0	0.5	0.0	3.5	2.0	6.0	3.5	3.5	0.0	---	---
28	6.5	2.0	1.0	0.0	4.0	0.0	4.5	2.5	3.0	0.0	8.0	1.0
29	5.5	0.5	---	---	2.0	0.0	4.5	1.5	---	---	9.5	1.5
30	5.5	0.0	1.5	0.0	3.0	0.0	6.0	3.0	---	---	11.0	2.5
31	3.0	0.0	---	---	2.0	0.0	6.0	2.5	---	---	11.0	4.0
MONTH	12.0	0.0	---	---	---	---	6.0	0.0	5.5	0.0	---	---

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.0	2.0	9.5	2.0	12.5	4.5	15.5	7.0	17.0	12.0	18.0	8.0
2	5.0	0.5	7.5	4.5	13.0	5.0	16.0	6.5	14.5	12.5	19.0	8.5
3	6.0	0.0	10.0	4.0	13.0	5.0	16.5	8.0	17.5	10.0	16.5	10.0
4	5.0	0.5	9.5	4.0	13.0	5.5	16.5	6.0	20.0	10.5	16.5	10.0
5	7.5	0.5	12.0	3.0	12.5	5.0	16.5	6.5	18.5	9.0	18.5	10.5
6	4.5	2.0	9.5	3.0	13.0	5.0	16.5	6.5	18.5	8.5	18.0	8.0
7	10.0	1.0	9.0	3.5	13.5	6.0	16.5	6.5	18.0	7.5	16.0	9.0
8	11.5	2.0	6.5	2.5	14.0	6.0	17.0	7.0	18.5	8.0	14.5	8.0
9	11.5	3.0	4.5	2.5	14.0	5.5	18.0	7.5	18.5	7.0	14.0	7.5
10	11.0	3.0	10.0	2.0	13.5	5.0	18.0	8.5	19.0	8.0	14.5	5.5
11	11.0	4.0	12.5	2.5	13.5	5.0	17.5	7.5	18.5	8.0	16.0	6.0
12	8.0	1.5	14.0	3.5	13.5	5.0	17.5	8.0	18.5	7.5	17.0	7.5
13	3.5	0.5	14.0	4.0	13.5	5.5	17.5	8.5	18.5	8.0	14.5	6.5
14	7.0	1.0	13.5	4.5	13.5	4.5	17.5	7.5	19.0	8.5	16.0	6.0
15	7.5	0.0	13.0	4.0	14.0	4.5	17.5	8.0	20.0	10.0	13.0	7.0
16	6.5	1.5	11.5	3.0	15.0	6.5	19.0	9.5	19.5	9.5	14.0	7.0
17	8.5	3.0	12.5	3.5	16.0	7.5	18.5	10.0	20.0	8.5	12.0	4.5
18	9.5	2.5	11.5	2.0	15.0	8.0	19.0	10.5	20.5	10.0	12.5	3.5
19	10.5	1.0	12.0	3.0	14.0	6.0	20.0	12.0	20.5	10.5	15.0	5.0
20	8.0	2.5	13.5	3.5	14.0	6.0	19.0	12.0	18.5	10.0	14.5	5.5
21	7.5	3.0	14.0	4.5	13.5	5.0	21.5	11.5	16.0	13.0	15.0	5.5
22	6.5	2.5	13.5	4.0	13.0	5.0	21.0	11.5	18.0	11.5	15.5	6.0
23	9.0	3.5	13.5	4.5	8.0	5.0	19.0	13.0	19.0	9.0	16.0	6.5
24	6.5	3.5	12.5	5.0	13.5	5.0	20.5	13.0	19.5	9.5	15.5	7.0
25	8.0	2.0	10.5	4.5	14.5	5.0	19.0	11.5	19.5	8.5	15.0	6.5
26	10.0	1.5	12.0	4.5	16.0	6.5	20.0	11.0	18.5	11.5	14.5	5.5
27	9.0	2.5	13.0	5.0	16.5	7.5	19.0	12.0	19.0	9.5	15.5	6.0
28	10.0	2.5	12.5	5.0	17.0	8.5	19.5	11.0	19.0	9.0	15.5	7.0
29	6.5	2.0	11.5	5.5	16.5	8.5	21.5	12.0	18.0	8.0	15.0	7.0
30	7.0	1.5	11.5	5.5	15.5	6.0	21.0	12.0	18.5	7.5	15.0	6.5
31	---	---	12.5	4.5	---	---	21.0	12.5	14.5	9.0	---	---
MONTH	11.5	0.0	14.0	2.0	17.0	4.5	21.5	6.0	20.5	7.0	19.0	3.5

10345490 GRAY CREEK NEAR FLORISTON, CA—Continued

TURBIDITY (NTU), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	6.3	0.1	11	0.1	15	0.8	32	1.0	16	2.1	17	1.0
2	5.4	0.0	21	0.3	10	0.9	9.5	1.4	18	1.3	22	0.8
3	3.7	0.1	6.6	0.3	11	0.7	60	1.1	13	1.6	14	1.2
4	5.4	0.2	19	0.2	5.0	0.7	13	1.2	15	1.5	6.5	0.8
5	9.8	0.2	6.9	0.3	---	---	16	1.2	12	1.2	9.1	0.8
6	20	0.0	8.2	0.8	---	---	37	1.1	9.0	1.2	9.9	0.8
7	7.7	0.0	110	1.1	7.4	0.6	27	0.8	13	1.4	4.8	0.9
8	14	0.0	45	9.7	14	0.4	11	0.9	7.8	1.5	16	1.1
9	2.6	0.0	27	10	67	0.5	20	1.3	12	1.7	6.2	1.1
10	3.8	0.0	29	3.8	4.0	0.8	11	1.2	100	1.9	9.5	1.1
11	5.1	0.0	74	3.8	43	0.6	14	0.9	17	1.5	15	0.9
12	8.9	0.0	19	2.5	5.9	0.8	88	1.0	24	1.5	11	1.3
13	7.2	0.0	11	2.4	11	1.0	22	0.9	17	1.5	17	2.0
14	7.4	0.0	14	2.5	18	1.3	10	0.6	8.5	1.3	18	2.7
15	6.9	0.2	8.5	2.0	18	1.1	14	0.7	13	1.2	120	3.3
16	13	0.0	18	0.8	18	2.0	20	0.7	61	1.4	11	2.3
17	11	0.1	20	1.3	19	1.0	63	0.8	16	1.1	11	2.2
18	5.0	0.0	16	1.0	3.1	0.4	29	1.3	27	0.9	12	2.3
19	5.9	0.4	78	0.9	8.2	0.4	23	1.2	13	1.0	14	1.7
20	6.9	0.2	9.2	1.0	18	0.5	16	1.2	9.3	0.9	10	0.9
21	9.4	0.1	7.7	1.2	24	1.4	18	1.4	21	1.0	13	1.0
22	5.0	0.0	6.4	0.9	8.9	0.6	33	1.1	25	1.1	16	1.2
23	4.9	0.0	8.6	1.0	1.7	0.4	120	7.0	19	0.9	19	2.6
24	10	0.0	18	0.9	2.6	0.5	38	5.0	17	1.0	12	2.1
25	7.7	0.2	8.9	0.8	2.8	0.8	14	2.9	18	1.0	15	1.8
26	9.0	0.1	9.2	0.8	8.9	1.9	22	2.2	16	0.8	99	5.0
27	9.0	0.0	13	0.8	19	1.8	29	2.3	7.0	0.8	---	---
28	3.6	0.0	8.3	0.9	11	1.6	26	3.3	16	0.7	25	3.1
29	4.1	0.1	---	---	20	1.1	13	2.5	---	---	17	2.4
30	6.0	0.5	7.5	0.7	8.9	1.0	12	2.2	---	---	30	3.5
31	13	0.6	---	---	19	1.1	20	1.8	---	---	45	3.9
MONTH	20	0.0	---	---	---	---	120	0.6	100	0.7	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	32	5.0	890	2.7	---	---	14	1.7	200	100	36	20
2	13	2.6	21	2.4	---	---	36	2.1	540	86	46	18
3	27	3.5	22	3.1	---	---	640	1.8	120	62	37	18
4	22	1.7	16	2.2	---	---	56	1.8	81	49	58	15
5	24	1.7	15	2.8	90	24	260	2.1	78	44	310	18
6	20	1.5	20	3.5	65	20	450	1.9	78	30	51	12
7	33	1.5	15	2.9	70	19	1100	1.8	93	28	38	14
8	30	2.9	11	1.9	98	19	560	2.0	57	24	30	13
9	56	3.5	15	2.4	110	22	710	1.9	93	25	24	11
10	35	2.9	36	2.4	78	18	870	1.5	150	24	26	9.0
11	40	2.9	27	3.3	40	15	880	1.6	50	19	34	9.6
12	44	3.9	130	3.3	33	12	460	1.5	51	20	21	9.4
13	18	4.6	290	11	27	11	760	2.0	140	13	30	9.4
14	24	3.5	260	22	22	7.9	500	1.7	34	16	26	9.0
15	58	2.4	160	22	18	9.2	1100	1.7	45	16	22	8.1
16	22	2.3	78	19	37	7.4	1100	1.2	58	12	22	7.2
17	28	2.1	59	14	33	6.4	15	1.1	46	14	25	6.9
18	22	2.2	62	9.8	20	6.5	14	1.2	31	12	59	7.1
19	48	2.4	58	12	28	6.4	10	0.9	36	12	17	6.0
20	43	4.3	240	11	14	5.6	>4000	0.7	28	11	30	6.4
21	130	3.5	510	23	16	4.3	>4000	78	>4000	13	16	4.8
22	17	2.6	930	30	20	4.6	1000	36	2900	170	18	5.5
23	12	2.4	1100	45	24	4.2	360	19	200	95	13	5.3
24	12	3.7	1000	50	20	4.0	78	21	340	67	20	5.0
25	22	1.9	200	44	17	3.0	120	17	160	57	14	5.0
26	49	2.8	160	20	43	2.6	39	14	110	48	20	6.7
27	18	2.4	780	25	12	3.0	30	12	64	42	20	4.1
28	78	3.5	---	---	10	2.1	>4000	10	63	34	16	5.8
29	10	2.9	---	---	9.8	2.9	>4000	250	50	26	16	5.6
30	22	2.3	---	---	9.5	2.0	490	140	46	24	13	4.3
31	---	---	2100	32	---	---	480	95	41	21	---	---
MONTH	130	1.5	---	---	---	---	>4000	0.7	>4000	11	310	4.1

> Actual value is known to be greater than the value shown.

10345490 GRAY CREEK NEAR FLORISTON, CA—Continued

PARTICAL-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)	Suspnd. sediment, falldia dst wat percent <.002mm (70337)	Suspnd. sediment, falldia dst wat percent <.004mm (70338)	Suspnd. sediment, falldia dst wat percent <.008mm (70339)
OCT								
03...	1335	7.3	8.5	1	.02	--	--	--
NOV								
05...	1445	7.7	3.0	4	.08	--	--	--
DEC								
05...	1225	7.3	2.0	3	.06	--	--	--
JAN								
07...	1240	11	.0	7	.21	--	--	--
FEB								
11...	1225	12	2.5	5	.16	--	--	--
MAR								
19...	1430	14	6.5	7	.26	--	--	--
APR								
23...	1215	19	8.0	6	.31	--	--	--
MAY								
21...	1905	75	9.5	1370	277	--	--	--
21...	2030	85	7.5	1310	300	--	--	--
28...	1900	236	8.5	7780	4960	13	14	17
30...	1255	94	10.0	215	55	--	--	--
JUN								
24...	1420	23	12.5	10	.62	--	--	--
JUL								
21...	1415	13	20.5	198	6.9	--	--	--
AUG								
28...	1150	13	15.0	110	3.9	--	--	--

Date	Suspnd. sediment, falldia dst wat percent <.016mm (70340)	Suspnd. sediment, falldia dst wat percent <.031mm (70341)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspnd. sediment, sieve diametr percent <.125mm (70332)	Suspnd. sediment, sieve diametr percent <.25mm (70333)	Suspnd. sediment, sieve diametr percent <.5 mm (70334)	Suspnd. sediment, sieve diametr percent <1 mm (70335)
OCT							
03...	--	--	--	--	--	--	--
NOV							
05...	--	--	--	--	--	--	--
DEC							
05...	--	--	--	--	--	--	--
JAN							
07...	--	--	--	--	--	--	--
FEB							
11...	--	--	--	--	--	--	--
MAR							
19...	--	--	--	--	--	--	--
APR							
23...	--	--	--	--	--	--	--
MAY							
21...	--	--	--	--	--	--	--
21...	--	--	44	56	73	87	100
28...	27	39	49	65	82	94	100
30...	--	--	--	--	--	--	--
JUN							
24...	--	--	--	--	--	--	--
JUL							
21...	--	--	--	--	--	--	--
AUG							
28...	--	--	--	--	--	--	--

10345490 GRAY CREEK NEAR FLORISTON, CA—Continued

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	sample location, feet (81903)	Depth at Sampling depth, feet (00003)	water, unfltrd field, NTU (61028)	Turbidity, unfltrd field, std units (00400)	pH, water, tance, wat unf uS/cm 25 degC (00095)	Specif. conduc- Temperature, water, deg C (00010)
DEC							
05...*	1204	1.10	.80	.7	8.1	160	2.0
05...*	1205	1.30	.80	1.3	8.1	160	2.0
05...*	1206	1.40	.80	1.2	8.1	160	2.0
05...*	1207	1.40	.80	1.7	8.1	160	2.0
05...*	1208	1.50	.80	.9	8.1	160	2.0
05...*	1209	1.50	.80	1.1	8.1	160	2.0
MAY							
21...*	1850	1.10	.80	430	8.0	106	9.6
21...*	1851	1.20	.80	400	8.0	106	9.6
21...*	1852	1.40	.80	440	8.0	105	9.5
21...*	1853	1.60	.80	440	8.0	105	9.5
21...*	1854	1.30	.80	470	8.0	105	9.5
21...*	1855	1.00	.80	440	8.0	106	9.5

* Instantaneous discharge at time of cross-sectional measurement: Dec. 5, 7.3 ft^3/s; May 21, 75 ft^3/s.

10346000 TRUCKEE RIVER AT FARAD, CA

LOCATION.—Lat 39° 25'41", long 120° 01'59", in SE 1/4 NE 1/4 sec.12, T.18 N., R.17 E., Nevada County, Hydrologic Unit 16050102, on left bank, 0.5 mi upstream from Mystic Canyon, 0.7 mi downstream from Farad Powerplant, 2.5 mi north of Floriston, and 3.5 mi upstream from California–Nevada State line.

DRAINAGE AREA.—932 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—March to October 1890 (monthly discharge only), September 1899 to current year. Monthly discharge only for January 1944 to July 1957, published in WSP 1734. Published as "near Boca," March to October 1890, "at or near Nevada–California State Line," September 1899 to August 1912, and as "at Iceland," August 1912 to December 1937.

CHEMICAL DATA: Water years 1951–61, 1964–81. Published as "Truckee River at Floriston" (station 10345900) January 1964 to September 1971.

BIOLOGICAL DATA: Water years 1975–77.

SPECIFIC CONDUCTANCE: Water years 1964–80, 1993–98.

WATER TEMPERATURE: Water years 1964–81, 1993–98.

SUSPENDED SEDIMENT: Water years 1974, 1978.

REVISED RECORDS.—WSP 1714: Drainage area. WDR CA-88-3: 1906–07 (monthly runoff).

GAGE.—Water-stage recorder. Datum of gage is 5,153.21 ft above NGVD of 1929 (U.S. Bureau of Reclamation benchmark). See WSP 2127 for history of changes prior to Aug. 26, 1957.

REMARKS.—Records fair. Flow regulated by Lake Tahoe and Donner, Martis Creek, and Independence Lakes, and Prosser Creek, Stampede, and Boca Reservoirs (stations 10337000, 10338400, 10339380, 10342900, 10340300, 10344300, and 10344490, respectively), and by several powerplants. See schematic diagram of Truckee River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 17,500 ft^3/s, Nov. 21, 1950, gage height, 14.5 ft, present datum, from floodmarks, from slope-area measurement of peak flow; minimum, 37 ft^3/s, Sept. 15, 1933.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	476	359	149	306	541	304	938	773	1180	655	522	500
2	468	341	144	316	538	296	868	859	1110	643	529	495
3	466	342	136	322	481	296	809	882	1050	654	518	495
4	463	340	127	299	424	300	846	899	1020	645	501	509
5	457	348	105	295	389	301	838	805	990	645	498	515
6	458	363	83	303	352	309	843	759	931	652	502	505
7	464	393	81	290	331	309	799	675	948	647	502	489
8	463	520	77	291	314	305	786	679	945	641	504	490
9	463	516	77	303	304	306	811	660	911	645	516	524
10	465	333	79	305	293	304	828	661	883	661	515	545
11	465	351	77	303	285	308	855	670	829	659	502	550
12	464	358	75	293	288	315	891	680	768	652	506	566
13	460	395	79	295	313	335	913	741	725	644	507	563
14	461	432	456	298	328	413	870	901	698	616	512	550
15	460	434	331	289	320	546	841	1000	659	609	507	545
16	457	405	251	285	335	522	795	963	646	607	501	541
17	460	375	253	285	315	468	761	896	674	644	506	547
18	463	372	274	284	301	433	707	902	671	661	510	547
19	461	357	241	286	299	384	637	910	628	659	503	542
20	458	351	261	288	291	364	629	949	585	662	500	545
21	455	352	363	293	291	361	625	1040	556	661	531	550
22	459	349	384	309	293	426	608	1130	529	654	544	544
23	461	344	407	450	298	607	507	1280	528	664	507	541
24	457	334	396	602	299	665	524	1330	514	659	509	539
25	455	326	394	490	298	690	551	1310	494	648	504	539
26	452	332	358	483	291	933	574	1180	504	643	503	540
27	453	295	287	502	293	941	567	1160	538	643	502	540
28	454	245	381	660	287	815	595	1300	553	621	499	542
29	451	185	328	580	---	790	692	1330	592	530	506	538
30	442	150	296	532	---	809	754	1400	654	511	511	533
31	429	---	283	515	---	865	---	1260	---	519	503	---
TOTAL	14220	10597	7233	11352	9392	15020	22262	29984	22313	19654	15780	15969
MEAN	459	353	233	366	335	485	742	967	744	634	509	532
MAX	476	520	456	660	541	941	938	1400	1180	664	544	566
MIN	429	150	75	284	285	296	507	660	494	511	498	489
AC-FT	28210	21020	14350	22520	18630	29790	44160	59470	44260	38980	31300	31670

10346000 TRUCKEE RIVER AT FARAD, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	387	420	531	596	658	800	1268	1714	1261	659	513	470
MAX	982	2469	3596	6115	3254	4073	3887	5674	5214	2921	1084	1482
(WY)	1972	1984	1984	1997	1997	1986	1952	1952	1983	1983	1975	1983
MIN	51.0	55.6	80.4	77.7	85.3	142	369	349	142	53.9	53.9	47.3
(WY)	1978	1991	1991	1991	1933	1933	1977	1934	1931	1931	1931	1933

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1909 - 2003	
ANNUAL TOTAL	198418		193776			
ANNUAL MEAN	544		531		766	
HIGHEST ANNUAL MEAN					2443	1983
LOWEST ANNUAL MEAN					184	1931
HIGHEST DAILY MEAN	1640	Jun 1	1400	May 30	13400	Dec 23 1955
LOWEST DAILY MEAN	75	Dec 12	75	Dec 12	37	Sep 15 1933
ANNUAL SEVEN-DAY MINIMUM	78	Dec 7	78	Dec 7	40	Sep 9 1933
MAXIMUM PEAK FLOW			1600	May 30	17500	Nov 21 1950
MAXIMUM PEAK STAGE			5.22	May 30	14.50	Nov 21 1950
ANNUAL RUNOFF (AC-FT)	393600		384400		555100	
10 PERCENT EXCEEDS	1070		869		1670	
50 PERCENT EXCEEDS	455		504		505	
90 PERCENT EXCEEDS	285		291		207	

10346000 TRUCKEE RIVER AT FARAD, CA—Continued

PRECIPITATION RECORDS

PERIOD OF RECORD.— April 1999 to current year.

INSTRUMENTATION.—Recording-weighing gage.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily precipitation, 2.03 in., Dec. 16, 2002; no precipitation for many days in each year.

EXTREMES FOR CURRENT YEAR.—Maximum daily precipitation, 2.03 in., Dec. 16; no precipitation for many days.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.24	0.07	0.06	0.00	0.00	0.00	0.04	0.00
2	0.04	0.00	0.00	0.00	0.03	0.00	0.20	0.10	0.00	0.00	0.22	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.13	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.20	0.00	0.00	0.00	0.12
5	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.03
6	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.04	0.00
7	0.00	1.45	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	1.13	0.00	0.00	0.00	0.00	0.10	0.06	0.00	0.00	0.00	0.04
9	0.00	0.41	0.00	0.08	0.00	0.00	0.04	0.25	0.00	0.00	0.00	0.00
10	0.00	0.53	0.00	0.17	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.07	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.41	0.00	0.08	0.00	0.96	0.00	0.00	0.04	0.00	0.00
14	0.00	0.00	0.74	0.03	0.03	0.26	0.03	0.00	0.00	0.00	0.00	0.00
15	0.00	0.03	0.72	0.00	0.07	0.77	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	2.03	0.00	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.01	0.00	0.61	0.00	0.00	0.07	0.07	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.26	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.03	0.00
20	0.00	0.00	0.00	0.00	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.17	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.63	0.00
22	0.00	0.00	0.00	0.15	0.00	0.05	0.03	0.00	0.00	0.00	0.15	0.00
23	0.00	0.00	0.00	0.31	0.00	0.13	0.03	0.00	0.03	0.33	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.07	0.03	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.03	0.04	0.00	0.00	0.11	0.00	0.00	0.07	0.00	0.00
26	0.00	0.00	0.03	0.00	0.03	0.13	0.10	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.03	0.04	0.00	0.00	0.00	0.00	0.00	0.03	0.05
28	0.00	0.00	0.23	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00
29	0.03	0.00	0.57	0.00	---	0.00	0.00	0.00	0.03	0.00	0.00	0.00
30	0.00	0.00	0.31	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.58	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.08	3.55	6.69	0.93	1.16	1.77	3.01	1.00	0.06	0.44	1.14	0.24

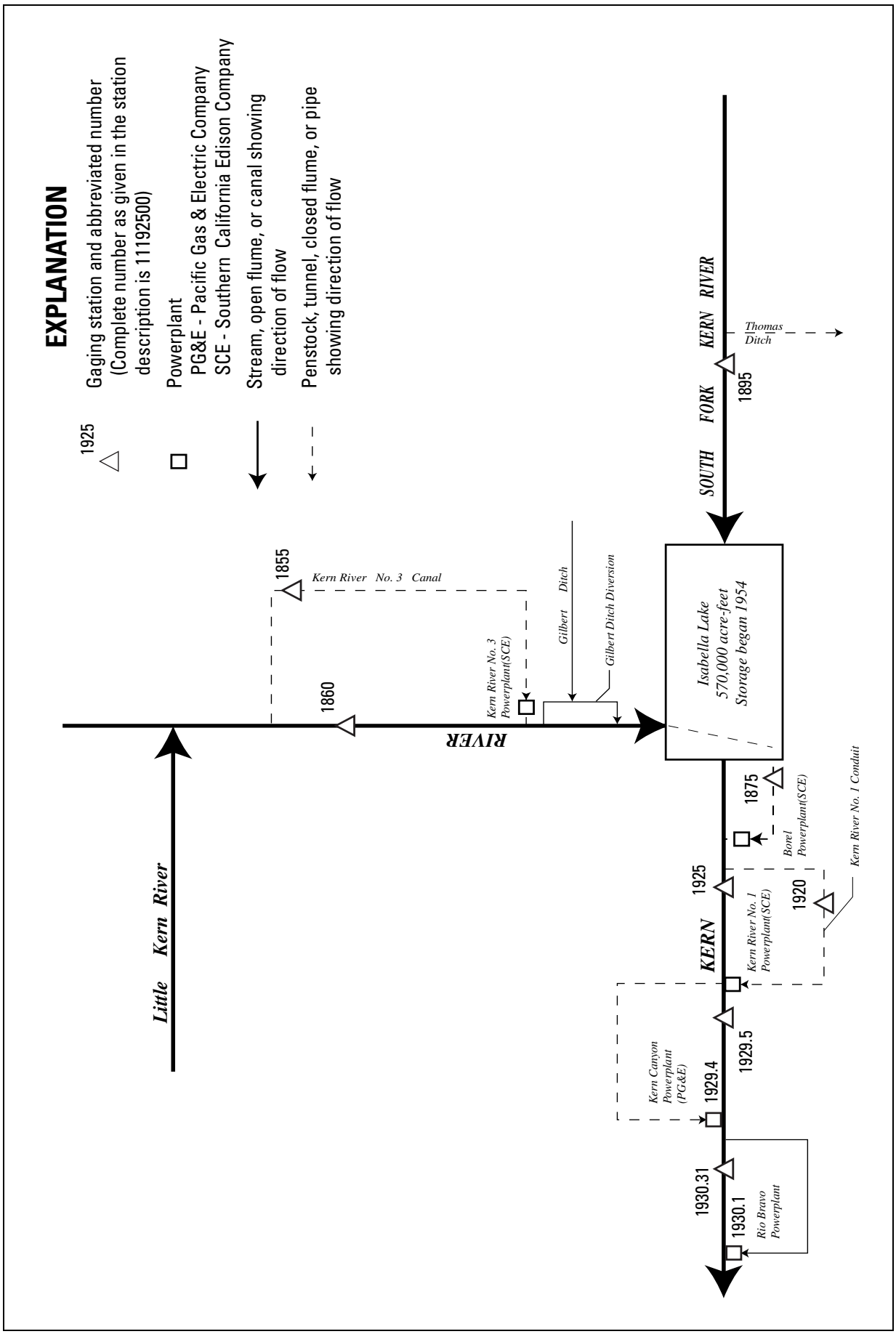


Figure 23. Diversions and storage in Kern River Basin.

BUENA VISTA LAKE BASIN

11186000 KERN RIVER NEAR KERNVILLE, CA

LOCATION.—Lat 35° 56'43", long 118° 28'36", unsurveyed, Tulare County, Hydrologic Unit 18030001, on left bank, at Packsaddle Canyon Creek, 100 ft downstream from diversion dam, and 13.4 mi north of Kernville.

DRAINAGE AREA.—846 mi^2.

PERIOD OF RECORD.—January 1912 to current year. Records for water year 1912 incomplete; yearly estimates published in WSP 1315-A. March 1921 to October 1953, records for river and canal published separately; combined flow only, October 1953 to September 1960.

REVISED RECORDS.—WSP 1445: 1912, 1916(M). WSP 1930: 1914(M), 1918(M).

GAGE.—Water-stage recorder on river; water-stage recorder and rectangular concrete-lined flume for canal diversion. Elevation of gage is 3,620 ft above NGVD of 1929, from topographic map. Prior to Apr. 1, 1913, at site 1.4 mi downstream at different datum. Apr. 1 to Sept. 14, 1913, nonrecording gage, and Sept. 15, 1913, to Sept. 30, 1967, water-stage recorder, at site 1.2 mi downstream at different datum.

REMARKS.—Since 1921, Kern River No. 3 Canal (station 11185500) diverts up to 630 ft^3/s, 100 ft upstream from station, from left bank of Kern River for power development; water is returned to river 15 mi downstream from station. For records of combined discharge of river and canal, see station 11186001. See schematic diagram of Kern River Basin.

COOPERATION.—Records were provided by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2290.

EXTREMES FOR PERIOD OF RECORD.—River only: Maximum discharge, 60,000 ft^3/s, Dec. 6, 1966, gage height, 22.77 ft, site and datum then in use, from floodmarks, from rating curve extended above 6,000 ft^3/s, on basis of computed flow over dam at gage height 17.55 ft (basic data for computation provided by Southern California Edison Co.) and slope-area measurement of peak flow; no flow for many days in 1924 and 1925.

Combined river and diversion: Maximum discharge, 60,000 ft^3/s, Dec. 6, 1966; minimum daily, 76 ft^3/s, Dec. 22, 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e81	47	44	41	53	102	354	176	3030	230	754	227
2	89	43	44	48	64	99	232	287	3190	185	627	233
3	93	43	43	56	50	101	178	301	3280	186	489	418
4	92	42	44	55	52	85	138	317	3350	187	392	462
5	88	50	47	54	50	76	121	320	2780	185	220	356
6	85	46	46	54	49	74	125	409	2400	186	165	307
7	82	44	46	56	49	73	125	471	2170	165	170	247
8	82	5520	47	65	49	72	123	532	1940	150	173	228
9	83	6030	47	60	49	72	124	526	1610	152	176	219
10	81	1600	48	59	49	75	127	429	1570	151	179	203
11	81	877	49	59	51	82	154	368	1530	152	182	196
12	81	671	49	59	85	85	184	303	1380	152	186	195
13	81	570	50	60	178	93	189	317	1230	152	187	185
14	81	525	50	59	144	102	224	423	1360	153	186	183
15	78	381	53	60	106	677	182	496	1500	153	184	177
16	77	346	301	61	101	640	157	589	1300	155	185	160
17	80	326	435	61	93	391	151	747	1100	154	187	150
18	82	304	193	60	77	313	145	771	1020	155	172	155
19	81	297	126	61	68	285	146	899	971	155	154	155
20	81	184	105	58	60	273	147	1010	831	162	170	153
21	81	47	74	52	55	260	136	1170	670	163	281	134
22	82	55	69	51	52	265	126	1540	583	158	273	112
23	84	57	68	51	52	287	129	1830	472	156	261	116
24	86	57	64	50	53	287	131	1910	347	159	219	136
25	84	60	59	51	62	289	133	2230	270	157	433	129
26	85	53	53	51	56	297	135	2330	248	157	644	131
27	85	46	47	52	56	343	137	2610	258	157	660	133
28	86	45	47	53	61	336	139	3160	278	154	463	136
29	86	45	46	49	---	336	154	3510	295	158	324	138
30	87	44	44	49	---	357	113	3460	293	300	265	147
31	83	---	43	50	---	408	---	3190	---	460	238	---
TOTAL	2588	18455	2481	1705	1924	7235	4659	36631	41256	5499	9199	5921
MEAN	83.5	615	80.0	55.0	68.7	233	155	1182	1375	177	297	197
MAX	93	6030	435	65	178	677	354	3510	3350	460	754	462
MIN	77	42	43	41	49	72	113	176	248	150	154	112
AC-FT	5130	36610	4920	3380	3820	14350	9240	72660	81830	10910	18250	11740

e Estimated.

BUENA VISTA LAKE BASIN

11186000 KERN RIVER NEAR KERNVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	63.0	68.4	124	173	149	264	582	1484	1595	725	217	112
MAX	197	615	2488	2619	967	1480	2631	5874	6819	3482	1583	538
(WY)	1983	2003	1967	1997	1986	1986	1969	1969	1983	1983	1983	1982
MIN	2.01	1.36	0.98	2.01	1.51	1.84	1.93	6.68	7.22	2.66	12.5	2.70
(WY)	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1961	1963

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1961 - 2003	
ANNUAL TOTAL	79785		137553			
ANNUAL MEAN	219		377		464	
HIGHEST ANNUAL MEAN					1727	1969
LOWEST ANNUAL MEAN					3.65	1961
HIGHEST DAILY MEAN	6030	Nov 9	6030	Nov 9	33600	Dec 6 1966
LOWEST DAILY MEAN	42	Nov 4	41	Jan 1	0.20	Dec 16 1960
ANNUAL SEVEN-DAY MINIMUM	44	Nov 28	44	Nov 28	0.26	Dec 12 1960
MAXIMUM PEAK FLOW	13400	Nov 8	13400	Nov 8	60000	Dec 6 1966
MAXIMUM PEAK STAGE	24.39	Nov 8	24.39	Nov 8	22.77	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	158300		272800		336100	
10 PERCENT EXCEEDS	490		849		1450	
50 PERCENT EXCEEDS	85		152		83	
90 PERCENT EXCEEDS	47		49		29	

BUENA VISTA LAKE BASIN

11186001 KERN RIVER NEAR KERNVILLE, CA—Continued

KERN RIVER AND KERN RIVER NO. 3 CANAL NEAR KERNVILLE, CA

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	129	293	288	365	345	773	630	3420	811	783	245
2	133	129	280	308	372	340	817	629	3540	749	655	243
3	138	129	271	315	354	338	763	765	3630	707	517	433
4	140	128	263	331	343	346	724	886	3660	682	416	484
5	140	128	259	340	333	334	677	793	3240	668	388	362
6	137	127	258	342	318	333	627	760	2980	667	371	314
7	132	133	254	353	304	335	615	822	2750	662	339	264
8	128	5610	247	369	298	336	632	919	2520	630	312	238
9	127	6030	242	363	302	334	652	973	2190	582	290	229
10	126	1600	242	354	302	336	690	885	2150	549	275	220
11	127	879	239	348	312	343	744	838	2110	537	264	214
12	127	673	234	334	374	367	770	850	1960	515	253	203
13	126	572	236	333	490	394	774	905	1810	484	244	206
14	126	549	238	331	461	421	811	1010	1760	468	236	204
15	124	457	300	324	423	993	766	1040	1800	457	237	194
16	124	397	474	320	418	950	745	1170	1770	440	239	190
17	125	374	437	327	410	701	713	1330	1680	433	241	198
18	126	338	313	325	395	622	659	1350	1600	449	239	189
19	125	304	305	332	386	594	636	1440	1550	460	235	170
20	125	318	353	340	378	584	632	1560	1410	501	236	156
21	125	362	319	344	373	568	640	1760	1250	463	296	153
22	127	355	311	341	367	575	647	2120	1160	429	285	153
23	128	345	289	339	367	597	632	2410	1050	423	264	161
24	130	335	262	341	365	597	635	2490	930	425	236	165
25	129	325	278	341	380	599	642	2810	849	423	458	167
26	130	307	296	344	373	607	648	2910	828	426	649	167
27	131	301	286	355	362	650	658	3190	840	404	664	169
28	132	290	299	362	350	630	678	3650	860	412	468	172
29	132	285	305	349	---	626	672	3930	875	448	328	175
30	132	290	274	342	---	648	688	3840	873	441	268	165
31	132	---	320	351	---	703	---	3570	---	490	249	---
TOTAL	4009	22199	8977	10486	10275	16146	20760	52235	57045	16235	10935	6603
MEAN	129	740	290	338	367	521	692	1685	1902	524	353	220
MAX	140	6030	474	369	490	993	817	3930	3660	811	783	484
MIN	124	127	234	288	298	333	615	629	828	404	235	153
AC-FT	7950	44030	17810	20800	20380	32030	41180	103600	113100	32200	21690	13100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

MEAN	241	275	355	455	505	691	1108	2050	2143	1132	494	301
MAX	634	740	2696	3161	1524	2075	3235	6475	7401	4059	2175	934
(WY)	1983	2003	1967	1997	1980	1986	1969	1969	1983	1983	1983	1978
MIN	106	112	109	121	120	181	333	373	303	133	114	100
(WY)	1962	1991	1991	1991	1991	1977	1976	1977	1976	1961	1990	1990

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1961 - 2003	
ANNUAL TOTAL	174717		235905			
ANNUAL MEAN	479		646		813	
HIGHEST ANNUAL MEAN					2264	1983
LOWEST ANNUAL MEAN					228	1961
HIGHEST DAILY MEAN	6030	Nov 9	6030	Nov 9	33600	Dec 6 1966
LOWEST DAILY MEAN	110	Sep 26	124	Oct 15	76	Dec 22 1990
ANNUAL SEVEN-DAY MINIMUM	115	Sep 21	125	Oct 15	84	Sep 11 1990
ANNUAL RUNOFF (AC-FT)	346600		467900		589200	
10 PERCENT EXCEEDS	998		1370		2040	
50 PERCENT EXCEEDS	304		365		380	
90 PERCENT EXCEEDS	125		139		156	

11187500 BOREL CANAL BELOW ISABELLA DAM, CA

LOCATION.—Lat 35° 38'32", long 118° 28'09", in SW 1/4 NE 1/4 sec.30, T.26 S., R.33 E., Kern County, Hydrologic Unit 18030003, on right bank, 500 ft downstream from Isabella Dam, and 3 mi upstream from point where canal crosses Erskine Creek.

PERIOD OF RECORD.—January 1910 to September 1914, October 1925 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "Kern River Power Co.'s Canal" at or near Kernville, 1910–14. Published as "at Tillie Creek," 1925–51.

GAGE.—Water-stage recorder and concrete-lined channel with Ogee weir and AVM in syphon pipe 6 mi downstream. Elevation of gage is 2,540 ft above NGVD of 1929, from topographic map. Prior to Apr. 29, 1952, at site 4 mi upstream at different datum.

REMARKS.—Canal diverts from right bank of Kern River 5.5 mi upstream from Isabella Dam and above South Fork Kern River. When contents of Isabella Reservoir are above 110,000 acre-ft, diversion is at the dam. Canal is used to supply Borel Powerplant of Southern California Edison Co., 6 mi downstream from station, at which point water is returned to the Kern River. See schematic diagram of Kern River Basin.

COOPERATION.—Records were provided by Southern California Edison Co., under the general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 382.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 634 ft^3/s, Mar. 13, 14, 1952; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	0.00	312	394	408	351	457	426	549	572	550	531
2	52	0.00	313	381	425	345	445	394	555	571	549	535
3	48	0.00	312	357	440	331	432	341	559	568	543	514
4	44	0.00	303	387	434	331	434	340	558	569	540	506
5	43	31	298	442	456	331	428	377	555	569	539	534
6	40	115	287	453	456	340	424	412	564	569	538	530
7	29	127	275	458	444	364	428	381	565	557	536	526
8	33	60	275	458	407	383	429	366	561	544	535	526
9	28	0.71	268	459	376	385	436	266	561	548	533	528
10	23	165	260	458	367	375	424	340	568	550	532	523
11	18	326	285	458	344	365	385	341	569	552	534	525
12	15	453	320	458	354	376	358	365	566	551	534	520
13	13	364	313	448	473	377	354	425	559	548	537	492
14	9.8	19	288	426	404	395	362	523	559	549	538	489
15	6.9	19	306	405	181	406	361	578	563	552	531	527
16	3.8	19	368	384	181	381	360	575	564	550	532	533
17	1.6	19	427	372	193	370	360	573	563	545	533	527
18	0.63	230	436	372	248	371	355	574	568	546	532	523
19	0.19	350	419	390	283	371	353	566	569	548	532	505
20	0.00	352	436	402	262	368	353	561	569	545	521	473
21	0.00	353	459	409	229	347	353	560	570	549	507	493
22	0.00	355	431	423	230	326	354	561	573	551	539	539
23	0.00	353	393	406	231	330	353	561	571	548	531	539
24	0.00	352	372	385	206	349	352	563	570	554	526	542
25	0.00	353	358	387	165	375	353	561	571	553	528	547
26	0.00	354	357	387	242	396	352	556	571	550	531	532
27	0.00	353	357	405	290	399	352	555	571	553	533	492
28	0.00	354	357	431	327	373	349	554	570	553	533	467
29	0.00	336	357	428	---	348	423	557	572	551	533	466
30	0.00	311	358	407	---	347	459	558	572	550	531	459
31	0.00	---	372	399	---	384	---	553	---	548	530	---
TOTAL	464.92	6123.71	10672	12829	9056	11290	11638	14863	16955	17163	16541	15443
MEAN	15.0	204	344	414	323	364	388	479	565	554	534	515
MAX	56	453	459	459	473	406	459	578	573	572	550	547
MIN	0.00	0.00	260	357	165	326	349	266	549	544	507	459
AC-FT	922	12150	21170	25450	17960	22390	23080	29480	33630	34040	32810	30630

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 2003, BY WATER YEAR (WY)

MEAN	243	238	268	306	383	461	506	520	538	490	403	304
MAX	588	584	576	584	590	611	605	607	614	605	607	586
(WY)	1979	1984	1951	1984	1984	1985	1984	1989	1989	1985	1952	1993
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.23	2.25	0.000	0.000
(WY)	1973	1946	1973	1952	1951	1973	1990	1914	1914	1990	1972	1931

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1910 - 2003	
ANNUAL TOTAL	131217.63		143038.63			
ANNUAL MEAN	360		392		387	
HIGHEST ANNUAL MEAN					585	1984
LOWEST ANNUAL MEAN					106	1990
HIGHEST DAILY MEAN	559	May 10	578	May 15	634	Mar 13 1952
LOWEST DAILY MEAN	0.00	Oct 20	0.00	Oct 20	0.00	Oct 23 1910
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 20	0.00	Oct 20	0.00	May 24 1912
ANNUAL RUNOFF (AC-FT)	260300		283700		280700	
10 PERCENT EXCEEDS	536		561		586	
50 PERCENT EXCEEDS	404		409		438	
90 PERCENT EXCEEDS	42		42		126	

11189500 SOUTH FORK KERN RIVER NEAR ONYX, CA

LOCATION.—Lat 35° 44'15", long 118° 10'22", unsurveyed, T.25 S., R.35 E., Kern County, Hydrologic Unit 18030002, on left bank, 0.8 mi north of State Highway 178, 1.6 mi upstream from Canebrake Creek, and 5 mi northeast of Onyx.

DRAINAGE AREA.—530 mi^2.

PERIOD OF RECORD.—September 1911 to August 1914, January 1919 to September 1942, October 1947 to June 1994, July 1995 to current year. Yearly estimate for water year 1927 (incomplete) and monthly discharges for incomplete water years 1914, 1919, 1926, 1928, 1929, published in WSP 1315-A.

REVISED RECORDS.—WSP 1151: 1948(M). WSP 1445: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 2,900 ft above NGVD of 1929, from topographic map. Sept. 12, 1911, to Aug. 31, 1914, nonrecording gage, and Jan. 23, 1919, to Apr. 17, 1936, water-stage recorder, 140 ft upstream at datum 2.88 ft lower. Apr. 18, 1936, to September 1942, and October 1947 to Feb. 8, 1967, at datum 6.88 ft higher. Feb. 9, 1967, to May 31, 1972, at datum 2.00 ft higher.

REMARKS.—Records fair. Lowell and Thomas Ditches divert upstream from station for irrigation downstream of station, combined capacity, 15 ft^3/s. See schematic diagram of Kern River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 28,700 ft^3/s, Dec. 6, 1966, gage height, 18.9 ft, from floodmarks, present datum, from rating curve extended above 3,000 ft^3/s, on basis of slope-area measurement of peak flow; no flow for several days in 1929, 1934, 1960–61.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 8	1830	6,470	10.58	May 5	2200	249	5.08
Mar. 15	1630	609	6.08				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	9.9	67	60	73	81	297	151	148	25	21	15
2	6.0	9.9	64	60	76	83	302	153	140	24	27	15
3	7.4	9.8	58	69	70	78	262	180	132	23	31	13
4	7.9	9.9	54	82	69	80	242	214	125	21	27	25
5	8.0	9.8	52	86	68	76	219	217	121	21	20	25
6	8.1	9.4	52	88	61	72	203	231	117	19	17	24
7	7.8	9.8	53	89	59	73	197	212	111	19	14	21
8	7.5	2090	52	94	57	72	201	194	103	17	13	17
9	7.2	3300	48	94	56	74	213	190	94	16	11	15
10	6.9	948	47	95	57	75	220	185	84	15	10	14
11	6.9	392	47	89	65	79	228	177	78	14	9.7	13
12	6.9	255	45	85	94	86	230	170	72	14	9.1	12
13	7.0	200	45	81	143	96	221	169	67	13	8.3	11
14	7.1	170	48	79	141	113	238	172	63	12	7.8	10
15	7.3	146	53	74	128	334	232	179	59	11	7.7	8.8
16	7.5	128	60	71	119	341	215	182	54	9.8	7.5	7.8
17	7.8	116	67	71	113	254	206	183	51	9.5	7.5	7.7
18	8.2	108	57	72	102	224	192	184	47	9.4	7.4	7.7
19	8.0	96	50	71	97	198	180	183	44	11	7.1	7.6
20	7.8	89	56	71	93	184	172	181	43	18	6.9	7.6
21	8.0	85	53	72	89	179	171	180	42	17	24	7.5
22	8.0	80	52	72	88	181	173	179	40	14	25	7.5
23	8.3	77	47	72	88	201	168	179	38	13	18	7.5
24	8.6	74	47	72	87	215	163	180	37	13	15	7.5
25	8.6	70	53	72	96	224	162	186	35	12	14	7.7
26	9.0	63	60	72	95	243	161	186	33	11	30	7.5
27	9.2	55	56	71	89	309	157	178	32	12	28	7.4
28	9.4	52	63	71	85	320	159	171	30	14	22	7.5
29	9.4	53	65	70	---	275	157	167	28	17	19	7.7
30	9.8	66	56	68	---	262	152	163	27	17	18	7.8
31	9.9	---	66	69	---	278	---	157	---	18	16	---
TOTAL	244.9	8781.5	1693	2362	2458	5360	6093	5633	2095	479.7	499.0	352.8
MEAN	7.90	293	54.6	76.2	87.8	173	203	182	69.8	15.5	16.1	11.8
MAX	9.9	3300	67	95	143	341	302	231	148	25	31	25
MIN	5.4	9.4	45	60	56	72	152	151	27	9.4	6.9	7.4
AC-FT	486	17420	3360	4690	4880	10630	12090	11170	4160	951	990	700

11189500 SOUTH FORK KERN RIVER NEAR ONYX, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.1	39.5	57.2	66.0	95.0	162	348	426	171	49.1	23.5	18.8
MAX	98.9	293	942	500	448	686	1583	2896	1311	349	184	90.2
(WY)	1984	2003	1967	1997	1980	1978	1969	1969	1983	1983	1983	1978
MIN	1.00	8.92	12.4	14.0	17.3	24.1	23.4	9.52	1.00	0.19	0.20	0.10
(WY)	1962	1930	1949	1931	1961	1961	1961	1961	1924	1961	1934	1961

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1912 - 2003	
ANNUAL TOTAL	20275.09		36051.9			
ANNUAL MEAN	55.5		98.8		124	
HIGHEST ANNUAL MEAN					605	1969
LOWEST ANNUAL MEAN					11.5	1961
HIGHEST DAILY MEAN	3300	Nov 9	3300	Nov 9	14000	Dec 6 1966
LOWEST DAILY MEAN	0.60	Aug 19	5.4	Oct 1	0.00	Sep 1 1934
ANNUAL SEVEN-DAY MINIMUM	0.62	Aug 16	7.0	Oct 9	0.00	Jul 23 1961
MAXIMUM PEAK FLOW			6470	Nov 8	28700	Dec 6 1966
MAXIMUM PEAK STAGE			10.58	Nov 8	18.90	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	40220		71510		89830	
10 PERCENT EXCEEDS	80		202		287	
50 PERCENT EXCEEDS	40		63		42	
90 PERCENT EXCEEDS	0.81		7.8		7.0	

11192500 KERN RIVER NEAR DEMOCRAT SPRINGS, CA

LOCATION.—Lat 35° 31'15", long 118° 40'34", in NE 1/4 SE 1/4 sec.6, T.28 S., R.31 E., Kern County, Hydrologic Unit 18030003, on left bank, 1.0 mi southwest of Democrat Springs, and 2.1 mi upstream from Cow Creek.

DRAINAGE AREA.—2,258 mi^2.

PERIOD OF RECORD.—July 1950 to current year. Prior to October 1954, records for river and conduit published separately; combined flow only, October 1954 to September 1960.

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder on river; water-stage recorder for conduit diversion. Datum of gage is 1,837.7 ft above NGVD of 1929.

REMARKS.—Kern River No. 1 Conduit (station 11192000) diverts up to about 420 ft^3/s from left bank of Kern River 0.4 mi upstream from station in sec.13, T.28 S., R.30 E., for power development; water is returned to river 10 mi downstream from station. Flow regulated by Isabella Lake 22 mi upstream beginning in 1954. Many diversions upstream from station for irrigation. For records of combined discharge of river and conduit, see station 11192501. See schematic diagram of Kern River Basin.

COOPERATION.—Records were provided by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2290.

EXTREMES FOR PERIOD OF RECORD.—River only, prior to regulation by Isabella Lake in 1954: Maximum discharge, 40,000 ft^3/s, Nov. 19, 1950, gage height, 30.7 ft, from rating curve extended above 8,700 ft^3/s, on basis of computation of peak flow over dam (basic data for computation provided by Southern California Edison Co.); minimum daily, 0.7 ft^3/s, Nov. 17–19, 1951. Since regulation by Isabella Lake: Maximum discharge, 10,100 ft^3/s, Dec. 6, 1966, gage height, 18.55 ft; no flow May 26–28, 1977.

Combined flow, prior to regulation by Isabella Lake: Maximum discharge, 40,000 ft^3/s, Nov. 19, 1950; minimum daily, 123 ft^3/s, Sept. 22, 1951. Since regulation by Isabella Lake: Maximum discharge, 10,100 ft^3/s, Dec. 6, 1966; minimum daily, 10 ft^3/s, Dec. 17, 1968.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	19	342	101	430	89	150	143	767	1010	913	426
2	27	19	344	100	454	152	159	139	834	1080	832	413
3	25	19	344	57	459	123	141	51	873	1110	741	480
4	24	19	341	303	466	76	140	60	922	1070	785	498
5	24	19	329	469	499	29	135	60	911	964	764	501
6	24	19	326	476	498	23	123	152	996	851	726	399
7	24	19	309	488	495	32	125	96	862	1020	698	356
8	23	22	310	489	456	73	124	96	822	1060	663	405
9	23	208	306	488	408	74	127	47	1090	1040	565	349
10	23	40	292	488	404	72	142	67	1090	985	553	366
11	23	59	293	485	381	43	79	53	1050	987	754	349
12	23	83	348	484	379	62	58	53	1040	913	928	318
13	23	258	349	484	494	66	29	127	935	1090	947	264
14	22	71	334	461	555	67	45	197	791	1280	951	233
15	22	50	299	440	236	136	44	280	828	1310	1030	272
16	24	50	270	420	217	103	52	321	975	1280	853	296
17	24	51	144	401	217	74	49	300	1000	1340	866	311
18	23	60	186	400	249	70	51	296	1020	1340	998	274
19	23	49	141	403	312	65	48	444	1110	1280	955	272
20	23	48	164	427	311	61	47	461	1080	1250	988	244
21	24	48	189	427	260	57	46	518	1030	1380	1100	226
22	23	51	179	447	189	25	57	529	1030	1390	1040	286
23	e28	56	109	448	147	22	55	605	1120	1250	792	307
24	e23	54	93	412	151	25	54	576	1060	1110	747	327
25	20	55	56	412	61	58	54	562	1020	1080	758	308
26	20	55	55	414	68	85	52	597	955	971	711	287
27	20	56	51	420	129	108	53	662	936	959	684	250
28	20	54	52	454	128	85	52	732	932	1070	641	219
29	20	56	62	466	---	41	76	796	937	1040	506	218
30	19	230	58	446	---	38	185	901	988	1060	446	210
31	19	---	61	430	---	38	---	776	---	981	366	---
TOTAL	721	1897	6736	12640	9053	2072	2552	10697	29004	34551	24301	9664
MEAN	23.3	63.2	217	408	323	66.8	85.1	345	967	1115	784	322
MAX	38	258	349	489	555	152	185	901	1120	1390	1100	501
MIN	19	19	51	57	61	22	29	47	767	851	366	210
AC-FT	1430	3760	13360	25070	17960	4110	5060	21220	57530	68530	48200	19170

e Estimated.

11192500 KERN RIVER NEAR DEMOCRAT SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	318	242	146	180	297	493	726	986	1497	1460	1041	454
MAX	1455	1298	1052	1967	2046	3289	5306	5512	6446	5712	3435	2115
(WY)	1984	1983	1984	1967	1997	1969	1969	1983	1983	1983	1967	1983
MIN	0.53	0.18	0.13	0.16	2.19	2.37	1.94	1.69	50.5	57.6	53.1	50.4
(WY)	1978	1977	1977	1977	1977	1961	1961	1977	1961	1961	1961	1981

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1961 - 2003	
ANNUAL TOTAL	65834		143888			
ANNUAL MEAN	180		394		655	
HIGHEST ANNUAL MEAN					2837	1983
LOWEST ANNUAL MEAN					23.7	1961
HIGHEST DAILY MEAN	1300	Jul 15	1390	Jul 22	6640	Jun 7 1969
LOWEST DAILY MEAN	15	Apr 29	19	Oct 30	0.00	May 26 1977
ANNUAL SEVEN-DAY MINIMUM	17	Mar 29	19	Oct 30	0.01	May 16 1977
MAXIMUM PEAK FLOW			1430	Jul 23	10100	Dec 6 1966
MAXIMUM PEAK STAGE			9.77	Jul 23	18.55	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	130600		285400		474500	
10 PERCENT EXCEEDS	511		1020		1830	
50 PERCENT EXCEEDS	56		293		248	
90 PERCENT EXCEEDS	19		24		2.3	

11192501 KERN RIVER NEAR DEMOCRAT SPRINGS, CA—Continued

KERN RIVER AND KERN RIVER NO. 1 CONDUIT NEAR DEMOCRAT SPRINGS, CA

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	231	143	344	417	431	381	471	467	1090	1330	1240	735
2	236	144	346	417	455	355	480	462	1160	1400	1160	721
3	225	144	346	374	460	347	463	374	1200	1430	1060	783
4	203	143	342	383	467	340	463	384	1250	1380	1110	805
5	175	152	330	471	500	342	458	384	1240	1280	1080	807
6	173	152	328	478	499	342	447	477	1320	1170	1040	705
7	218	161	310	490	496	359	449	419	1190	1330	1020	662
8	254	224	311	491	457	393	449	420	1150	1370	980	711
9	277	553	307	490	409	394	452	370	1410	1350	882	655
10	282	287	293	490	405	393	467	389	1410	1300	869	671
11	271	370	294	487	382	365	404	375	1370	1300	1070	656
12	237	395	349	486	380	383	383	375	1360	1220	1240	625
13	222	567	350	486	495	384	354	448	1260	1180	1260	571
14	265	384	335	462	556	386	376	517	1120	1280	1260	540
15	262	365	300	442	237	454	380	601	1150	1310	1340	579
16	269	365	418	422	218	420	376	647	1300	1280	1170	602
17	213	365	459	402	218	390	374	625	1320	1340	1180	618
18	211	375	500	402	250	389	376	625	1340	1340	1310	581
19	212	363	456	404	313	385	373	774	1430	1280	1270	579
20	212	363	479	428	312	380	372	784	1400	1250	1290	550
21	217	362	505	428	262	376	371	840	1350	1380	1410	532
22	215	364	496	448	261	344	380	851	1350	1390	1350	593
23	224	368	426	449	261	341	377	928	1440	1440	1100	613
24	224	365	411	413	261	344	374	900	1380	1430	1060	634
25	220	366	374	413	172	376	374	887	1340	1400	1070	615
26	183	365	373	415	214	402	372	923	1280	1290	1020	593
27	174	365	369	421	313	424	373	988	1260	1280	997	556
28	191	364	370	455	334	402	371	1060	1250	1390	953	525
29	193	365	378	467	---	359	398	1120	1260	1360	818	524
30	164	331	374	447	---	356	509	1210	1310	1380	757	516
31	144	---	378	431	---	357	---	1090	---	1300	676	---
TOTAL	6797	9630	11651	13709	10018	11663	12266	20714	38690	41160	34042	18857
MEAN	219	321	376	442	358	376	409	668	1290	1328	1098	629
MAX	282	567	505	491	556	454	509	1210	1440	1440	1410	807
MIN	144	143	293	374	172	340	354	370	1090	1170	676	516
AC-FT	13480	19100	23110	27190	19870	23130	24330	41090	76740	81640	67520	37400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2003, BY WATER YEAR (WY)

MEAN	556	466	399	463	611	819	1053	1334	1864	1782	1352	718
MAX	1835	1689	1432	2338	2439	3644	5695	5922	6850	6110	3824	2501
(WY)	1984	1983	1984	1967	1997	1969	1969	1983	1983	1983	1967	1983
MIN	116	127	131	154	152	221	260	256	311	400	334	127
(WY)	1962	1991	1991	1991	1991	1961	1961	1961	1961	1961	1961	1990

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1955 - 2003	
ANNUAL TOTAL	175828		229197			
ANNUAL MEAN	482		628		953	
HIGHEST ANNUAL MEAN					3173	1983
LOWEST ANNUAL MEAN					246	1961
HIGHEST DAILY MEAN	1300	Jul 15	1440	Jun 23	7030	Jun 7 1969
LOWEST DAILY MEAN	143	Nov 1	143	Nov 1	10	Dec 17 1968
ANNUAL SEVEN-DAY MINIMUM	146	Oct 31	146	Oct 31	12	Dec 11 1968
ANNUAL RUNOFF (AC-FT)	348800		454600		690500	
10 PERCENT EXCEEDS	877		1310		2100	
50 PERCENT EXCEEDS	409		449		598	
90 PERCENT EXCEEDS	235		237		205	

11192950 KERN RIVER BELOW KERN CANYON POWERHOUSE DIVERSION DAM, NEAR BAKERSFIELD, CA

LOCATION.—Lat 35° 27'37", long 118° 46'43", in SE 1/4 SE 1/4 sec.29, T.28 S., R.30 E., Kern County, Hydrologic Unit 18030003, Sequoia National Forest, on right bank, 100 ft downstream of diversion dam, and 16.4 mi northeast of Bakersfield.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—October 1987 to June 1995, October 1995 to September 1996 (low-flow records only to 35 ft^3/s), October 1996 to current year. Prior to October 1996 published as "Kern River Fishwater Release at Kern County Powerhouse Dam, near Bakersfield". Prior to Oct. 1, 1993, at site 100 ft upstream and did not include leakage through diversion dam radial gates. Bypass flow would enter the main channel immediately downstream from the gage.

GAGE.—Water-stage recorder. Elevation of gage is 975 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow regulated at diversion dam 100 ft upstream from gage. Water is diverted upstream of gage to Kern Canyon Powerplant (station 11192940) and returned to the river approximately 5 mi downstream. See schematic diagram of Kern River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 178.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,770 ft^3/s, July 3, 1998, gage height, 7.61 ft; minimum daily, 6 ft^3/s, Dec. 18, 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	209	16	440	418	30	29	476	718	629	98
2	14	16	14	16	462	323	29	29	552	792	565	91
3	15	16	14	16	467	343	29	29	584	830	452	129
4	16	16	14	18	485	331	29	29	647	798	494	182
5	15	16	14	17	493	177	29	29	616	701	478	187
6	15	17	14	16	503	79	29	29	731	535	441	87
7	16	16	14	16	502	39	29	29	598	730	409	64
8	16	16	14	16	476	39	29	29	508	783	367	85
9	15	67	14	16	423	37	28	29	815	763	274	50
10	15	83	14	16	413	31	28	30	814	706	218	45
11	15	17	14	16	388	29	28	30	773	719	431	35
12	15	14	15	16	382	30	28	30	763	627	634	28
13	16	27	14	16	486	30	28	29	686	553	665	27
14	15	14	14	16	588	30	28	29	510	693	634	27
15	15	14	14	16	282	29	28	29	517	738	759	28
16	16	14	20	17	199	29	28	33	696	701	563	28
17	15	14	14	16	199	29	28	29	722	761	547	28
18	16	14	18	17	217	29	28	29	725	761	715	28
19	15	15	15	225	297	29	28	132	828	719	670	28
20	15	14	16	447	306	30	28	143	811	642	669	28
21	16	14	16	446	259	31	28	194	765	904	811	27
22	16	14	16	468	274	29	28	199	744	1270	780	28
23	16	14	16	475	248	30	28	280	845	1360	503	28
24	16	14	16	439	247	30	28	268	792	855	452	28
25	16	14	16	433	205	30	29	245	752	807	471	28
26	16	14	16	432	223	30	29	276	689	760	419	28
27	16	14	16	431	283	29	29	342	662	679	386	28
28	16	14	16	465	341	29	29	442	658	787	342	28
29	16	14	16	476	---	29	29	482	652	746	204	28
30	16	127	16	460	---	29	31	619	712	781	136	28
31	16	---	16	441	---	31	---	487	---	715	61	---
TOTAL	482	689	665	5931	10088	2438	857	4638	20643	23934	15179	1582
MEAN	15.5	23.0	21.5	191	360	78.6	28.6	150	688	772	490	52.7
MAX	16	127	209	476	588	418	31	619	845	1360	811	187
MIN	14	14	14	16	199	29	28	29	476	535	61	27
AC-FT	956	1370	1320	11760	20010	4840	1700	9200	40950	47470	30110	3140
a	9560	15140	19240	14220	0	15540	20240	28740	33790	32090	34780	31220

a Diversion, in acre-feet, to Kern Canyon Powerplant (station 11192940), provided by Pacific Gas and Electric Co.

11192950 KERN RIVER BELOW KERN CANYON POWERHOUSE DIVERSION DAM, NEAR BAKERSFIELD, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	117	107	114	153	246	235	195	346	601	587	372	147
MAX	1134	1093	1212	630	1234	1634	1543	3378	4191	3375	2667	1442
(WY)	1999	1999	1997	1998	1998	1997	1998	1998	1998	1998	1998	1998
MIN	11.5	12.3	14.6	15.6	12.3	12.4	11.2	9.87	10.5	11.2	12.8	12.0
(WY)	1989	1988	1989	1991	1988	1988	1988	1988	1988	1988	1988	1988

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1988 - 2003	
ANNUAL TOTAL	43648		87126			
ANNUAL MEAN	120		239		453	
HIGHEST ANNUAL MEAN					1631	1998
LOWEST ANNUAL MEAN					24.8	1994
HIGHEST DAILY MEAN	669	Jul 15	1360	Jul 23	4520	Jul 5 1998
LOWEST DAILY MEAN	14	Aug 9	14	Oct 2	6.0	Dec 18 1988
ANNUAL SEVEN-DAY MINIMUM	14	Nov 20	14	Nov 20	9.5	May 20 1988
MAXIMUM PEAK FLOW			1680	Jul 23	4770	Jul 3 1998
MAXIMUM PEAK STAGE			5.05	Jul 23	7.61	Jul 3 1998
ANNUAL RUNOFF (AC-FT)	86580		172800		328000	
10 PERCENT EXCEEDS	393		719		1360	
50 PERCENT EXCEEDS	28		30		36	
90 PERCENT EXCEEDS	15		15		17	

11193031 KERN RIVER AT RIO BRAVO POWERPLANT, NEAR BAKERSFIELD, CA

LOCATION.—Lat 35° 25'49", long 118° 49'18", in NE 1/4 SW 1/4 SW 1/4 sec.1, T.29 S., R.29 E., Kern County, Hydrologic Unit 18030012, on left bank, at diversion to Rio Bravo Powerplant, and 15.5 mi northeast of Bakersfield.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—October 1989 to current year.

GAGE.—Water-stage recorder and broad-crested weir; water-stage recorder, Parshall flume and drain gate. Elevation of gage is 678.17 ft above NGVD of 1929.

REMARKS.—Flow regulated by Isabella Lake, capacity, 570,000 acre-ft. Flow at this station has three components which are combined for publication: flow over a broad-crested weir (station 11193020), flow through a Parshall flume (station 11193030) and bypass flow through a sand ejector and drain gate in dam (station 11193032). Water is diverted upstream from weir through a channel to Rio Bravo Powerplant (station 11193010), returning to Kern River about 1 mi downstream. See schematic diagram of Kern River Basin.

COOPERATION.—Records provided by Rio Bravo Hydro Project, under the general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 4129.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge (combined), 5,160 ft^3/s, Feb. 23, 1998; minimum daily, 46 ft^3/s, Feb. 22, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225	139	75	122	66	66	65	64	75	53	84	64
2	211	139	65	128	60	54	72	64	83	62	87	58
3	206	139	65	136	62	59	74	67	86	65	98	57
4	183	134	64	107	63	64	74	70	82	63	78	69
5	163	143	88	138	64	64	74	71	68	75	64	56
6	159	143	291	131	64	63	78	78	89	75	66	57
7	197	152	291	117	65	66	79	82	70	80	60	58
8	239	222	284	117	63	72	76	78	84	64	59	57
9	272	488	277	119	62	78	75	78	101	74	59	60
10	273	360	227	112	64	73	75	86	91	77	66	59
11	267	361	62	112	61	64	78	73	66	65	64	58
12	230	361	57	117	61	60	74	71	88	72	76	55
13	218	547	57	113	62	66	71	71	84	77	72	56
14	261	437	186	114	57	63	77	76	81	65	80	56
15	261	367	76	252	98	66	81	78	81	69	83	60
16	274	374	63	122	204	64	76	76	107	53	76	55
17	190	370	68	120	204	74	75	69	95	69	76	55
18	201	376	69	122	222	81	74	71	70	61	78	59
19	201	383	69	115	299	77	73	76	90	67	85	58
20	201	368	65	125	305	68	74	72	68	84	75	64
21	207	216	70	110	264	68	70	72	64	91	84	60
22	213	63	80	130	277	69	72	72	75	89	65	57
23	213	62	134	125	252	70	72	87	81	147	70	55
24	224	70	122	109	253	68	71	74	56	110	69	57
25	212	71	115	113	210	63	68	71	56	105	80	55
26	179	71	136	112	228	68	68	74	110	118	73	59
27	168	71	139	112	285	72	67	86	61	103	81	60
28	184	71	139	109	305	71	70	59	62	115	68	58
29	184	71	130	54	---	74	72	75	63	92	84	57
30	158	56	133	57	---	66	66	91	55	112	68	63
31	139	---	138	59	---	61	---	76	---	105	70	---
TOTAL	6513	6825	3835	3629	4280	2092	2191	2308	2342	2557	2298	1752
MEAN	210	228	124	117	153	67.5	73.0	74.5	78.1	82.5	74.1	58.4
MAX	274	547	291	252	305	81	81	91	110	147	98	69
MIN	139	56	57	54	57	54	65	59	55	53	59	55
AC-FT	12920	13540	7610	7200	8490	4150	4350	4580	4650	5070	4560	3480
a	0	5440	16600	22080	11030	19600	19880	36650	71090	75150	61620	32890

a Diversion, in acre-feet, through Rio Bravo Powerplant (station 11193010), provided by Rio Bravo Hydro Project.

11193031 KERN RIVER AT RIO BRAVO POWERPLANT, NEAR BAKERSFIELD, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	150	191	221	170	317	297	310	434	583	482	504	204
MAX	283	407	759	348	1762	1639	2014	2009	2705	1943	2665	586
(WY)	2001	1999	1997	1995	1997	1997	1995	1998	1998	1998	1995	1998
MIN	60.5	63.1	57.8	58.8	59.2	59.8	49.5	51.5	51.6	52.1	55.7	58.4
(WY)	1994	1996	1998	1998	1994	1994	1991	1991	1991	1991	2001	2003

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	47324		40622			
ANNUAL MEAN	130		111		327	
HIGHEST ANNUAL MEAN					1056	1995
LOWEST ANNUAL MEAN					106	1994
HIGHEST DAILY MEAN	547	Nov 13	547	Nov 13	3870	Aug 17 1995
LOWEST DAILY MEAN	51	Feb 24	53	Jul 1	46	Feb 22 1996
ANNUAL SEVEN-DAY MINIMUM	53	Jan 1	56	Sep 11	47	Jun 14 1991
MAXIMUM PEAK FLOW			574	Nov 13	5160	Feb 23 1998
ANNUAL RUNOFF (AC-FT)	93870		80570		237000	
10 PERCENT EXCEEDS	286		224		1100	
50 PERCENT EXCEEDS	80		75		87	
90 PERCENT EXCEEDS	60		59		56	

11199500 WHITE RIVER NEAR DUCOR, CA

LOCATION.—Lat 35° 48'36", long 118° 55'03", in NW 1/4 SE 1/4 sec.26, T.24 S., R.28 E., Tulare County, Hydrologic Unit 18030012, on left bank, 0.6 mi upstream from Tyler Gulch, and 9.0 mi southeast of Ducor.

DRAINAGE AREA.—90.6 mi^2.

PERIOD OF RECORD.—October 1942 to September 1953, February 1971 to current year. Monthly discharge only for October 1942 to September 1944, published in WSP 1315-A.

GAGE.—Water-stage recorder. Elevation of gage is 715 ft above NGVD of 1929, from topographic map. October 1942 to September 1946, at site 3,800 ft downstream; October 1946 to September 1953, at site 4,300 ft downstream; and October 1971 to November 1978, at site 4,000 ft downstream, all at different datums. December 1978 to current year at datum 5.00 ft higher.

REMARKS.—Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,720 ft^3/s, Feb. 23, 1998, gage height, 4.53 ft, from rating curve extended above 646 ft^3/s, on basis of slope-area measurement, maximum gage height, 7.49 ft, Feb. 14, 2000; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 30 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 9	1530	283	6.29	Mar. 18	0815	33	5.48
Dec. 17	1015	55	5.51	May 4	1445	275	6.27
Mar. 16	0745	36	5.49	May 9	1300	73	5.70

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	1.8	16	2.8	7.6	10	5.5	4.1	0.00	0.00	0.00
2	0.00	0.00	1.9	16	2.8	7.6	12	5.5	3.5	0.00	0.00	0.00
3	0.00	0.00	1.8	14	3.1	5.7	15	8.6	2.8	0.00	0.00	0.00
4	0.00	0.00	1.9	14	3.5	7.2	15	135	3.0	0.00	0.00	0.00
5	0.00	0.00	1.9	12	3.4	7.5	15	151	3.4	0.00	0.00	0.00
6	0.00	0.00	1.9	12	3.2	6.3	14	102	2.9	0.00	0.00	0.00
7	0.00	0.00	1.9	11	3.1	5.6	14	76	2.7	0.00	0.00	0.00
8	0.00	0.00	1.7	10	2.9	5.0	12	62	2.8	0.00	0.00	0.00
9	0.00	215	1.8	9.6	2.8	4.5	12	60	2.6	0.00	0.00	0.00
10	0.00	77	1.7	8.8	3.0	4.3	14	41	2.3	0.00	0.00	0.00
11	0.00	34	1.7	8.5	3.9	4.8	12	36	e3.1	0.00	0.00	0.00
12	0.00	e10	1.7	6.7	5.4	4.7	12	24	e2.8	0.00	0.00	0.00
13	0.00	e4.2	1.7	5.8	17	4.1	13	18	e2.6	0.00	0.00	0.00
14	0.00	e2.2	1.8	5.0	17	4.2	14	15	e2.3	0.00	0.00	0.00
15	0.00	e1.9	1.9	4.4	11	7.1	14	15	e2.0	0.00	0.00	0.00
16	0.00	1.1	6.8	3.3	8.1	28	14	16	e1.7	0.00	0.00	0.00
17	0.00	0.76	39	2.9	7.2	25	13	15	e1.5	0.00	0.00	0.00
18	0.00	0.83	49	2.9	6.0	29	13	15	1.2	0.00	0.00	0.00
19	0.00	0.92	41	3.3	4.8	28	13	14	1.1	0.00	0.00	0.00
20	0.00	1.1	48	3.0	7.2	24	13	13	1.0	0.00	0.00	0.00
21	0.00	1.2	49	2.8	5.3	21	13	11	1.1	0.00	0.00	0.00
22	0.00	1.1	40	2.5	4.8	20	12	12	1.1	0.00	0.00	0.00
23	0.00	1.2	32	2.5	4.3	19	11	13	0.99	0.00	0.00	0.00
24	0.00	1.3	25	2.8	4.1	19	11	12	0.84	0.00	0.00	0.00
25	0.00	1.7	18	2.9	3.6	17	12	12	0.71	0.00	0.00	0.00
26	0.00	2.0	14	2.8	5.9	15	11	11	0.55	0.00	0.00	0.00
27	0.00	2.1	12	3.0	6.8	16	10	11	0.30	0.00	0.00	0.00
28	0.00	1.9	14	2.9	7.4	15	7.4	8.1	0.14	0.00	0.00	0.00
29	0.00	1.9	19	2.8	---	12	8.8	5.1	0.05	0.00	0.00	0.00
30	0.00	1.9	19	2.9	---	9.7	6.3	4.6	0.00	0.00	0.00	0.00
31	0.00	---	17	2.9	---	9.6	---	5.2	---	0.00	0.00	---
TOTAL	0.00	365.31	469.9	200.0	160.4	393.5	366.5	932.6	55.18	0.00	0.00	0.00
MEAN	0.000	12.2	15.2	6.45	5.73	12.7	12.2	30.1	1.84	0.000	0.000	0.000
MAX	0.00	215	49	16	17	29	15	151	4.1	0.00	0.00	0.00
MIN	0.00	0.00	1.7	2.5	2.8	4.1	6.3	4.6	0.00	0.00	0.00	0.00
AC-FT	0.00	725	932	397	318	781	727	1850	109	0.00	0.00	0.00

e Estimated.

11199500 WHITE RIVER NEAR DUCOR, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.52	2.66	6.72	14.2	20.6	33.5	23.3	13.0	5.06	1.23	0.36	0.29
MAX	8.05	20.6	36.5	97.0	155	260	165	87.9	58.8	20.6	8.30	5.36
(WY)	1984	1984	1984	1997	1998	1943	1998	1998	1998	1998	1983	1998
MIN	0.000	0.000	0.000	0.084	0.76	1.79	0.85	0.19	0.000	0.000	0.000	0.000
(WY)	1943	1943	1948	1949	1991	1977	1977	1992	1950	1947	1943	1943

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1943 - 2003	
ANNUAL TOTAL	3131.70		2943.39			
ANNUAL MEAN	8.58		8.06		10.2	
HIGHEST ANNUAL MEAN					52.0	1998
LOWEST ANNUAL MEAN					0.58	1977
HIGHEST DAILY MEAN	215	Nov 9	215	Nov 9	1320	Mar 9 1943
LOWEST DAILY MEAN	0.00	Jun 12	0.00	Oct 1	0.00	Oct 1 1942
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 12	0.00	Oct 1	0.00	Oct 1 1942
MAXIMUM PEAK FLOW			283	Nov 9	2720	Feb 23 1998
MAXIMUM PEAK STAGE			6.29	Nov 9	7.49	Feb 14 2000
ANNUAL RUNOFF (AC-FT)	6210		5840		7390	
10 PERCENT EXCEEDS	24		17		23	
50 PERCENT EXCEEDS	1.4		2.5		2.2	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

11200800 DEER CREEK NEAR FOUNTAIN SPRINGS, CA

LOCATION.—Lat 35° 56'30", long 118° 49'19", in SE 1/4 NE 1/4 sec.10, T.23 S., R.29 E., Tulare County, Hydrologic Unit 18030005, on left bank, 1.0 mi upstream from Pothole Creek, 6.3 mi northeast of Fountain Springs, and 12 mi east of Terra Bella.

DRAINAGE AREA.—83.3 mi^2.

PERIOD OF RECORD.—August 1968 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 980 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,790 ft^3/s, Jan. 3, 1997, gage height, 10.32 ft, from rating curve extended above 600 ft^3/s on basis of slope-area measurements at gage heights 8.83 ft in gage well, 9.18 ft from floodmarks, and 12.54 ft from floodmarks; no flow for periods in several years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 6, 1966, reached a stage of 12.54 ft, from floodmarks, discharge, 5,330 ft^3/s.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 8	2015	1,750	8.21	May 4	1030	525	5.66

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	2.4	9.6	24	13	21	24	38	29	10	5.7	1.3
2	1.4	2.5	10	21	14	20	28	38	30	9.4	6.2	1.5
3	1.3	2.5	9.8	22	13	19	30	48	27	9.1	4.5	2.1
4	1.3	2.5	9.5	25	13	21	27	306	26	8.4	4.4	2.3
5	1.2	1.7	9.0	25	13	21	28	156	26	6.1	5.0	2.3
6	1.2	2.3	9.5	24	13	20	26	108	25	7.2	5.4	2.1
7	0.92	2.7	8.7	23	12	20	26	94	23	7.9	5.4	1.2
8	0.82	402	8.6	22	12	19	28	89	21	8.2	4.8	1.3
9	1.1	567	8.4	21	12	18	28	87	23	7.3	4.8	1.7
10	1.1	80	8.2	20	12	19	27	77	20	7.6	3.1	2.4
11	0.78	38	8.3	21	13	19	27	73	21	7.0	2.6	2.5
12	1.2	27	8.3	19	17	18	26	68	22	6.6	4.0	2.5
13	1.3	22	8.3	18	28	18	28	65	21	4.9	3.3	2.4
14	1.1	19	8.5	17	24	18	54	62	20	5.8	3.1	1.6
15	0.74	16	9.9	17	21	42	67	60	18	5.9	3.0	1.5
16	0.84	15	15	16	20	50	51	57	18	5.4	3.0	1.5
17	1.0	12	40	16	20	44	48	55	20	5.2	1.9	1.8
18	1.6	13	26	16	18	47	56	53	16	5.0	1.5	2.2
19	1.9	12	19	15	18	40	49	51	16	5.2	2.7	2.4
20	1.9	12	28	15	19	36	45	49	17	3.9	2.6	2.3
21	1.9	11	24	15	18	35	43	47	17	4.2	3.2	1.3
22	1.7	10	20	15	17	33	51	46	14	5.2	4.2	1.0
23	2.0	11	19	14	17	32	46	44	17	5.1	3.6	1.0
24	2.2	9.7	17	14	16	32	46	43	15	5.3	2.3	1.4
25	2.4	11	16	14	17	30	44	40	15	4.7	1.9	1.7
26	2.5	9.4	16	14	23	29	44	41	13	4.1	3.1	1.4
27	2.5	9.2	15	14	24	28	41	38	11	2.8	2.6	1.7
28	2.5	9.2	16	14	24	27	41	37	11	2.8	2.6	1.3
29	2.5	9.1	24	14	---	26	43	34	8.6	4.3	2.4	1.3
30	2.3	9.3	21	13	---	25	40	34	9.8	4.9	2.2	1.9
31	2.3	---	23	13	---	24	---	33	---	6.3	1.5	---
TOTAL	48.60	1350.5	473.6	551	481	851	1162	2071	570.4	185.8	106.6	52.9
MEAN	1.57	45.0	15.3	17.8	17.2	27.5	38.7	66.8	19.0	5.99	3.44	1.76
MAX	2.5	567	40	25	28	50	67	306	30	10	6.2	2.5
MIN	0.74	1.7	8.2	13	12	18	24	33	8.6	2.8	1.5	1.0
AC-FT	96	2680	939	1090	954	1690	2300	4110	1130	369	211	105

11200800 DEER CREEK NEAR FOUNTAIN SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.88	14.2	23.7	53.1	72.5	78.9	66.4	43.1	23.0	9.40	4.18	3.48
MAX	23.5	62.8	145	440	364	443	318	211	153	66.9	32.1	20.1
(WY)	1984	1984	1997	1997	1998	1983	1998	1998	1998	1998	1983	1998
MIN	0.77	3.35	4.88	6.69	4.65	8.38	4.12	2.96	0.71	0.000	0.000	0.000
(WY)	1978	1991	1991	1991	1991	1977	1977	1992	1992	1972	1972	1972

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1968 - 2003	
ANNUAL TOTAL	5715.83		7904.40			
ANNUAL MEAN	15.7		21.7		32.9	
HIGHEST ANNUAL MEAN					143	1983
LOWEST ANNUAL MEAN					4.29	1977
HIGHEST DAILY MEAN	567	Nov 9	567	Nov 9	2080	Jan 3 1997
LOWEST DAILY MEAN	0.00	Aug 8	0.74	Oct 15	0.00	Jun 24 1972
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 8	0.99	Oct 11	0.00	Jun 30 1972
MAXIMUM PEAK FLOW			1750	Nov 8	3790	Jan 3 1997
MAXIMUM PEAK STAGE			8.21	Nov 8	10.32	Jan 3 1997
ANNUAL RUNOFF (AC-FT)	11340		15680		23860	
10 PERCENT EXCEEDS	28		44		73	
50 PERCENT EXCEEDS	10		14		12	
90 PERCENT EXCEEDS	0.00		1.7		0.98	

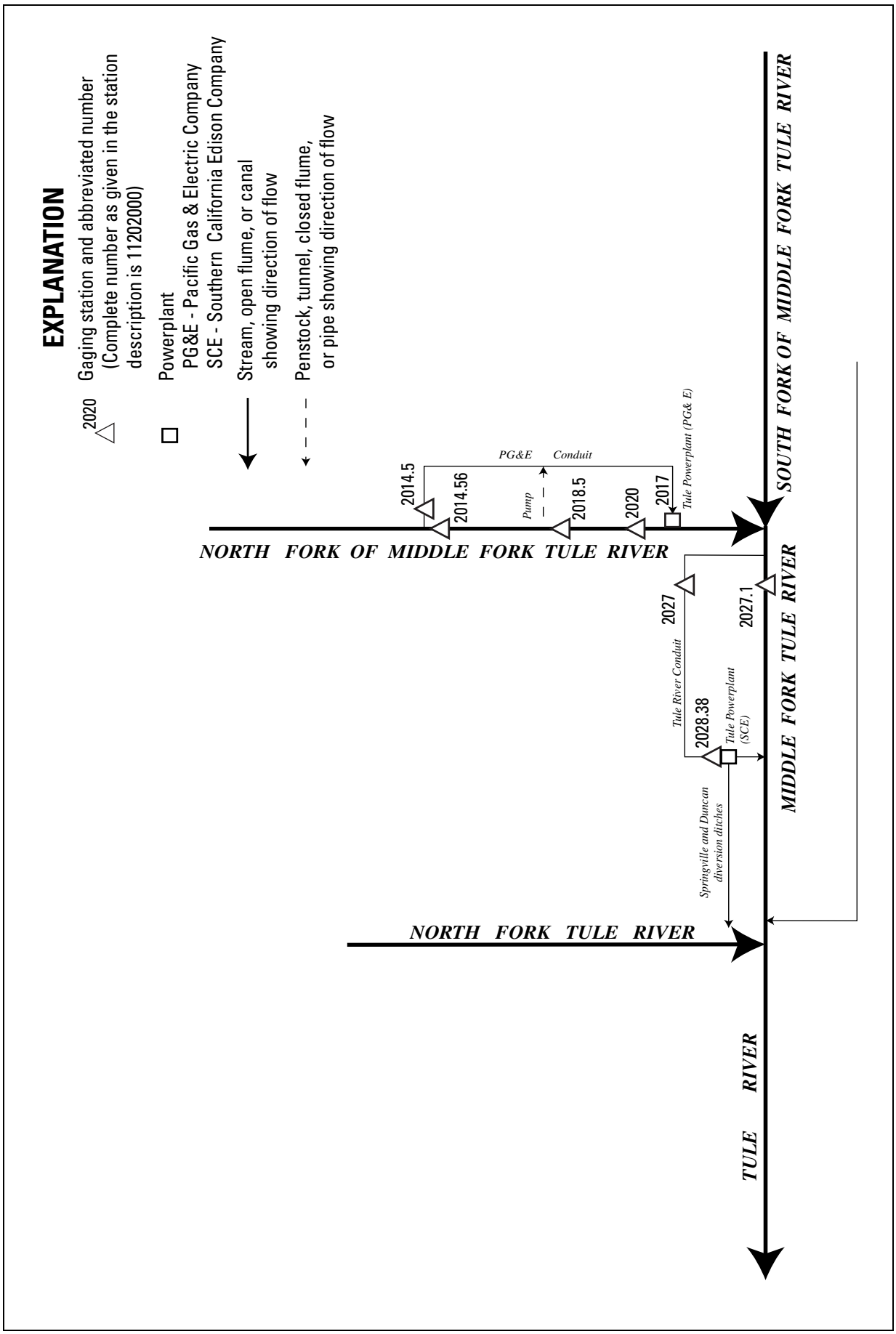


Figure 24. Diversions and storage in Tule River Basin.

11201450 PACIFIC GAS & ELECTRIC CO. TULE RIVER CONDUIT BELOW DIVERSION DAM, NEAR SPRINGVILLE, CA

LOCATION.—Lat 36° 11'32", long 118° 39'24", in SW 1/4 SE 1/4 sec.7, T.20 S., R.31 E., Tulare County, Hydrologic Unit 18030006, on left bank, 75 ft downstream from diversion dam, and 11 mi east of Springville.

PERIOD OF RECORD.—October 1994 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 4,040 ft above NGVD of 1929, from topographic map.

REMARKS.—Water is returned to river 3.6 mi downstream after passing through Tule River Powerplant (station 11201700). See schematic diagram of Tule River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 1333.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 66 ft^3/s, Apr. 28, May 1, 2, 2001, several days in May 2003; minimum daily, 0.10 ft^3/s, Oct. 10, 1999.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	2.8	22	22	28	27	56	53	65	23	14	4.4
2	4.0	2.8	21	24	28	26	58	56	65	23	13	4.3
3	3.3	2.7	20	31	26	26	55	60	65	21	14	5.7
4	2.9	2.6	19	36	25	25	53	65	65	20	12	4.5
5	2.6	2.7	19	38	24	25	51	64	64	19	11	2.4
6	2.4	2.6	18	39	23	26	49	63	64	18	10	2.1
7	2.3	4.7	18	38	22	27	52	63	63	17	9.7	2.1
8	2.6	5.7	17	39	21	29	54	63	62	17	9.2	1.4
9	2.8	0.52	17	36	20	30	55	61	61	16	8.7	0.63
10	2.7	0.25	17	36	20	31	54	61	60	15	8.4	2.4
11	2.8	0.24	16	33	23	32	54	61	58	15	8.3	3.1
12	2.8	0.24	16	31	37	33	53	63	56	14	8.0	3.1
13	2.7	0.33	16	30	46	34	56	64	54	14	7.5	2.9
14	2.7	8.4	17	29	43	36	59	65	50	13	7.2	2.6
15	2.6	10	27	27	39	50	58	65	48	13	7.4	2.6
16	2.7	1.9	32	28	39	35	58	65	47	13	7.2	1.8
17	2.8	1.9	34	29	35	49	58	65	45	12	6.8	2.7
18	2.8	13	26	29	33	59	57	65	43	12	6.6	2.6
19	2.7	32	23	29	32	58	56	65	41	13	6.2	2.4
20	2.6	33	23	30	31	57	55	66	40	13	6.2	2.4
21	2.6	32	20	29	29	56	55	64	38	12	6.6	2.3
22	2.6	30	20	28	29	58	55	63	37	12	6.9	2.2
23	2.8	29	19	27	28	58	55	65	35	12	6.1	2.1
24	2.7	27	18	26	28	57	54	66	33	11	5.7	2.0
25	2.8	26	18	26	30	56	55	66	31	10	5.6	2.0
26	2.7	24	18	27	30	57	56	66	29	10	5.6	1.9
27	3.0	23	19	28	30	57	56	66	28	9.7	5.5	1.9
28	3.0	22	21	27	28	56	56	66	26	11	5.3	1.9
29	2.9	21	21	26	---	55	55	66	25	12	5.1	2.8
30	3.0	22	20	26	---	55	53	65	24	12	4.9	4.0
31	2.9	---	24	27	---	56	---	65	---	16	4.6	---
TOTAL	87.8	384.38	636	931	827	1336	1651	1971	1422	448.7	243.3	79.23
MEAN	2.83	12.8	20.5	30.0	29.5	43.1	55.0	63.6	47.4	14.5	7.85	2.64
MAX	4.0	33	34	39	46	59	59	66	65	23	14	5.7
MIN	2.3	0.24	16	22	20	25	49	53	24	9.7	4.6	0.63
AC-FT	174	762	1260	1850	1640	2650	3270	3910	2820	890	483	157

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

MEAN	5.00	9.72	15.8	24.0	34.0	44.3	54.6	59.0	39.2	22.4	10.5	7.12
MAX	13.5	20.0	50.0	55.0	58.5	59.8	61.1	63.6	62.8	59.3	31.7	19.2
(WY)	1999	1997	1997	1997	1997	1997	1996	2003	1995	1995	1998	1998
MIN	1.68	4.05	4.93	6.48	10.8	22.7	38.9	53.1	13.7	5.27	1.39	1.49
(WY)	2000	1995	2000	2001	2001	1999	1999	2002	2001	2001	2001	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1995 - 2003	
ANNUAL TOTAL	8117.48		10017.41			
ANNUAL MEAN	22.2		27.4		27.1	
HIGHEST ANNUAL MEAN					37.8	1997
LOWEST ANNUAL MEAN					15.9	2001
HIGHEST DAILY MEAN	62	Apr 15	66	May 20	66	Apr 28 2001
LOWEST DAILY MEAN	0.24	Nov 11	0.24	Nov 11	0.10	Oct 10 1999
ANNUAL SEVEN-DAY MINIMUM	1.1	Sep 10	1.7	Nov 7	0.21	Oct 4 1995
ANNUAL RUNOFF (AC-FT)	16100		19870		19620	
10 PERCENT EXCEEDS	54		61		61	
50 PERCENT EXCEEDS	19		24		19	
90 PERCENT EXCEEDS	1.6		2.6		2.7	

11201456 NORTH FORK OF MIDDLE FORK TULE RIVER BELOW DIVERSION DAM, NEAR SPRINGVILLE, CA

LOCATION.—Lat 36° 11'33", long 118° 39'25", in SW 1/4 SE 1/4 sec.7, T.20 S., R.31 E., Tulare County, Hydrologic Unit 18030006, on left bank, 375 ft downstream from diversion dam, 0.3 mi upstream from Hossack Creek, and 11 mi east of Springville.

DRAINAGE AREA.—30.9 mi^2.

PERIOD OF RECORD.—October 1994 to current year (low-flow records only).

GAGE.—Water-stage recorder and sharp-crested V-notch weir in concrete control. Elevation of gage is 4,000 ft above NGVD of 1929, from topographic map.

REMARKS.—No records computed above 80 ft^3/s. Most of the flow is diverted at the diversion dam to Pacific Gas and Electric Co. Tule River Conduit (station 11201450). Water is returned to river 3.6 mi downstream after passing through Tule River Powerplant (station 11201700). See schematic diagram of Tule River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 1333.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	4.9	5.0	8.1	5.0	5.1	21	13	---	7.6	7.9	7.1
2	6.1	4.9	5.0	4.8	5.1	5.0	24	18	---	7.6	7.9	7.1
3	6.1	4.9	4.9	5.2	5.0	5.0	17	28	---	7.7	7.8	7.3
4	5.9	4.9	4.9	5.5	4.9	5.0	14	49	---	7.8	7.8	8.1
5	5.9	4.9	4.9	5.9	4.9	5.0	12	46	61	7.8	7.7	9.1
6	5.9	9.1	4.8	5.9	4.9	5.0	9.9	41	50	7.7	7.6	9.0
7	5.9	14	4.8	5.8	4.9	5.1	14	40	42	7.6	7.6	8.9
8	5.5	---	4.8	6.0	4.8	5.1	16	38	35	7.6	7.6	10
9	5.2	---	4.7	5.3	4.8	5.2	17	32	30	7.7	7.6	12
10	5.2	---	4.7	5.3	4.8	5.2	16	30	26	7.8	7.5	9.3
11	5.2	---	4.7	5.1	4.9	5.2	15	35	22	7.8	7.4	8.1
12	5.2	---	4.5	5.1	16	5.2	15	43	18	7.7	7.4	7.9
13	5.2	---	4.5	5.0	14	5.3	21	---	15	7.6	7.4	7.9
14	5.2	---	4.5	5.0	8.3	5.4	25	---	14	7.6	7.4	7.8
15	5.2	64	5.3	5.0	5.9	---	23	---	12	7.6	7.4	7.8
16	5.2	68	7.3	5.0	5.9	---	21	---	10	7.6	7.4	8.7
17	5.2	62	5.1	5.0	5.2	---	22	---	9.0	7.5	7.4	7.8
18	5.2	35	4.4	5.0	5.1	31	19	---	8.5	7.4	7.4	7.8
19	5.2	6.6	4.6	5.0	5.1	27	17	---	8.5	7.5	7.3	7.7
20	5.2	6.0	4.9	5.0	5.1	24	17	---	8.5	7.6	7.2	7.6
21	5.2	5.7	4.8	5.0	5.1	22	18	---	8.5	7.6	7.2	7.6
22	5.2	5.6	4.7	5.0	5.1	25	17	---	8.2	7.5	7.2	7.6
23	5.2	5.6	4.7	4.9	5.0	26	17	---	8.1	7.5	7.2	7.6
24	5.2	5.5	4.7	5.0	5.0	23	16	---	7.9	7.6	7.2	7.6
25	5.1	5.5	4.6	5.0	5.1	21	17	---	7.9	7.6	7.2	7.6
26	5.1	5.3	4.6	5.0	5.1	22	19	---	7.8	7.6	7.1	7.6
27	5.1	5.2	4.7	5.0	5.1	23	19	---	7.8	7.6	7.1	7.5
28	5.0	5.0	4.7	5.0	5.0	20	20	---	7.7	7.6	7.1	7.4
29	5.0	5.0	4.8	5.0	---	18	16	---	7.6	7.8	7.1	6.7
30	5.0	5.0	4.7	5.0	---	18	14	---	7.6	7.8	7.1	5.5
31	4.9	---	4.8	5.0	---	20	---	---	---	8.1	7.0	---
TOTAL	165.8	---	150.1	162.9	165.1	---	528.9	---	---	237.1	229.2	239.7
MEAN	5.35	---	4.84	5.25	5.90	---	17.6	---	---	7.65	7.39	7.99
MAX	6.1	---	7.3	8.1	16	---	25	---	---	8.1	7.9	12
MIN	4.9	---	4.4	4.8	4.8	---	9.9	---	---	7.4	7.0	5.5
AC-FT	329	---	298	323	327	---	1050	---	---	470	455	475

11201850 NORTH FORK OF MIDDLE FORK TULE RIVER BELOW DOYLE SPRINGS DIVERSION, NEAR SPRINGVILLE, CA

LOCATION.—Lat 36° 11'19", long 118° 40'01", unsurveyed, in T.20 S., R.31 E., Tulare County, Hydrologic Unit 18030006, on right bank, 600 ft downstream from diversion, 0.2 mi upstream from Meadow Creek, and 10 mi east of Springville.

DRAINAGE AREA.—34.1 mi^2.

PERIOD OF RECORD.—October 1994 to current year (low-flow records only).

GAGE.—Water-stage recorder and broad-crested weir in concrete control. Elevation of gage is 3,740 ft above NGVD of 1929, from topographic map.

REMARKS.—No records computed above 5 ft^3/s. Pacific Gas and Electric Co. pumps up to 5 ft^3/s from river at Doyle Springs Diversion to Tule River Conduit (station 11201450); water is returned to river 2.6 mi downstream after passing through Tule River Powerplant (station 11201700). See schematic diagram of Tule River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 1333.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	---	4.9
2	---	---	---	---	---	---	---	---	---	---	---	4.9
3	---	---	---	---	---	---	---	---	---	---	---	4.9
4	---	---	---	---	---	5.0	---	---	---	---	---	---
5	---	---	---	---	---	5.0	---	---	---	---	5.0	---
6	---	---	---	---	---	5.0	---	---	---	---	5.0	---
7	---	---	---	---	---	5.0	---	---	---	---	---	---
8	---	---	---	---	---	5.0	---	---	---	---	5.0	---
9	---	---	---	---	---	4.9	---	---	---	---	5.0	---
10	---	---	---	---	---	4.9	---	---	---	---	5.0	---
11	---	---	---	---	---	4.9	---	---	---	---	---	---
12	---	---	---	---	---	4.9	---	---	---	---	5.0	---
13	---	---	---	---	---	4.9	---	---	---	---	5.0	---
14	---	---	---	---	---	4.9	---	---	---	---	5.0	---
15	---	---	---	---	---	---	---	---	---	---	5.0	---
16	---	---	---	---	---	---	---	---	---	---	5.0	---
17	---	---	---	---	---	---	---	---	---	---	4.9	---
18	---	---	---	---	---	---	---	---	---	---	4.9	---
19	---	---	---	---	---	---	---	---	---	---	4.9	---
20	---	---	---	---	---	---	---	---	---	---	4.9	---
21	---	---	---	---	---	---	---	---	---	---	4.9	---
22	---	---	---	---	---	---	---	---	---	---	4.9	---
23	---	---	---	---	---	---	---	---	---	---	4.9	---
24	---	---	---	---	---	---	---	---	---	---	4.9	---
25	---	---	---	---	---	---	---	---	---	---	4.9	---
26	---	---	---	---	---	---	---	---	---	---	4.9	---
27	---	---	---	---	---	---	---	---	---	---	4.9	---
28	---	---	---	---	---	---	---	---	---	---	4.9	---
29	---	---	---	---	---	---	---	---	---	---	4.9	---
30	---	---	---	---	---	---	---	---	---	---	4.9	---
31	---	---	---	---	---	---	---	---	---	---	4.9	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

11202000 NORTH FORK OF MIDDLE FORK TULE RIVER, NEAR SPRINGVILLE, CA

LOCATION.—Lat 36° 10'29", long 118° 41'41", unsurveyed, in T.20 S., R.30 E., Tulare County, Hydrologic Unit 18030006, on right bank, 1.2 mi upstream from mouth, 2.2 mi downstream from Hossack Creek, and 7.4 mi northeast of Springville.

DRAINAGE AREA.—39.3 mi^2.

PERIOD OF RECORD.—October 1939 to current year. Monthly discharge only for some periods, published in WSP 1315-A. January 1909 to December 1912 at site 2 mi upstream, records not equivalent. Prior to October 1954, records for river and Pacific Gas & Electric Co. Conduit published separately; combined flow only, October 1954 to September 1960. Prior to October 1982, combined flow consisted of river and conduit. October 1982 to present, combined flow consists of river and Pacific Gas & Electric Co. Tule River Powerplant near Springville (station 11201700).

REVISED RECORDS.—WSP 1445: 1951. WSP 1930: Drainage area. WDR CA-91-3: Adjusted data for 1990.

GAGE.—Water-stage recorder. Concrete control on river since Aug. 6, 1958. Rectangular weir and concrete control on river since July 10, 1991. Elevation of gage is 2,920 ft above NGVD of 1929, from topographic map.

REMARKS.—Pacific Gas and Electric Co. Conduit diverts 2.5 mi upstream from station; water is returned to river 1.1 mi downstream after passing through Tule River Powerplant (station 11201700). For records of combined discharge of river and powerplant, see station 11202001. See schematic diagram of Tule River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 1333.

EXTREMES FOR PERIOD OF RECORD.—River only: Maximum discharge, 16,900 ft^3/s, Dec. 6, 1966, gage height, 13.83 ft, from floodmarks, from rating curve extended above 1,820 ft^3/s, on basis of critical-depth determinations at gage heights 9.67 and 12.47 ft; minimum daily, 0.06 ft^3/s, Nov. 2, 1979.

Combined flow: Maximum discharge, 16,900 ft^3/s, Dec. 6, 1966; minimum daily, 4.9 ft^3/s, Dec. 24, 26, 1999, July 9, 2002.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	8.6	7.5	9.7	8.1	10	22	20	102	10	11	8.8
2	9.7	8.6	7.5	9.3	8.3	9.8	28	24	99	10	11	8.9
3	9.4	8.6	7.5	9.5	8.1	9.4	22	40	95	10	11	8.8
4	9.2	8.6	7.5	10	8.0	9.3	19	86	87	10	11	9.2
5	9.2	8.6	7.2	10	7.9	9.2	17	72	75	10	10	13
6	9.2	8.6	7.2	10	7.7	9.1	15	61	62	10	9.2	14
7	9.1	9.3	7.1	10	7.5	8.9	17	60	51	10	9.3	14
8	7.9	1120	7.0	10	7.5	8.9	19	58	42	10	9.2	14
9	8.6	1820	7.0	9.2	7.5	9.0	20	49	35	10	9.1	16
10	8.6	289	7.0	9.4	7.5	8.9	19	45	31	10	9.0	15
11	8.6	154	7.0	9.0	7.9	8.9	19	49	27	10	8.9	13
12	8.6	113	7.2	8.8	18	8.9	22	59	24	10	8.9	13
13	8.6	93	7.0	8.6	20	8.9	27	77	22	10	8.9	13
14	8.6	71	7.1	8.4	15	9.0	34	95	22	10	8.9	13
15	8.6	56	8.8	8.3	11	139	37	96	20	9.7	8.9	13
16	8.6	60	15	8.3	11	115	30	107	17	9.7	8.9	13
17	8.6	54	15	8.3	9.6	75	30	110	13	9.7	8.9	13
18	8.6	37	10	8.3	9.0	45	31	113	12	9.8	8.9	13
19	8.6	11	8.8	8.3	9.0	35	28	119	12	9.9	8.9	13
20	8.6	9.1	11	8.2	9.0	29	26	121	12	9.9	8.9	13
21	8.6	8.9	9.8	8.0	8.9	26	30	131	12	9.7	8.9	12
22	8.6	8.8	9.0	8.0	8.7	28	29	137	12	10	8.9	12
23	8.6	8.3	8.8	8.0	8.7	29	26	142	11	10	8.9	12
24	8.6	8.3	8.4	8.0	8.6	26	28	149	11	10	8.9	12
25	8.6	8.3	8.1	8.0	10	24	26	150	11	10	8.9	12
26	8.6	8.2	8.0	8.0	11	24	25	141	11	10	8.9	12
27	8.6	7.7	7.9	8.1	13	25	25	144	11	10	8.9	12
28	8.6	7.5	8.3	8.0	14	22	26	148	11	10	8.8	12
29	8.6	7.5	9.6	7.8	---	21	23	143	11	10	8.7	12
30	8.6	7.5	9.0	7.8	---	21	21	131	10	11	8.7	9.9
31	8.6	---	10	7.9	---	22	---	113	---	11	8.7	---
TOTAL	270.8	4029.0	266.3	269.2	280.5	834.2	741	2990	971	310.4	286.0	369.6
MEAN	8.74	134	8.59	8.68	10.0	26.9	24.7	96.5	32.4	10.0	9.23	12.3
MAX	9.7	1820	15	10	20	139	37	150	102	11	11	16
MIN	7.9	7.5	7.0	7.8	7.5	8.9	15	20	10	9.7	8.7	8.8
AC-FT	537	7990	528	534	556	1650	1470	5930	1930	616	567	733

11202000 NORTH FORK OF MIDDLE FORK TULE RIVER, NEAR SPRINGVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.81	14.4	25.8	28.5	26.8	33.2	48.9	80.4	47.5	12.5	5.04	4.24
MAX	19.1	362	786	353	182	337	229	381	316	136	16.2	22.7
(WY)	1953	1951	1967	1997	1986	1943	1969	1969	1983	1998	1996	1952
MIN	0.53	0.76	0.73	0.81	0.80	1.21	1.13	1.03	0.61	0.34	0.32	0.31
(WY)	1965	1963	1991	1991	1991	1977	1977	1992	1992	1961	1964	1961

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	7700.5		11618.0			
ANNUAL MEAN	21.1		31.8		27.4	
HIGHEST ANNUAL MEAN					129	1967
LOWEST ANNUAL MEAN					1.25	1961
HIGHEST DAILY MEAN	1820	Nov 9	1820	Nov 9	13300	Dec 6 1966
LOWEST DAILY MEAN	4.0	Jul 30	7.0	Dec 8	0.06	Nov 2 1979
ANNUAL SEVEN-DAY MINIMUM	4.1	Jul 25	7.0	Dec 7	0.20	Aug 24 1964
MAXIMUM PEAK FLOW			6050	Nov 8	16900	Dec 6 1966
MAXIMUM PEAK STAGE			9.50	Nov 8	13.83	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	15270		23040		19810	
10 PERCENT EXCEEDS	20		66		72	
50 PERCENT EXCEEDS	8.8		10		5.7	
90 PERCENT EXCEEDS	6.6		8.0		0.80	

11202001 NORTH FORK OF MIDDLE FORK TULE RIVER, NEAR SPRINGVILLE, CA—Continued

NORTH FORK OF MIDDLE FORK TULE RIVER AND
PACIFIC GAS & ELECTRIC CO. TULE RIVER POWERPLANT, NEAR SPRINGVILLE, CA

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	8.6	38	37	41	45	84	81	166	39	23	18
2	9.7	8.6	38	36	41	44	92	85	164	40	29	18
3	9.4	8.6	36	46	41	41	83	106	160	40	28	18
4	9.2	8.6	34	56	41	41	80	153	152	39	27	15
5	9.2	8.6	35	56	41	41	76	139	140	39	27	13
6	9.2	8.6	33	56	39	41	72	128	126	38	23	14
7	9.1	9.3	31	55	38	43	74	126	115	36	23	14
8	7.9	1120	31	52	38	43	77	121	105	36	23	14
9	8.6	1820	31	51	34	50	73	115	97	34	22	16
10	8.6	289	28	51	34	46	69	109	91	33	22	15
11	8.6	154	26	51	35	48	70	113	86	32	21	13
12	8.6	113	28	51	45	49	57	123	80	31	21	13
13	8.6	93	30	47	73	50	74	143	78	31	21	13
14	8.6	71	31	44	66	55	99	160	76	31	21	13
15	8.6	56	33	44	59	189	90	162	73	30	21	13
16	8.6	60	56	43	11	164	96	173	67	30	21	13
17	8.6	54	47	43	56	130	95	176	63	29	20	13
18	8.6	51	43	42	49	109	96	179	61	29	20	13
19	8.6	54	39	42	48	100	87	185	60	30	20	13
20	8.6	51	41	45	47	94	74	186	58	30	20	13
21	8.6	47	40	43	46	89	78	195	58	30	20	12
22	8.6	47	36	42	46	93	93	202	56	29	20	12
23	8.6	45	38	42	45	94	76	209	52	28	19	12
24	8.6	39	35	42	42	90	28	216	51	27	19	12
25	8.6	40	35	41	42	88	86	216	48	27	18	12
26	8.6	40	35	41	43	88	85	207	47	27	19	12
27	8.6	40	35	8.1	48	89	85	209	45	25	19	12
28	8.6	40	35	43	47	86	90	214	43	27	19	12
29	8.6	38	37	41	---	82	86	208	41	26	19	12
30	8.6	38	44	43	---	82	84	196	39	25	18	13
31	8.6	---	37	41	---	83	---	178	---	23	18	---
TOTAL	270.8	4460.9	1116	1375.1	1236	2387	2409	5013	2498	971	661	406
MEAN	8.74	149	36.0	44.4	44.1	77.0	80.3	162	83.3	31.3	21.3	13.5
MAX	9.7	1820	56	56	73	189	99	216	166	40	29	18
MIN	7.9	8.6	26	8.1	11	41	28	81	39	23	18	12
AC-FT	537	8850	2210	2730	2450	4730	4780	9940	4950	1930	1310	805

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	17.4	29.6	48.3	54.0	60.1	74.5	103	139	92.5	40.1	21.7	17.7
MAX	44.3	375	794	417	241	381	296	445	384	202	72.3	42.6
(WY)	1983	1951	1967	1997	1980	1943	1969	1969	1983	1998	1983	1983
MIN	8.66	10.5	11.9	13.3	12.5	16.7	21.8	25.1	16.4	10.1	8.99	8.63
(WY)	1962	1962	1991	1961	1991	1977	1977	1977	1992	1961	1977	1961

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	17154.1		22803.8			
ANNUAL MEAN	47.0		62.5		58.2	
HIGHEST ANNUAL MEAN					157	1983
LOWEST ANNUAL MEAN					15.1	1977
HIGHEST DAILY MEAN	1820	Nov 9	1820	Nov 9	13300	Dec 6 1966
LOWEST DAILY MEAN	4.9	Jul 9	7.9	Oct 8	4.9	Dec 24 1999
ANNUAL SEVEN-DAY MINIMUM	8.3	Jul 5	8.5	Oct 8	5.2	Oct 1 1987
MAXIMUM PEAK FLOW			6050	Nov 8	16900	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	34030		45230		42150	
10 PERCENT EXCEEDS	79		124		133	
50 PERCENT EXCEEDS	35		41		29	
90 PERCENT EXCEEDS	8.7		9.3		13	

11202710 MIDDLE FORK TULE RIVER BELOW INTAKE, ABOVE SPRINGVILLE, CA

LOCATION.—Lat 36° 09'41", long 118° 42'31", unsurveyed, T.20 S., R.30 E., Tulare County, Hydrologic Unit 18030006, Sequoia National Forest, on right bank, 700 ft downstream from confluence of North Fork Middle Fork Tule River and South Fork Middle Fork Tule River, and 6.5 mi northeast of Springville.

DRAINAGE AREA.—85.3 mi^2.

PERIOD OF RECORD.—October 1988 to September 1990, October 1991 to current year. Prior to October 2002, published as river only, and river and conduit combined.

REVISED RECORD.—WDR CA-95-3: 1993(M).

GAGE.—Water-stage recorder and V-notch sharp-crested weir in concrete control. Elevation of gage is 2,370 ft above NGVD of 1929, from topographic map.

REMARKS.—Southern California Edison Co.'s Tule River Conduit diverts from the right bank of Middle Fork Tule River upstream from station. Flow from this conduit passes through Tule River Powerplant of Southern California Edison Co. Diversions are made from powerplant tailrace ditch to Springville Diversion and Duncan Diversion Ditches. Remaining water is returned to the Tule River 1.5 mi upstream from confluence of Middle and North Forks. The record of combined discharges of river and conduit was discontinued September 2002 when the conduit gage location was moved from near the point of diversion (station11202700) to near the powerplant (station 11202838). The conduit-flow records from those two locations may not be equivalent due to gains or losses along the conduit. See schematic diagram of Tule River Basin.

COOPERATION.—Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 372.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 19,400 ft^3/s, Jan. 2, 1997, gage height, 11.82 ft; minimum daily, 4.8 ft^3/s, Oct. 3, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	6.9	28	33	32	41	99	97	199	32	20	11
2	5.8	5.7	32	33	33	38	112	105	193	31	16	11
3	5.6	5.7	35	41	53	37	98	140	185	29	15	11
4	5.5	5.7	28	49	63	36	92	247	175	28	13	11
5	5.5	5.7	17	52	60	34	88	207	160	26	12	11
6	5.5	5.7	15	52	39	35	83	181	147	25	12	11
7	5.5	6.5	13	50	23	36	85	175	133	24	12	11
8	5.4	e2490	25	52	21	37	95	171	123	23	12	11
9	5.3	e2270	39	47	20	39	98	157	113	21	12	11
10	5.3	430	39	47	20	45	98	148	105	19	12	11
11	5.3	219	40	44	25	53	95	152	99	18	12	11
12	5.3	156	39	38	61	48	96	162	94	16	12	11
13	5.3	127	39	35	85	46	108	180	89	16	11	11
14	5.3	108	41	34	77	49	135	202	83	15	11	11
15	5.3	91	64	33	60	310	146	204	77	14	12	12
16	5.4	71	96	33	59	235	127	216	72	13	11	11
17	5.4	57	96	33	51	175	126	218	66	13	11	11
18	5.4	52	70	33	45	145	127	221	62	13	11	11
19	5.5	50	59	33	43	127	121	229	60	13	11	11
20	5.5	52	69	33	42	119	115	230	58	16	11	11
21	5.6	48	59	33	38	110	118	240	56	13	11	11
22	5.7	42	56	31	36	112	119	248	54	12	11	11
23	5.7	34	53	30	35	114	113	256	50	12	11	e12
24	5.8	34	50	30	35	108	115	267	48	12	11	e13
25	5.7	32	48	30	45	106	114	270	44	12	11	e14
26	5.7	31	35	30	50	106	113	261	39	12	11	e15
27	5.8	30	24	32	49	110	111	260	37	12	11	e13
28	5.8	28	28	31	46	103	112	264	35	12	11	e10
29	5.7	27	33	29	---	98	105	256	33	12	11	e11
30	5.7	28	28	29	---	98	98	241	33	14	11	11
31	7.2	---	38	30	---	99	---	215	---	19	11	---
TOTAL	175.5	6548.9	1336	1140	1246	2849	3262	6420	2722	547	370	342
MEAN	5.66	218	43.1	36.8	44.5	91.9	109	207	90.7	17.6	11.9	11.4
MAX	8.0	2490	96	52	85	310	146	270	199	32	20	15
MIN	5.3	5.7	13	29	20	34	83	97	33	12	11	10
AC-FT	348	12990	2650	2260	2470	5650	6470	12730	5400	1080	734	678

e Estimated.

11202710 MIDDLE FORK TULE RIVER BELOW INTAKE, ABOVE SPRINGVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.6	37.2	36.2	103	76.4	95.5	120	151	108	45.6	16.9	14.7
MAX	40.9	218	236	976	241	239	303	390	614	303	69.7	41.8
(WY)	1998	2003	1997	1997	1998	1995	1998	1998	1998	1998	1998	1998
MIN	5.66	5.72	5.50	6.41	8.21	15.5	32.9	22.6	12.1	11.0	10.8	10.4
(WY)	2003	2001	2001	1994	1990	1992	1990	1992	1992	2000	1996	1996

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1989 - 2003	
ANNUAL TOTAL	18049.7		26958.4			
ANNUAL MEAN	49.5		73.9		68.4	
HIGHEST ANNUAL MEAN					199	1998
LOWEST ANNUAL MEAN					15.6	1990
HIGHEST DAILY MEAN	2490	Nov 8	2490	Nov 8	6030	Jan 3 1997
LOWEST DAILY MEAN	5.3	Oct 9	5.3	Oct 9	4.8	Oct 3 1996
ANNUAL SEVEN-DAY MINIMUM	5.3	Oct 9	5.3	Oct 9	5.1	Oct 2 1996
MAXIMUM PEAK FLOW			8300	Nov 8	19400	Jan 2 1997
MAXIMUM PEAK STAGE			10.51	Nov 8	11.82	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	35800		53470		49530	
10 PERCENT EXCEEDS	84		161		171	
50 PERCENT EXCEEDS	21		35		21	
90 PERCENT EXCEEDS	7.1		7.1		6.5	

11202838 SOUTHERN CALIFORNIA EDISON TULE RIVER CONDUIT AT POWERPLANT, NEAR SPRINGVILLE, CA

LOCATION.—Lat 36° 08'07", long 118° 47'19", in NW 1/4 NW 1/4 sec 6, T.21 S., R.30 E., Tulare County, Hydrologic Unit 18030006, in powerplant penstock, on north side of Highway 190, 2.0 mi east of Springville.

PERIOD OF RECORD.—October 2002 to September 2003.

GAGE.—Acoustic-velocity meter. Elevation of gage is 1,240 ft above NGVD of 1929, from topographic map.

REMARKS.—Southern California Edison Co.'s Tule River Conduit diverts from the right bank of Middle Fork Tule River 6 mi upstream from powerplant. Flow from this conduit passes through Tule River Powerplant of Southern California Edison Co. Diversions are made from powerplant tailrace ditch to Springville Diversion and Duncan Diversion Ditches. Remaining water is returned to the Tule River 1.5 mi upstream from confluence of Middle and North Forks. Records of discharge for Tule River Conduit collected near the point of diversion until September 2002 (station 11202700) may not be equivalent to this record due to gains or losses along the conduit. See schematic diagram of Tule River Basin.

COOPERATION.—Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 372.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 35 ft^3/s, many days in 2003; minimum daily, 0.04 ft^3/s, Feb. 4, 5, 2003.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	15	27	35	35	33	31	35	35	34	31	17
2	19	16	22	35	35	33	34	35	35	34	31	16
3	17	16	16	35	13	33	34	35	35	34	31	18
4	17	15	23	35	0.04	33	34	35	35	34	30	18
5	16	16	34	35	0.04	33	34	35	35	34	29	17
6	15	15	35	35	16	33	34	35	35	34	27	16
7	15	17	35	35	34	33	34	35	35	34	26	16
8	15	16	22	35	34	33	34	35	35	33	26	16
9	14	0.14	1.6	35	35	33	34	35	35	34	24	18
10	14	0.14	1.6	35	35	29	34	35	35	34	24	17
11	15	0.14	1.6	35	35	23	34	35	34	34	23	17
12	15	0.14	1.6	35	35	28	33	35	35	33	23	16
13	14	0.14	1.6	35	34	33	33	35	35	33	22	16
14	14	0.14	1.6	35	35	33	33	35	35	33	21	15
15	4.7	0.56	1.6	35	34	33	33	35	35	33	21	14
16	0.76	10	1.6	35	34	33	34	35	34	32	21	14
17	7.3	26	1.6	35	34	33	34	35	35	32	21	15
18	15	28	1.6	35	34	33	34	35	35	32	20	15
19	15	23	1.6	35	34	33	34	35	34	32	20	14
20	14	16	1.6	35	34	33	34	34	34	33	19	14
21	14	17	1.6	35	34	33	34	35	34	32	22	14
22	15	20	1.6	35	34	33	34	34	34	31	22	13
23	15	27	1.6	35	34	33	34	34	34	31	21	5.9
24	15	27	1.6	35	34	33	34	34	34	31	19	1.5
25	16	28	1.6	35	34	33	34	35	33	29	19	1.5
26	16	28	16	35	34	33	34	35	34	28	19	1.5
27	16	28	33	35	33	33	34	35	34	27	19	1.5
28	16	28	34	35	33	33	34	35	34	27	18	1.5
29	16	27	35	35	---	34	34	35	34	30	18	7.2
30	16	27	35	35	---	34	35	35	34	28	17	13
31	14	---	35	35	---	34	---	35	---	30	17	---
TOTAL	439.76	487.40	429.2	1085	850.08	1007	1014	1081	1035	990	701	379.6
MEAN	14.2	16.2	13.8	35.0	30.4	32.5	33.8	34.9	34.5	31.9	22.6	12.7
MAX	19	28	35	35	35	34	35	35	35	34	31	18
MIN	0.76	0.14	1.6	35	0.04	23	31	34	33	27	17	1.5
AC-FT	872	967	851	2150	1690	2000	2010	2140	2050	1960	1390	753

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2003, BY WATER YEAR (WY)

MEAN	14.2	16.2	13.8	35.0	30.4	32.5	33.8	34.9	34.5	31.9	22.6	12.7
MAX	14.2	16.2	13.8	35.0	30.4	32.5	33.8	34.9	34.5	31.9	22.6	12.7
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003
MIN	14.2	16.2	13.8	35.0	30.4	32.5	33.8	34.9	34.5	31.9	22.6	12.7
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003

SUMMARY STATISTICS FOR 2003 WATER YEAR

ANNUAL TOTAL	9499.04	
ANNUAL MEAN	26.0	
HIGHEST DAILY MEAN	35	Dec 6
LOWEST DAILY MEAN	0.04	Feb 4
ANNUAL SEVEN-DAY MINIMUM	0.20	Nov 9
ANNUAL RUNOFF (AC-FT)	18840	
10 PERCENT EXCEEDS	35	
50 PERCENT EXCEEDS	33	
90 PERCENT EXCEEDS	8.9	

11203580 SOUTH FORK TULE RIVER NEAR CHOLOLLO CAMPGROUND, NEAR PORTERVILLE, CA

LOCATION.—Lat 36° 02'54", long 118° 39'12", unsurveyed, T.22 S., R.31 E., Tulare County, Hydrologic Unit 18030006, Tule River Indian Reservation, on right bank at bridge, 20 mi southeast of Porterville, and 0.5 mi south of Chololo Campground.

DRAINAGE AREA.—20.1 mi^2.

PERIOD OF RECORD.—January 2000 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 3,700 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,380 ft^3/s, Nov. 8, 2002, gage height, 6.56 ft; minimum daily, 1.7 ft^3/s, Sept. 24, 2001.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 8	1430	2,380	6.56	Mar. 15	1545	164	4.61
Dec. 16	1500	111	4.42	Apr. 13	2015	53	4.09
Feb. 12	1500	68	4.20	May 4	0645	174	4.64

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	2.8	12	15	13	16	25	33	40	12	10	4.1
2	3.4	2.8	11	16	13	16	30	38	38	12	8.4	4.0
3	3.0	2.7	11	19	12	16	26	55	36	12	7.8	4.7
4	2.9	2.7	10	21	12	16	25	118	34	11	7.4	5.0
5	2.7	2.7	10	21	12	15	25	80	32	11	7.0	4.1
6	2.6	2.7	9.9	21	11	15	24	66	30	11	6.7	3.8
7	2.5	4.3	9.8	21	11	15	26	61	29	11	6.6	3.8
8	2.4	713	9.6	22	11	15	28	61	28	10	6.4	3.8
9	2.3	690	9.3	20	11	15	27	56	27	10	6.1	4.3
10	2.3	110	9.3	21	11	15	26	53	25	9.8	5.9	4.2
11	2.5	54	9.2	19	13	16	26	52	25	9.6	5.8	4.0
12	2.5	37	8.9	18	37	16	25	52	24	9.2	5.7	3.7
13	2.3	29	8.8	17	31	16	32	55	23	9.1	5.3	3.6
14	2.3	25	9.0	16	26	16	39	59	22	8.8	5.2	3.4
15	2.3	22	13	15	21	92	42	60	21	8.5	5.4	3.2
16	2.2	20	33	15	23	54	38	60	20	8.2	5.3	3.3
17	2.6	19	21	15	20	46	38	60	19	8.0	5.1	3.4
18	2.5	17	15	15	18	41	38	59	18	8.0	5.0	3.4
19	2.5	16	14	14	18	38	37	58	18	8.6	4.7	3.2
20	2.3	15	15	14	18	36	37	57	17	8.5	4.5	3.1
21	2.3	14	13	14	17	33	38	56	17	7.8	5.3	3.0
22	2.5	14	13	14	16	33	39	54	17	7.6	5.5	2.9
23	2.7	13	12	13	16	32	37	54	16	8.0	5.1	2.8
24	2.7	13	11	13	16	31	36	54	16	7.6	4.7	2.8
25	2.7	12	11	13	19	30	39	54	15	7.2	4.6	2.9
26	2.8	12	11	13	18	29	38	52	14	6.9	4.5	2.7
27	2.9	12	12	13	18	29	36	50	14	6.8	4.5	2.6
28	2.8	11	13	13	17	27	39	48	13	6.7	4.4	2.6
29	2.8	11	14	12	---	26	36	46	13	7.0	4.3	2.5
30	2.9	11	14	12	---	25	34	45	13	7.8	4.2	2.6
31	2.8	---	18	12	---	25	---	43	---	8.1	4.1	---
TOTAL	81.2	1910.7	390.8	497	479	845	986	1749	674	277.8	175.5	103.5
MEAN	2.62	63.7	12.6	16.0	17.1	27.3	32.9	56.4	22.5	8.96	5.66	3.45
MAX	3.4	713	33	22	37	92	42	118	40	12	10	5.0
MIN	2.2	2.7	8.8	12	11	15	24	33	13	6.7	4.1	2.5
AC-FT	161	3790	775	986	950	1680	1960	3470	1340	551	348	205

11203580 SOUTH FORK TULE RIVER NEAR CHOLOLLO CAMPGROUIND, NEAR PORTERVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.53	25.0	12.3	14.1	15.1	24.8	28.8	29.8	13.5	6.07	3.65	2.81
MAX	5.17	63.7	20.0	20.9	21.5	31.2	32.9	56.4	22.5	8.96	5.66	3.49
(WY)	2001	2003	2002	2002	2000	2000	2003	2003	2003	2003	2003	2000
MIN	2.62	4.42	4.23	5.29	9.14	19.3	24.3	18.4	7.41	4.17	2.61	2.07
(WY)	2003	2001	2001	2001	2001	2001	2001	2002	2001	2001	2001	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL TOTAL	6065.4		8169.5			
ANNUAL MEAN	16.6		22.4		14.7	
HIGHEST ANNUAL MEAN					22.4	2003
LOWEST ANNUAL MEAN					8.98	2001
HIGHEST DAILY MEAN	713	Nov 8	713	Nov 8	713	Nov 8 2002
LOWEST DAILY MEAN	1.9	Sep 15	2.2	Oct 16	1.7	Sep 24 2001
ANNUAL SEVEN-DAY MINIMUM	2.0	Sep 21	2.3	Oct 10	1.8	Sep 20 2001
MAXIMUM PEAK FLOW			2380	Nov 8	2380	Nov 8 2002
MAXIMUM PEAK STAGE			6.56	Nov 8	6.56	Nov 8 2002
ANNUAL RUNOFF (AC-FT)	12030		16200		10620	
10 PERCENT EXCEEDS	27		42		30	
50 PERCENT EXCEEDS	12		13		9.3	
90 PERCENT EXCEEDS	2.4		2.8		2.5	

11204100 SOUTH FORK TULE RIVER NEAR RESERVATION BOUNDARY, NEAR PORTERVILLE, CA

LOCATION.—Lat 36° 01'27", long 118° 48'45", unsurveyed, T.22 S., R.29 E., Tulare County, Hydrologic Unit 18030006, Tule River Indian Reservation, on left bank, 0.5 mi east of Reservation Boundary, and 12 mi southeast of Porterville.

DRAINAGE AREA.—95.8 mi^2.

PERIOD OF RECORD.—September 2000 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 970 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,060 ft^3/s, Nov. 8, 2002, gage height, 12.97 ft, from flood marks; minimum daily, 0.77 ft^3/s, Aug. 21, 2001.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 75 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 8	1830	5,060	12.97	Mar. 15	1615	503	7.60
Dec. 16	1845	172	6.69	Apr. 15	0330	161	6.64
Feb. 12	2000	129	6.49	May 4	0915	620	7.82

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	2.8	17	38	21	34	28	54	59	17	15	2.6
2	3.1	2.7	18	34	21	32	45	57	56	17	16	2.3
3	3.1	2.7	16	38	20	31	38	116	53	18	13	3.5
4	2.8	2.6	16	43	19	32	32	406	51	18	11	8.1
5	2.9	2.2	15	42	19	31	33	220	49	17	10	5.7
6	2.6	2.1	15	40	19	30	29	157	47	17	9.5	4.1
7	2.4	2.8	14	38	18	30	28	142	45	16	9.2	3.2
8	2.2	1290	14	39	17	30	36	139	44	16	8.8	3.1
9	2.0	1500	14	37	18	29	34	137	43	16	7.9	4.3
10	2.0	193	14	37	18	29	32	118	40	15	7.5	5.2
11	2.1	84	14	38	21	29	30	113	38	14	6.9	5.0
12	2.3	57	14	32	54	29	29	107	36	13	6.7	3.8
13	2.3	45	13	30	63	29	38	104	34	13	5.8	3.2
14	1.9	38	14	29	54	29	99	106	31	13	4.9	2.9
15	1.8	34	22	28	40	195	114	104	27	11	5.0	2.5
16	1.9	30	52	26	44	121	79	102	25	10	5.1	1.9
17	2.3	28	55	26	39	117	76	100	25	9.5	4.8	2.2
18	2.1	26	35	25	34	100	74	98	27	9.1	4.5	3.2
19	2.2	25	27	25	33	76	70	95	26	11	3.5	3.0
20	2.2	23	47	24	34	65	64	92	24	13	3.8	2.6
21	2.1	21	33	24	32	55	66	88	24	11	4.4	2.7
22	2.4	20	28	23	30	52	80	85	23	9.8	6.6	2.2
23	2.6	20	26	23	29	51	68	82	20	9.9	6.3	2.0
24	2.7	19	23	23	28	48	68	81	18	11	5.3	2.0
25	2.8	19	22	23	35	44	72	80	18	8.8	4.3	2.4
26	2.7	18	22	22	44	41	69	77	16	8.3	3.7	2.3
27	2.8	17	22	22	40	41	63	74	14	7.8	3.8	2.0
28	2.9	16	25	21	37	36	67	70	13	7.6	3.5	2.0
29	2.7	16	38	21	---	33	63	66	14	8.4	2.7	2.1
30	2.8	16	29	20	---	30	57	64	18	12	3.0	2.0
31	2.8	---	41	21	---	29	---	61	---	13	2.9	---
TOTAL	76.2	3572.9	755	912	881	1558	1681	3395	958	391.2	205.4	94.1
MEAN	2.46	119	24.4	29.4	31.5	50.3	56.0	110	31.9	12.6	6.63	3.14
MAX	3.1	1500	55	43	63	195	114	406	59	18	16	8.1
MIN	1.8	2.1	13	20	17	29	28	54	13	7.6	2.7	1.9
AC-FT	151	7090	1500	1810	1750	3090	3330	6730	1900	776	407	187

11204100 SOUTH FORK TULE RIVER NEAR RESERVATION BOUNDARY, NEAR PORTERVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.72	47.0	32.1	30.1	27.3	48.3	52.3	55.2	16.8	7.68	3.53	2.74
MAX	7.80	119	63.1	48.8	31.5	59.2	56.0	110	31.9	12.6	6.63	3.14
(WY)	2001	2003	2002	2002	2003	2002	2003	2003	2003	2003	2003	2003
MIN	2.46	9.10	8.90	12.0	24.0	35.5	49.9	28.0	6.64	4.54	1.52	2.14
(WY)	2003	2001	2001	2001	2001	2001	2001	2002	2001	2001	2001	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL TOTAL	11591.7		14479.8			
ANNUAL MEAN	31.8		39.7		27.3	
HIGHEST ANNUAL MEAN					39.7	2003
LOWEST ANNUAL MEAN					15.8	2001
HIGHEST DAILY MEAN	1500	Nov 9	1500	Nov 9	1500	Nov 9 2002
LOWEST DAILY MEAN	1.4	Aug 17	1.8	Oct 15	0.77	Aug 21 2001
ANNUAL SEVEN-DAY MINIMUM	1.5	Aug 13	2.0	Oct 10	0.91	Aug 15 2001
MAXIMUM PEAK FLOW			5060	Nov 8	5060	Nov 8 2002
MAXIMUM PEAK STAGE			12.97	Nov 8	12.97	Nov 8 2002
ANNUAL RUNOFF (AC-FT)	22990		28720		19770	
10 PERCENT EXCEEDS	55		76		56	
50 PERCENT EXCEEDS	21		22		15	
90 PERCENT EXCEEDS	2.4		2.7		2.3	

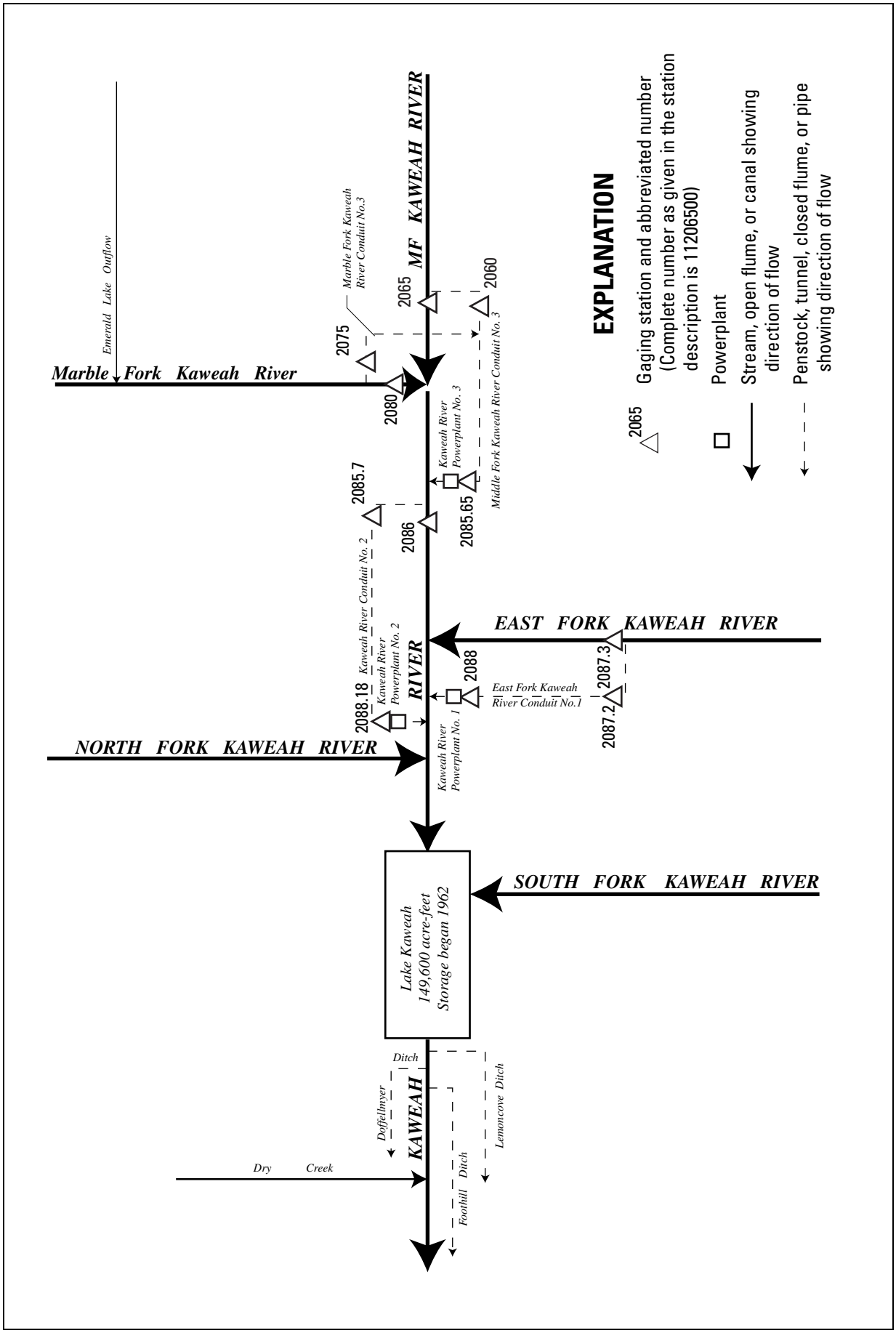


Figure 25. Diversions and storage in Kaweah River Basin.

11206500 MIDDLE FORK KAWEAH RIVER NEAR POTWISHA CAMP, CA

LOCATION.—Lat 36° 30'48", long 118° 47'27", unsurveyed, T.16 S., R.29 E., Tulare County, Hydrologic Unit 18030007, Sequoia National Park, on right bank, 0.5 mi southeast of Potwisha Camp, and 0.7 mi upstream from confluence with Marble Fork Kaweah River.

DRAINAGE AREA.—102 mi^2.

PERIOD OF RECORD.—July 1949 to current year. Monthly discharge, only, for water years 1956–57, published in WSP 1735. Prior to October 1954, records for river and conduit published separately. October 1954 to September 1955, October 1957 to September 1962, combined flow only; October 1962 to September 2002, river only, and river and conduit combined.
CHEMICAL ANALYSES: June to September 1980.
SPECIFIC CONDUCTANCE: October 1979 to September 1981.
WATER TEMPERATURE: October 1979 to September 1981.

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder and rectangular flume. Elevation of gage is 2,100 ft above NGVD of 1929, from topographic map. Prior to October 1955, at datum 0.70 ft higher.

REMARKS.—Middle Fork Kaweah River Conduit No. 3 diverts from left bank of Middle Fork Kaweah River , 0.1 mi upstream from station. Flow from this conduit joins that of Marble Fork Kaweah River Conduit No. 3 and is returned to Kaweah River 2.7 mi downstream from confluence of Marble and Middle Forks. The record of combined discharges of river and conduit was discontinued September 2002 when the two conduit gages near the points of diversion (stations 11206000 and 11207500, respectively) were replaced with one nonequivalent conduit gage at the powerplant (station 11208565). See schematic diagram of Kaweah River Basin.

COOPERATION.—Records were provided by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 268.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 46,800 ft^3/s, Dec. 23, 1955, gage height, 29.0 ft, from floodmarks, datum then in use, on basis of slope-area measurement of peak flow; minimum daily, 0.1 ft^3/s, Nov. 12–15, 1949.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	12	13	38	50	52	214	161	824	132	73	15
2	23	12	13	41	50	47	228	201	863	112	61	15
3	16	12	13	63	39	48	192	262	883	105	49	16
4	14	12	13	69	33	49	169	284	846	99	30	14
5	14	12	12	66	27	44	154	260	755	97	20	12
6	14	12	12	61	24	52	139	240	671	95	16	12
7	14	12	11	56	20	60	153	243	622	88	16	12
8	14	3310	11	125	19	65	186	245	559	83	16	12
9	14	1610	11	91	17	70	203	221	490	74	16	12
10	14	492	11	32	17	73	205	215	482	70	15	12
11	14	300	11	27	18	79	202	238	444	67	15	12
12	14	240	11	24	72	87	203	291	411	59	15	12
13	13	185	11	29	96	97	219	378	391	54	15	12
14	13	130	13	33	98	96	262	457	386	50	15	12
15	13	84	39	30	63	398	244	443	385	45	15	12
16	13	75	54	28	78	254	217	508	368	40	15	12
17	13	71	58	37	67	217	219	540	361	36	15	12
18	13	60	35	39	53	182	199	551	361	39	15	12
19	13	56	30	41	49	166	182	590	317	50	15	12
20	13	57	42	42	45	159	179	635	263	76	15	12
21	14	59	34	41	41	148	188	729	236	47	15	12
22	14	61	27	39	38	167	186	811	216	39	16	12
23	14	51	20	37	37	175	181	806	188	42	15	12
24	14	43	16	36	37	160	188	774	159	49	15	12
25	14	34	14	35	54	155	190	828	148	33	15	12
26	13	22	13	39	63	160	195	846	148	24	15	12
27	13	19	15	46	63	161	198	1010	157	20	15	12
28	12	15	23	45	54	155	211	1070	167	18	15	12
29	12	14	30	38	---	159	183	1060	163	21	15	12
30	12	13	22	38	---	180	166	952	151	28	15	12
31	12	---	56	44	---	207	---	849	---	68	15	---
TOTAL	430	7085	694	1410	1322	4122	5855	16698	12415	1860	628	372
MEAN	13.9	236	22.4	45.5	47.2	133	195	539	414	60.0	20.3	12.4
MAX	23	3310	58	125	98	398	262	1070	883	132	73	16
MIN	12	12	11	24	17	44	139	161	148	18	15	12
AC-FT	853	14050	1380	2800	2620	8180	11610	33120	24630	3690	1250	738

11206500 MIDDLE FORK KAWEAH RIVER NEAR POTWISHA CAMP, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.5	31.2	54.3	90.3	102	138	238	437	390	170	46.8	22.4
MAX	125	236	732	743	489	504	630	1178	1271	786	354	157
(WY)	1983	2003	1967	1997	1986	1986	1982	1969	1983	1983	1983	1982
MIN	0.92	1.07	1.08	0.36	0.60	12.8	64.3	78.6	27.1	1.07	2.43	1.56
(WY)	1962	1962	1962	1961	1961	1961	1976	1977	1976	1961	1962	1962

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1961 - 2003	
ANNUAL TOTAL	41791		52891			
ANNUAL MEAN	114		145		145	
HIGHEST ANNUAL MEAN					417	1983
LOWEST ANNUAL MEAN					25.2	1961
HIGHEST DAILY MEAN	3310	Nov 8	3310	Nov 8	10500	Dec 6 1966
LOWEST DAILY MEAN	11	Dec 7	11	Dec 7	0.30	Dec 27 1960
ANNUAL SEVEN-DAY MINIMUM	11	Dec 7	11	Dec 7	0.30	Dec 27 1960
MAXIMUM PEAK FLOW			10800	Nov 8	46800	Dec 23 1955
MAXIMUM PEAK STAGE			14.26	Nov 8	29.00	Dec 23 1955
ANNUAL RUNOFF (AC-FT)	82890		104900		104800	
10 PERCENT EXCEEDS	309		385		422	
50 PERCENT EXCEEDS	41		47		34	
90 PERCENT EXCEEDS	13		12		10	

11208000 MARBLE FORK KAWEAH RIVER AT POTWISHA CAMP, CA

LOCATION.—Lat 36° 31'08", long 118° 48'03", in NE 1/4 SW 1/4 sec.23, T.16 S., R.29 E., Tulare County, Hydrologic Unit 18030007, Sequoia National Park, on left bank, 0.1 mi north of Potwisha Camp, 0.3 mi upstream from confluence with Middle Fork Kaweah River, and 7.9 mi northeast of Three Rivers.

DRAINAGE AREA.—51.4 mi^2.

PERIOD OF RECORD.—March 1950 to September 2002, October 2002 to current year (low-flow records only). Monthly discharge only, for March 1950, published in WSP 1315-A. Prior to October 1954, records for river and conduit published separately. October 1954 to September 1962, combined flow only; October 1962 to September 2002, river only, and river and conduit combined.
CHEMICAL ANALYSES: June to September 1980.
SPECIFIC CONDUCTANCE: October 1979 to September 1981.
WATER TEMPERATURE: October 1979 to September 1981.

REVISED RECORDS.—WP 1930: Drainage area.

GAGE.—Acoustic-velocity meter since October 2002. Water-stage recorder on river discontinued September 2002. Elevation of gage is 2,150 ft above NGVD of 1929, from topographic map.

REMARKS.—No records recorded above 11 ft^3/s. Marble Fork Kaweah River Conduit No. 3 diverts from left bank of Marble Fork, 0.3 mi upstream from station. Flow from this conduit joins that of Middle Fork Kaweah River Conduit No. 3 and is returned to Kaweah River 2.7 mi downstream from confluence of Marble and Middle Forks. The record of combined discharges of river and conduit was discontinued in September 2002 when the two conduit gages near the points of diversion (stations 11207500 and 11206000, respectively) were replaced with one nonequivalent conduit gage at the powerplant (station 11208565). See schematic diagram of Kaweah River Basin.

COOPERATION.—Records were provided by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 298.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 12,500 ft^3/s, Dec. 23, 1955, gage height, 13.4 ft, from rating curve extended above 1,100 ft^3/s, on basis of slope-area measurement of peak flow; minimum daily, 0.10 ft^3/s, at times in 1961–64.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	2.0	1.7	7.1	7.2	11	---	---	10	9.1	7.8	3.9
2	---	1.9	1.9	7.0	7.3	11	---	---	10	7.5	7.7	1.6
3	9.7	1.9	2.0	6.8	7.1	11	11	11	10	7.5	7.6	1.8
4	2.7	1.8	1.9	6.7	7.2	11	11	11	10	7.6	7.4	1.8
5	2.5	1.8	2.0	6.6	7.2	11	11	11	10	7.5	7.2	1.8
6	2.0	1.7	1.9	7.0	7.4	11	11	---	10	7.5	7.2	1.8
7	1.9	2.5	1.9	7.1	7.4	11	11	11	10	7.5	7.1	1.8
8	1.8	---	1.9	7.3	7.4	11	11	11	10	7.5	7.1	1.8
9	2.0	---	1.9	7.4	7.3	11	11	11	10	7.5	7.0	1.8
10	2.0	---	2.8	7.3	7.4	11	---	---	9.9	7.6	7.0	1.8
11	2.2	---	3.7	7.5	7.4	11	---	---	10	7.6	7.0	1.8
12	2.4	---	3.7	7.4	7.0	11	---	11	10	7.3	7.0	1.8
13	2.8	---	3.7	7.6	6.6	11	---	10	11	7.1	7.0	1.8
14	2.7	---	5.2	7.5	6.8	11	---	11	11	7.1	6.9	1.8
15	2.7	---	---	7.5	7.1	11	---	11	10	7.1	6.9	1.8
16	2.8	---	---	7.5	7.2	11	---	9.7	11	7.0	6.9	1.8
17	2.9	---	---	7.4	7.1	11	---	11	11	7.0	7.0	1.8
18	2.7	---	8.8	7.4	7.3	---	---	11	11	7.1	7.0	1.8
19	2.8	---	5.5	7.4	7.4	11	---	11	10	7.1	6.9	1.8
20	2.7	---	8.3	7.4	7.5	11	---	11	11	7.5	6.9	1.8
21	2.5	---	5.6	7.4	7.3	---	---	10	11	7.4	6.9	1.8
22	2.5	---	3.2	7.5	7.3	11	---	10	11	7.2	6.9	1.8
23	2.3	---	2.4	7.5	7.3	11	---	10	11	7.3	6.9	1.8
24	2.4	---	2.3	7.4	7.3	11	---	10	11	7.7	6.9	1.8
25	2.3	11	1.9	7.3	7.3	---	---	10	11	7.5	6.9	1.8
26	2.3	4.9	1.5	7.4	7.4	---	---	10	11	7.3	6.8	1.8
27	2.2	3.3	1.7	7.3	7.3	---	---	10	10	7.1	6.8	1.8
28	2.3	2.3	4.2	7.3	8.9	---	---	10	11	7.1	6.7	1.8
29	2.3	2.1	4.6	7.5	---	---	---	10	11	7.1	6.7	1.8
30	2.0	1.7	3.6	7.5	---	---	---	10	11	7.4	6.7	1.8
31	2.0	---	3.6	7.1	---	11	---	10	---	7.5	6.6	---
TOTAL	---	---	---	226.1	204.4	---	---	---	314.9	229.3	217.4	55.9
MEAN	---	---	---	7.29	7.30	---	---	---	10.5	7.40	7.01	1.86
MAX	---	---	---	7.6	8.9	---	---	---	11	9.1	7.8	3.9
MIN	---	---	---	6.6	6.6	---	---	---	9.9	7.0	6.6	1.6
AC-FT	---	---	---	448	405	---	---	---	625	455	431	111

11208000 MARBLE FORK KAWEAH RIVER AT POTWISHA CAMP, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.120	9.984	28.78	41.63	45.37	63.57	139.0	287.6	248.3	95.72	19.18	9.167
MAX	60.5	72.5	385	417	259	278	396	812	799	578	135	103
(WY)	1983	1983	1956	1997	1986	1986	1982	1969	1998	1998	1983	1978
MIN	0.38	0.39	0.44	0.15	0.17	0.92	32.7	46.5	9.58	0.57	0.83	0.38
(WY)	1963	1963	1962	1961	1961	1961	1975	1977	1976	1961	1962	1962

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1955 - 2002	
ANNUAL TOTAL	19885.3		17804.0			
ANNUAL MEAN	54.48		48.78		82.95	
HIGHEST ANNUAL MEAN					235	1969
LOWEST ANNUAL MEAN					10.9	1961
HIGHEST DAILY MEAN	507	May 11	371	Jun 1	5700	Dec 23 1955
LOWEST DAILY MEAN	1.6	Nov 4	1.6	Nov 4	0.10	Jan 10 1961
ANNUAL SEVEN-DAY MINIMUM	1.8	Nov 2	1.8	Nov 2	0.10	Jan 10 1961
MAXIMUM PEAK FLOW			1060	Nov 24	12500	Dec 23 1955
MAXIMUM PEAK STAGE			6.31	Nov 24	13.40	Dec 23 1955
ANNUAL RUNOFF (AC-FT)	39440		35310		60090	
10 PERCENT EXCEEDS	205		174		252	
50 PERCENT EXCEEDS	7.1		8.8		12	
90 PERCENT EXCEEDS	3.2		3.3		1.7	

11208565 MIDDLE FORK KAWEAH RIVER CONDUIT NO. 3 AT POWERPLANT, NEAR HAMMOND, CA

LOCATION.—Lat 36° 29'10", long 118° 50'08", in NW 1/4 NW 1/4 sec.37, T.17 S., R.29 E., Tulare County, Hydrologic Unit 18030007, in powerplant penstock, on right bank, 0.5 mi upstream of confluence with East Fork Kaweah River, 2.0 mi northeast of Hammond, and 5.3 mi northeast of Three Rivers.

PERIOD OF RECORD.—October 2002 to September 2003.

GAGE.—Acoustic-velocity meter. Elevation of gage is 1,400 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow from Marble Fork Kaweah River Conduit No. 3 (station 11207500) joins that of Middle Fork Kaweah River Conduit No. 3 (station 11206000) upstream of this station. The combined flow is measured by the acoustic-velocity meter as it enters Kaweah River Powerplant No. 3. Combined flow of the two conduits, when formerly measured near the points of diversion, may not be equivalent to that measured at the powerplant due to possible gains or losses along the conduit. See schematic diagram of Kaweah River Basin.

COOPERATION.—Records were provided by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 398.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 90 ft^3/s, many days in water year 2003; minimum daily, 0.09 ft^3/s, Oct. 2, 2002.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.10	e3.9	e72	82	87	86	87	88	90	89	72	16
2	0.09	e3.9	e72	83	87	85	88	88	90	89	72	6.6
3	4.4	e3.8	e70	84	86	85	87	88	90	89	72	1.9
4	6.1	e3.5	69	85	86	85	87	88	90	89	70	9.4
5	5.6	e3.6	67	85	85	85	87	88	90	88	66	25
6	5.1	e4.1	66	86	85	86	87	88	90	88	62	22
7	4.5	e6.0	65	86	83	87	87	88	90	88	58	21
8	4.0	e18	63	86	83	87	88	88	90	88	55	20
9	3.7	e3.7	56	85	80	88	88	87	90	87	52	21
10	3.3	e4.5	61	85	81	88	88	87	90	85	49	21
11	3.2	e5.1	60	85	81	88	87	87	90	84	48	20
12	3.3	e5.8	59	85	84	88	88	88	90	81	46	18
13	e2.9	e18	59	85	88	89	88	89	90	79	45	17
14	e2.4	e46	65	85	88	89	88	89	90	77	43	16
15	e2.3	e65	77	84	87	89	88	88	90	74	43	14
16	e2.5	e69	77	85	87	87	88	89	90	74	42	14
17	e2.4	e69	80	86	87	88	88	89	90	72	41	14
18	e2.6	e70	80	86	86	87	87	89	90	71	40	13
19	e2.7	e70	80	87	86	86	87	90	89	70	38	12
20	e1.4	e72	81	87	86	86	88	89	89	72	38	12
21	e0.55	e74	81	87	86	87	89	90	89	72	38	11
22	e0.58	e74	80	87	86	87	88	90	89	e71	45	10
23	e0.60	e74	79	87	85	87	88	90	89	e70	41	9.6
24	e2.3	e74	79	86	86	87	89	90	89	e76	39	9.2
25	e0.63	e74	78	86	86	87	89	90	89	e73	e36	9.3
26	e2.2	e73	79	86	87	87	89	90	89	e68	e23	9.1
27	e4.1	e73	79	87	87	87	89	90	89	e64	21	8.4
28	e4.0	e72	69	87	86	87	89	90	89	e62	20	8.0
29	e4.0	e73	61	86	---	87	88	90	89	e53	18	7.8
30	e4.0	e72	81	86	---	88	87	90	89	53	16	7.9
31	e3.9	---	83	87	---	88	---	90	---	72	14	---
TOTAL	89.45	1277.9	2228	2654	2392	2698	2636	2755	2688	2368	1363	404.2
MEAN	2.89	42.6	71.9	85.6	85.4	87.0	87.9	88.9	89.6	76.4	44.0	13.5
MAX	6.1	74	83	87	88	89	89	90	90	89	72	25
MIN	0.09	3.5	56	82	80	85	87	87	89	53	14	1.9
AC-FT	177	2530	4420	5260	4740	5350	5230	5460	5330	4700	2700	802

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2003, BY WATER YEAR (WY)

MEAN	2.89	42.6	71.9	85.6	85.4	87.0	87.9	88.9	89.6	76.4	44.0	13.5
MAX	2.89	42.6	71.9	85.6	85.4	87.0	87.9	88.9	89.6	76.4	44.0	13.5
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003
MIN	2.89	42.6	71.9	85.6	85.4	87.0	87.9	88.9	89.6	76.4	44.0	13.5
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003

SUMMARY STATISTICS	FOR 2003 WATER YEAR	
ANNUAL TOTAL	23553.55	
ANNUAL MEAN	64.5	
HIGHEST DAILY MEAN	90	May 19
LOWEST DAILY MEAN	0.09	Oct 2
ANNUAL SEVEN-DAY MINIMUM	1.2	Oct 20
ANNUAL RUNOFF (AC-FT)	46720	
10 PERCENT EXCEEDS	89	
50 PERCENT EXCEEDS	84	
90 PERCENT EXCEEDS	4.5	

e Estimated.

11208600 KAWEAH RIVER BELOW CONDUIT NO. 2, NEAR HAMMOND, CA

LOCATION.—Lat 36° 29'04", long 118° 50'06", in NW 1/4 NW 1/4 sec.37, T.17 S., R.29 E., Tulare County, Hydrologic Unit 18030007, on right bank, 200 ft downstream from diverision dam, 0.4 mi upstream of confluence with East Fork Kaweah River, 1.9 mi northeast of Hammond, and 5.2 miles northeast of Three Rivers.

DRAINAGE AREA.—342 mi^2.

PERIOD OF RECORD.—October 1993 to current year. Prior to October 2002, published as river only, and river and conduit combined.

GAGE.—Water-stage recorder. Elevation of gage is 1,360 ft above NGVD of 1929, from topographic map.

REMARKS.—Kaweah River Conduit No. 2 diverts up to 130 ft^3/s from right bank of river near diversion dam. Water is returned to Kaweah River 3.8 mi downstream of diversion and 1.9 mi upstream of confluence with North Fork Kaweah River. The record of combined discharges of river and conduit was discontinued September 2002 when the conduit gage location was moved from near the point of diversion (station11208570) to near the powerplant (station 11208818). The conduit-flow records from those two locations may not be equivalent due to gain or losses along the conduit. See schematic diagram of Kaweah River Basin.

COOPERATION.—Records were provided by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 398.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 29,000 ft^3/s, Jan. 2, 1997, gage height unknown; minimum daily, 5.5 ft^3/s, several days in December 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	16	18	42	93	83	350	245	1260	179	99	18
2	23	16	18	39	92	73	355	288	1310	159	82	16
3	22	16	18	69	76	77	292	386	1330	149	80	13
4	19	16	17	86	65	77	259	416	1300	141	34	e12
5	19	16	16	86	53	66	238	389	1160	134	26	e12
6	18	16	16	82	48	73	218	357	1040	127	22	e12
7	18	16	16	75	38	92	233	361	928	114	22	e12
8	17	e5300	16	79	36	100	297	363	839	106	22	e12
9	17	e1800	17	68	31	109	346	331	761	98	22	13
10	17	656	17	69	30	114	347	313	748	103	22	14
11	16	372	16	68	31	121	329	352	689	83	22	14
12	17	291	16	56	94	135	327	442	640	68	22	14
13	16	241	16	52	160	152	333	565	594	57	23	14
14	16	190	18	50	168	150	402	704	604	50	22	13
15	16	150	55	43	115	657	383	669	608	40	22	13
16	16	123	65	48	119	451	326	789	583	34	21	13
17	16	110	87	62	113	345	334	838	552	29	21	15
18	16	93	44	67	89	278	307	860	552	29	21	17
19	16	80	32	70	84	249	280	956	488	31	21	17
20	15	80	54	73	80	241	279	998	393	109	20	16
21	16	81	38	72	74	216	290	1130	352	49	20	15
22	16	77	30	70	68	246	287	1230	332	31	21	15
23	16	68	25	67	68	271	266	1250	293	34	21	14
24	17	57	22	66	66	239	289	1210	235	73	21	14
25	15	44	20	65	83	233	289	1280	220	33	21	14
26	16	31	19	70	101	247	302	1280	230	25	21	14
27	16	26	19	83	100	251	310	1430	237	22	20	16
28	16	23	25	85	88	241	332	1500	243	21	21	17
29	16	21	40	74	---	250	291	1530	240	21	21	16
30	16	18	25	73	---	287	256	1440	220	61	21	16
31	16	---	64	82	---	334	---	1290	---	84	21	---
TOTAL	523	10044	899	2091	2263	6458	9147	25192	18981	2294	875	431
MEAN	16.9	335	29.0	67.5	80.8	208	305	813	633	74.0	28.2	14.4
MAX	23	5300	87	86	168	657	402	1530	1330	179	99	18
MIN	15	16	16	39	30	66	218	245	220	21	20	12
AC-FT	1040	19920	1780	4150	4490	12810	18140	49970	37650	4550	1740	855

e Estimated.

11208600 KAWEAH RIVER BELOW CONDUIT NO. 2, NEAR HAMMOND, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	23.7	69.9	56.6	184	170	250	427	796	685	323	69.3	23.7
MAX	62.2	335	271	1250	439	521	633	1051	2009	1571	254	90.1
(WY)	1999	2003	1997	1997	1996	1995	1996	1996	1998	1998	1998	1998
MIN	11.8	5.70	5.93	20.1	32.1	81.1	230	451	150	11.7	11.2	8.05
(WY)	1996	1995	1995	1994	2001	1999	1999	1994	2001	1994	1994	1994

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1994 - 2003	
ANNUAL TOTAL	66169		79198			
ANNUAL MEAN	181		217		257	
HIGHEST ANNUAL MEAN					512	1998
LOWEST ANNUAL MEAN					99.2	1994
HIGHEST DAILY MEAN	5300	Nov 8	5300	Nov 8	9800	Jan 2 1997
LOWEST DAILY MEAN	14	Sep 23	12	Sep 4	5.5	Dec 21 1994
ANNUAL SEVEN-DAY MINIMUM	14	Sep 22	12	Sep 3	5.6	Dec 17 1994
MAXIMUM PEAK FLOW			15700	Nov 8	29000	Jan 2 1997
MAXIMUM PEAK STAGE			13.32	Nov 8	unknown	
ANNUAL RUNOFF (AC-FT)	131200		157100		186000	
10 PERCENT EXCEEDS	542		598		746	
50 PERCENT EXCEEDS	62		72		68	
90 PERCENT EXCEEDS	16		16		12	

11208730 EAST FORK KAWEAH RIVER NEAR THREE RIVERS, CA

LOCATION.—Lat 36° 27'06", long 118° 47'18", in NW 1/4 sec.14, T.17 S., R.29 E., Tulare County, Hydrologic Unit 18030007, at Conduit No. 1 diversion dam, 1.9 mi downstream of Grunigen Creek confluence, and 8.2 mi east of Three Rivers.

DRAINAGE AREA.—85.8 mi^2.

PERIOD OF RECORD.—May 1952 to September 1955, October 1957 to September 1978, October 1993 to current year. October 1962 to September 1978, October 1993 to September 2002, published as river only, and river and conduit combined. Prior to October 1962, combined only.

CHEMICAL ANALYSES: July 1968 to September 1971.
WATER TEMPERATURE: August 1968 to September 1976.
SEDIMENT DATA: August 1968 to September 1971.

GAGE.—Water-stage recorder and acoustic-velocity meter. Elevation of gage is 2,500 ft above NGVD of 1929, from topographic map. May 15, 1952, to Sept. 30, 1955, at site 200 ft downstream at different datum.

REMARKS.—East Fork Kaweah River Conduit No. 1 diverts up to 30 ft^3/s from left bank of river near diversion dam. Water is returned to Middle Fork Kaweah River, 1.9 mi downstream from mouth of East Fork. The record of combined discharges of river and conduit was discontinued September 2002 when the conduit gage loacation was moved from near the point of diversion (station 11208720) to near the powerplant (station 11208800). The conduit-flow records from those two locations may not be equivalent due to gains or losses along the conduit. See schematic diagram of Kaweah River Basin.

COOPERATION.—Records were provided by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 298.

EXTREMES FOR PERIOD OF RECORD.— Maximum discharge, 13,000 ft^3/s, Dec. 6, 1966, gage height, 21 ft, from floodmarks, from rating curve extended above 850 ft^3/s, on basis of critical-depth measurement of peak flow over diversion dam; no flow Jan. 22, Oct. 18–20, 1962.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	5.6	34	32	35	50	146	126	780	89	68	6.3
2	6.2	5.6	33	33	37	45	156	149	807	79	74	7.2
3	6.2	5.6	31	40	32	43	130	197	813	71	72	21
4	6.3	5.6	31	43	30	45	112	220	771	68	41	19
5	6.3	5.6	29	42	28	41	104	195	674	64	36	15
6	6.3	5.6	24	39	29	41	97	180	509	63	31	14
7	6.3	6.1	23	37	27	42	102	183	436	61	28	12
8	6.0	e1930	21	37	28	43	114	173	376	58	26	10
9	6.3	e907	21	36	28	45	130	161	360	53	22	11
10	6.3	e245	20	40	28	46	136	155	359	48	19	9.6
11	6.3	e149	20	37	32	51	138	164	338	45	18	8.2
12	6.3	e125	18	33	96	57	139	202	318	41	16	7.7
13	6.0	e95	18	32	86	57	157	263	292	42	14	6.9
14	5.6	e92	23	32	63	60	193	314	277	42	11	6.3
15	5.6	e88	42	30	51	248	199	316	279	40	11	7.1
16	5.6	e84	58	30	55	159	167	351	286	37	10	7.9
17	5.6	e81	53	31	49	154	163	373	281	33	9.3	7.7
18	5.6	e77	36	33	43	143	154	393	270	41	9.2	7.7
19	5.6	73	31	33	42	106	142	421	252	37	9.6	7.7
20	5.6	71	35	33	42	91	140	445	230	50	9.3	7.5
21	5.6	65	31	34	38	85	157	500	212	37	12	7.7
22	5.6	52	29	33	37	89	177	565	194	33	18	7.7
23	5.6	46	25	32	36	96	170	570	166	40	11	7.7
24	5.6	43	24	32	36	88	157	604	144	34	7.8	7.7
25	5.6	43	23	31	45	86	140	650	131	32	7.5	7.4
26	5.6	40	24	31	54	90	139	687	126	29	28	6.9
27	5.6	38	24	34	52	93	139	895	119	31	13	6.9
28	5.6	36	29	34	50	94	147	1040	114	36	9.1	6.9
29	5.6	35	33	31	---	110	132	1020	106	40	7.6	6.9
30	5.6	35	27	30	---	124	125	936	97	40	7.4	6.9
31	5.6	---	42	32	---	138	---	806	---	55	6.6	---
TOTAL	181.9	4489.7	912	1057	1209	2660	4302	13254	10117	1469	662.4	272.5
MEAN	5.87	150	29.4	34.1	43.2	85.8	143	428	337	47.4	21.4	9.08
MAX	6.3	1930	58	43	96	248	199	1040	813	89	74	21
MIN	5.6	5.6	18	30	27	41	97	126	97	29	6.6	6.3
AC-FT	361	8910	1810	2100	2400	5280	8530	26290	20070	2910	1310	541

e Estimated.

11208730 EAST FORK KAWEAH RIVER NEAR THREE RIVERS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.39	14.2	37.9	60.4	55.7	74.5	153	355	345	126	25.8	10.4
MAX	22.4	150	594	674	219	251	350	944	1017	775	148	73.9
(WY)	1970	2003	1967	1997	1969	1995	1969	1969	1998	1998	1967	1978
MIN	0.32	0.48	0.23	0.55	0.37	2.28	45.2	54.8	21.3	0.85	0.34	0.23
(WY)	1959	1963	1959	1961	1961	1977	1977	1977	1976	1959	1955	1953

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1952 - 2003	
ANNUAL TOTAL	30850.7		40586.5			
ANNUAL MEAN	84.5		111		104	
HIGHEST ANNUAL MEAN					300	1969
LOWEST ANNUAL MEAN					15.9	1977
HIGHEST DAILY MEAN	1930	Nov 8	1930	Nov 8	8000	Dec 6 1966
LOWEST DAILY MEAN	5.6	Sep 27	5.6	Oct 14	0.00	Jan 22 1962
ANNUAL SEVEN-DAY MINIMUM	5.6	Oct 14	5.6	Oct 14	0.10	Sep 28 1953
MAXIMUM PEAK FLOW			5680	Nov 8	13000	Dec 6 1966
MAXIMUM PEAK STAGE			14.12	Nov 8	21.00	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	61190		80500		75660	
10 PERCENT EXCEEDS	261		278		310	
50 PERCENT EXCEEDS	31		40		23	
90 PERCENT EXCEEDS	6.3		6.3		0.70	

11208800 EAST FORK KAWEAH RIVER CONDUIT NO. 1 AT POWERPLANT, NEAR HAMMOND, CA

LOCATION.—Lat 36° 27'55", long 118° 51'43", in NW 1/4 SE 1/4 sec.8, T.17 S., R.29 E., Tulare County, Hydrologic Unit 18030007, in powerplant penstock, on left bank, 0.3 mi southwest of Hammond, and 1.1 mi upstream from mouth of Salt Creek.

PERIOD OF RECORD.—October 2002 to September 2003.

GAGE.—Acoustic-velocity meter. Elevation of gage is 1,100 ft above NAVD 1988, from topographic map.

REMARKS.—East Fork Kaweah River Conduit No. 1 diverts up to 30 ft^3/s from left bank of river near diversion dam to powerplant. Water is returned to Middle Fork Kaweah River 1.9 mi downstream from mouth of East Fork. Records of discharge for Conduit No. 1 collected near the point of diversion until September 2002 (station 11208720) may not be equivalent to this record due to gains or losses along the conduit. See schematic diagram of Kaweah River Basin.

COOPERATION.—Records were provided by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 298.

EXTREMES FOR PERIOD OF RECORD.— Maximum daily discharge, 22 ft^3/s, many days in 2003; no flow several days in 2003.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5.7	4.4	e21	e21	22	17	21	20	19	e21	21	16
2	e10	4.3	e21	e21	22	17	22	21	20	e21	20	15
3	e7.9	4.3	e21	e21	22	17	21	21	21	e22	11	19
4	7.8	4.2	e21	e21	22	18	22	21	20	e21	20	21
5	7.3	4.2	e21	e21	22	18	21	21	20	e22	20	20
6	6.0	3.9	e20	e21	22	18	21	20	20	e21	21	19
7	5.4	5.5	e20	e21	22	18	21	20	19	e21	21	20
8	4.9	3.9	e20	e21	22	18	22	20	19	e21	21	20
9	4.7	0.00	e20	21	22	18	22	20	20	21	21	20
10	4.7	0.00	e20	21	22	18	21	19	21	21	20	19
11	4.9	0.00	e20	21	21	18	20	19	22	21	20	19
12	4.9	e0.00	e20	21	22	17	20	20	e22	20	20	18
13	4.0	e0.00	e20	21	20	0.01	19	20	e22	20	20	17
14	4.3	e1.5	e20	21	21	0.00	18	20	e22	20	20	16
15	4.0	e1.5	e20	21	21	0.00	18	20	e21	21	20	15
16	3.9	e1.4	e20	21	21	0.00	18	20	e21	21	19	15
17	4.2	e1.3	e20	20	21	0.00	17	20	e22	21	19	15
18	4.1	e2.4	e20	20	21	10	17	20	e22	21	19	14
19	4.0	e5.0	21	20	21	19	17	20	e22	21	17	14
20	3.8	e5.2	21	20	21	20	17	20	e21	21	18	13
21	3.7	e9.0	21	19	21	20	15	20	e21	21	19	12
22	3.9	e19	21	20	21	20	8.9	20	e21	20	21	12
23	4.3	e20	21	20	21	21	8.9	21	e21	21	19	11
24	4.5	e20	21	20	21	21	14	20	e21	21	18	11
25	4.5	e21	21	21	21	21	19	20	e21	21	17	11
26	4.6	e21	21	21	21	21	19	20	e21	21	21	10
27	4.9	e21	21	21	19	22	19	18	e22	21	19	9.7
28	4.8	e21	e21	22	18	21	19	20	e22	21	19	9.4
29	4.7	e21	e21	22	---	21	19	18	e21	16	18	9.3
30	4.8	e21	e21	22	---	21	20	19	e21	9.5	18	9.5
31	4.6	---	e21	22	---	22	---	19	---	21	17	---
TOTAL	155.8	247.00	638	646	593	492.01	556.8	617	628	632.5	594	449.9
MEAN	5.03	8.23	20.6	20.8	21.2	15.9	18.6	19.9	20.9	20.4	19.2	15.0
MAX	10	21	21	22	22	22	22	21	22	22	21	21
MIN	3.7	0.00	20	19	18	0.00	8.9	18	19	9.5	11	9.3
AC-FT	309	490	1270	1280	1180	976	1100	1220	1250	1250	1180	892

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2003, BY WATER YEAR (WY)

MEAN	5.03	8.23	20.6	20.8	21.2	15.9	18.6	19.9	20.9	20.4	19.2	15.0
MAX	5.03	8.23	20.6	20.8	21.2	15.9	18.6	19.9	20.9	20.4	19.2	15.0
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003
MIN	5.03	8.23	20.6	20.8	21.2	15.9	18.6	19.9	20.9	20.4	19.2	15.0
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003

SUMMARY STATISTICS FOR 2003 WATER YEAR

ANNUAL TOTAL	6250.01	
ANNUAL MEAN	17.1	
HIGHEST DAILY MEAN	22	Jan 28
LOWEST DAILY MEAN	0.00	Nov 9
ANNUAL SEVEN-DAY MINIMUM	0.43	Nov 9
ANNUAL RUNOFF (AC-FT)	12400	
10 PERCENT EXCEEDS	21	
50 PERCENT EXCEEDS	20	
90 PERCENT EXCEEDS	4.6	

e Estimated.

11208818 KAWEAH RIVER CONDUIT NO. 2 AT POWERPLANT, NEAR HAMMOND, CA

LOCATION.—Lat 36° 27'42", long 118° 52'46", in NW 1/4 SE 1/4 sec.7, T.17 S., R.29 E., Tulare County, Hydrologic Unit 18030007, in powerplant penstock, on right bank, 0.6 mi downstream from mouth of Salt Creek and 1.3 mi southeast of Hammond.

PERIOD OF RECORD.—October 2002 to September 2003.

GAGE.—Acoustic-velocity meter. Elevation of gage is 1,010 ft above NGVD of 1929, from topographic map.

REMARKS.—Kaweah River Conduit No. 2 diverts up to 130 ft^3/s from right bank of river near diversion dam. Water is returned to Kaweah River 3.8 mi downstream of diversion and 1.9 mi upstream of confluence with North Fork Kaweah River. Records of discharge for Conduit No. 2 collected near the point of diversion until September 2002 (station 11208570) may not be equivalent to this record due to gains or losses along the conduit. See schematic diagram of Kaweah River Basin.

COOPERATION.—Records were provided by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 398.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 80 ft^3/s, Nov. 21, 22, 2002; no flow many days in 2003.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	78	78	71	75	76	75	77	76	73	16
2	0.00	0.00	77	78	71	74	75	76	76	76	73	17
3	0.00	0.00	73	78	69	75	74	77	75	75	72	24
4	0.00	0.00	70	78	68	75	74	76	77	75	70	31
5	0.00	0.00	68	78	69	75	72	75	75	76	68	22
6	0.00	0.00	66	78	70	78	72	74	71	76	63	19
7	0.00	0.00	64	78	69	76	73	75	76	76	56	18
8	0.00	0.00	61	78	69	75	75	74	76	75	50	17
9	0.00	0.00	28	77	69	76	74	74	78	52	44	17
10	0.00	0.00	57	77	70	76	74	75	79	28	39	18
11	0.00	0.00	56	76	69	76	74	75	78	74	36	17
12	0.00	0.00	54	76	72	76	74	75	79	73	33	15
13	0.00	6.5	53	76	77	77	74	77	79	73	30	14
14	0.00	29	61	76	78	77	75	77	79	74	27	13
15	0.00	53	77	76	77	78	75	75	79	74	26	12
16	0.00	68	77	73	78	77	74	77	78	74	26	4.3
17	0.00	67	77	71	78	76	75	77	78	73	23	0.00
18	0.00	68	77	72	77	76	71	76	58	73	22	0.00
19	0.00	70	77	73	75	73	72	76	49	73	19	0.00
20	0.00	74	77	73	72	74	74	74	77	74	19	0.00
21	0.00	80	77	72	73	74	74	76	76	72	19	0.00
22	0.00	80	77	71	73	75	74	76	77	70	31	0.00
23	0.00	79	77	70	73	74	74	77	77	69	22	0.00
24	0.00	79	77	70	72	72	75	77	76	70	19	0.00
25	0.00	78	77	70	75	73	75	77	77	67	17	0.00
26	0.00	78	77	70	76	74	75	76	77	66	19	0.00
27	0.00	78	77	72	74	75	75	77	77	65	19	0.00
28	0.00	77	60	71	75	76	75	75	78	63	17	0.00
29	0.00	77	45	69	---	74	74	72	78	52	14	0.00
30	0.00	78	78	69	---	76	74	74	77	47	13	0.00
31	0.00	---	79	70	---	76	---	74	---	72	11	---
TOTAL	0.00	1219.50	2129	2294	2039	2334	2222	2341	2264	2133	1070	274.30
MEAN	0.000	40.6	68.7	74.0	72.8	75.3	74.1	75.5	75.5	68.8	34.5	9.14
MAX	0.00	80	79	78	78	78	76	77	79	76	73	31
MIN	0.00	0.00	28	69	68	72	71	72	49	28	11	0.00
AC-FT	0.00	2420	4220	4550	4040	4630	4410	4640	4490	4230	2120	544

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2003, BY WATER YEAR (WY)

MEAN	0.000	40.6	68.7	74.0	72.8	75.3	74.1	75.5	75.5	68.8	34.5	9.14
MAX	0.000	40.6	68.7	74.0	72.8	75.3	74.1	75.5	75.5	68.8	34.5	9.14
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003
MIN	0.000	40.6	68.7	74.0	72.8	75.3	74.1	75.5	75.5	68.8	34.5	9.14
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003

SUMMARY STATISTICS FOR 2003 WATER YEAR

ANNUAL TOTAL	20319.80	
ANNUAL MEAN	55.7	
HIGHEST DAILY MEAN	80	Nov 21
LOWEST DAILY MEAN	0.00	Oct 1
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 1
ANNUAL RUNOFF (AC-FT)	40300	
10 PERCENT EXCEEDS	77	
50 PERCENT EXCEEDS	73	
90 PERCENT EXCEEDS	0.00	

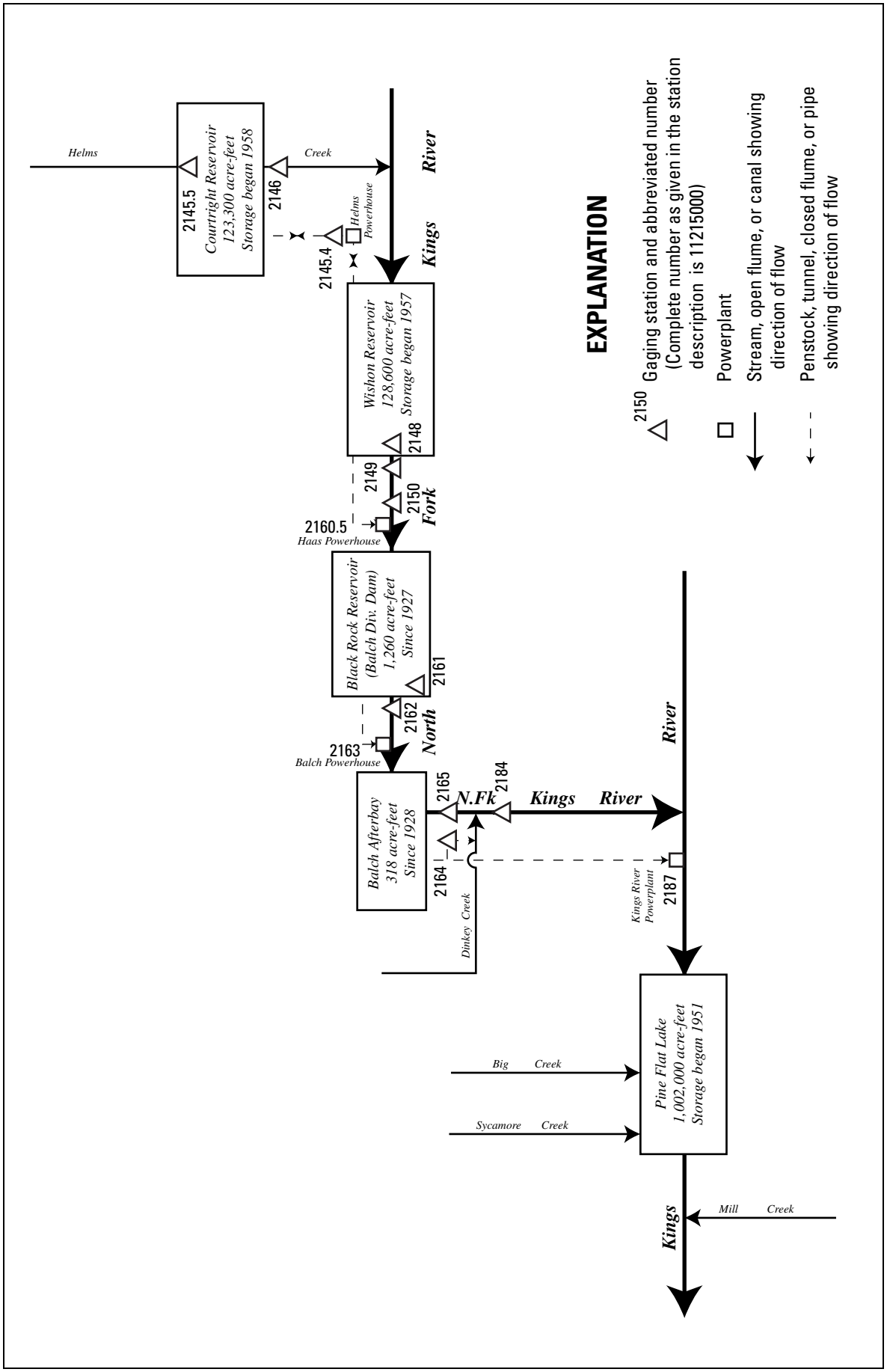


Figure 26. Diversions and storage in Kings River Basin.

11214540 HELMS POWERPLANT NEAR WISHON RESERVOIR, CA

LOCATION.—Lat 37° 02'22", long 118° 57'16", unsurveyed, T.10 S., R.28 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, underground facility, 2.4 mi north of Wishon Dam, and 2.8 mi south of Courtright Dam.

PERIOD OF RECORD.—October 1989 to current year.

GAGE.—Acoustic-velocity meter in penstock. Elevation of powerplant, approximately 1,000 ft below land surface, is 6,286.0 ft above NGVD of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.—Flow is diverted from Courtright Reservoir (station 11214550) through a tunnel to the powerplant which generates electricity during peak power demand, then to Wishon Reservoir (station 11214800). During periods of low power demand, reversible turbines pump water from Wishon Reservoir to Courtright Reservoir. Turbines draft up to 9,000 ft^3/s and pump up to 7,200 ft^3/s. Figures shown represent the net daily flow from Courtright Reservoir to Wishon Reservoir. Negative values represent net flow pumped to Courtright Reservoir. See schematic diagram of Kings River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 175 and 1988.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 5,440 ft^3/s, Dec. 22, 1998, maximum daily pumpage, 6,860 ft^3/s, Jan. 5, 1997.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	187	532	216	-540	-245	-172	239	427	-1260	-634	269	-105
2	322	57	430	203	-842	247	48	-486	559	-586	-576	250
3	-333	-78	222	526	618	334	280	-1470	932	-550	-964	672
4	-417	94	142	-408	583	149	-11	-745	-213	-1320	-829	938
5	-589	-267	120	-732	796	140	-926	9.1	954	-1400	-437	1190
6	-1070	-374	234	-11	586	196	-113	731	1210	-1170	-257	-426
7	421	-251	4.0	366	-6.6	-344	-63	828	-1230	-428	-281	-828
8	-68	-251	241	737	-290	0.00	-129	531	98	-480	-55	-416
9	2.5	-393	-146	350	-26	-96	-45	1060	422	323	58	-560
10	-505	-1310	206	593	414	-207	-155	-2050	382	824	-168	-6.1
11	-1.5	-473	656	-867	347	-33	-24	81	261	748	392	1280
12	-178	-156	487	-649	563	298	-776	369	-198	-432	277	1430
13	-757	-405	401	-183	335	322	-1260	757	442	570	855	774
14	-314	-382	-921	36	-80	223	-784	-285	-1250	790	106	-142
15	-657	438	-891	-130	-168	-461	-649	-540	585	143	-11	-339
16	0.00	-532	-78	69	-229	-1080	-461	-735	976	300	-457	-579
17	0.00	-709	832	229	256	205	0.00	-1910	309	646	-332	-290
18	0.00	5.5	839	-1300	378	570	472	-1710	752	733	504	743
19	0.00	-107	397	-394	501	656	241	-1260	532	-185	774	1040
20	0.00	72	98	268	555	421	-110	-1230	49	895	504	895
21	497	38	-589	71	468	560	127	-1420	-694	1350	654	1930
22	-47	-173	-659	232	-326	-155	-137	-1220	-841	799	85	2190
23	381	-684	478	-17	768	-708	567	-1420	-686	1030	-555	689
24	683	-233	486	-59	630	-24	723	-4230	-369	522	-280	319
25	559	20	-342	-1180	788	12	422	-2590	733	452	1370	195
26	57	80	-120	-974	585	235	-283	-1300	681	-298	1000	-604
27	1300	277	-134	-106	117	-307	-609	-383	1520	281	405	-913
28	639	-196	-938	449	364	-151	52	1660	1260	503	221	-731
29	893	227	-107	-73	---	-1450	-196	1240	760	754	-394	-429
30	-18	-158	129	-131	---	-1060	-55	-534	-366	837	-953	318
31	438	---	517	436	---	-383	---	-2200	---	314	-850	---
TOTAL	1425.00	-5291.5	2210.0	-3189	7439.4	-2063.00	-3615.00	-20024.9	6310	5331	75	8484.9
MEAN	46.0	-176	71.3	-103	266	-66.5	-120	-646	210	172	2.42	283
MAX	1300	532	839	737	796	656	723	1660	1520	1350	1370	2190
MIN	-1070	-1310	-938	-1300	-842	-1450	-1260	-4230	-1260	-1400	-964	-913
AC-FT	2830	-10500	4380	-6330	14760	-4090	-7170	-39720	12520	10570	149	16830

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)

MEAN	141	-104	29.0	23.5	93.9	36.4	-71.3	-305	19.9	145	352	326
MAX	499	298	358	500	469	371	370	194	405	627	850	894
(WY)	1996	2001	1999	2001	1999	1995	1995	1995	2000	1989	1999	1991
MIN	-110	-734	-203	-844	-285	-315	-734	-722	-239	-209	2.42	-169
(WY)	1993	1992	1996	1997	2000	1989	2001	1992	1997	1997	2003	2000

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1989 - 2003	
ANNUAL TOTAL	19453.70		-2908.10			
ANNUAL MEAN	53.3		-7.97		57.1	
HIGHEST ANNUAL MEAN					177	1995
LOWEST ANNUAL MEAN					-77.5	1997
HIGHEST DAILY MEAN	2600	Aug 29	2190	Sep 22	5440	Dec 22 1998
LOWEST DAILY MEAN	-1660	Jun 2	-4230	May 24	-6860	Jan 5 1997
ANNUAL SEVEN-DAY MINIMUM	-897	Apr 15	-1920	May 20	-2730	Apr 16 2001
ANNUAL RUNOFF (AC-FT)	38590		-5770		41380	
10 PERCENT EXCEEDS	819		770		1150	
50 PERCENT EXCEEDS	2.5		4.0		0.00	
90 PERCENT EXCEEDS	-719		-857		-985	

11214550 COURTRIGHT RESERVOIR NEAR NELSON MOUNTAIN, CA

LOCATION.—Lat 37° 04'45", long 118° 58'07", in NW 1/4 NW 1/4 sec.7, T.10 S., R.28 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, at left end of dam on Helms Creek, 2.5 mi upstream from mouth, 4.6 mi east of Nelson Mountain, and 9.7 mi west of Blackcap Mountain.

DRAINAGE AREA.—39.7 mi^2.

PERIOD OF RECORD.—October 1958 to September 1982 (monthend elevation and contents only), October 1982 to current year.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.—Reservoir is formed by rockfill dam completed in 1958. Usable capacity, 123,300 acre-ft, between elevations 7,902 ft, invert of tunnel, and 8,184 ft, elevation of spillway. Dead storage negligible. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Kings River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission Project nos. 175 and 1988.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 124,220 acre-ft, Sept. 26, 1982, elevation, 8,184.57 ft; no contents in 1961–62, 1968, 1970.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 121,208 acre-ft, July 8, elevation, 8,182.72 ft; minimum, 26,879 acre-ft, Mar. 21, elevation, 8,092.74 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated Apr. 13, 1959)

7,902	0	7,970	736	8,035	6,269	8,115	42,141
7,950	267	7,990	1,617	8,060	12,298	8,150	75,878
7,960	462	8,010	3,129	8,085	22,584	8,184	123,286

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31925	27590	40283	37676	44098	29942	36280	48920	116779	110072	96003	94539
2	31283	27446	39412	37297	45754	29459	36438	50124	116606	111168	97108	94023
3	31912	27584	38970	36266	44576	28802	36045	53205	115759	112195	98965	92647
4	32677	27381	38686	37065	43456	28520	36230	54952	117015	114713	100507	90729
5	33799	27901	38456	38516	41905	28258	38109	55194	115837	117409	101276	88368
6	35903	28667	37984	38464	40758	27895	38530	53972	114076	119618	101705	89098
7	35057	29222	37969	37778	40797	28587	38783	52588	116890	120371	102165	90636
8	35148	30502	37508	36344	41384	28599	39224	51790	117189	121208	102193	91391
9	35127	31616	37786	35669	41446	28833	39555	49871	116764	120500	101992	92446
10	36095	34259	37355	34542	40628	29278	40162	54091	116354	118804	102265	92406
11	36081	35190	36045	36653	39957	29390	40567	54165	116119	117283	101419	89858
12	37486	35711	35085	37574	38933	28857	42431	53706	116779	118074	100819	87012
13	37793	36509	34300	37947	38346	28307	45319	52661	116056	116874	99049	85442
14	38390	37260	36202	37925	38545	27986	47128	53880	118677	115290	98796	85582
15	39563	36438	37991	38183	38880	29141	48526	55606	117693	114931	98740	86180
16	39518	37450	38316	37947	39427	31368	49620	57806	115899	114246	99585	87346
17	39472	38783	36330	37457	38948	31030	49880	62449	115368	112916	100166	87940
18	39435	38776	34695	40268	38205	29955	49092	66704	113983	111428	99106	86448
19	39405	38992	33957	41043	37239	28697	48732	70318	112962	111734	97511	84382
20	39352	38880	33806	40521	36131	27931	49127	73989	112870	109875	96471	82588
21	38412	38843	35001	40406	35211	26879	49066	77905	114262	107170	95153	78762
22	38442	39195	36287	39994	35867	27298	49490	81689	115899	105542	94948	74435
23	37720	40521	35275	39957	34355	28827	48500	85849	117267	103509	95934	74069
24	36402	40966	34321	40131	33140	28980	47220	95741	117915	102438	95536	72492
25	35226	40874	34994	42478	31610	29073	46517	102193	116543	101490	93671	71986
26	35113	40774	35218	44463	30463	28753	47422	106103	115196	102007	91711	73113
27	32556	40245	35549	44730	30285	29528	48646	108336	112210	101390	90848	74826
28	31336	40621	37472	43865	29577	29873	48766	106695	109724	100336	90358	76156
29	29515	40200	37778	43913	---	32965	49308	105615	108291	98866	91046	76986
30	29559	40482	37574	44333	---	35331	49585	107887	108908	97219	92889	76308
31	28630	---	36588	43488	---	36466	---	113271	---	96582	94430	---
MAX	39563	40966	40283	44730	45754	36466	49880	113271	118677	121208	102265	94539
MIN	28630	27381	33806	34542	29577	26879	36045	48920	108291	96582	90358	71986
a	8095.66	8112.86	8107.61	8116.70	8097.19	8107.44	8124.02	8177.69	8174.83	8166.29	8164.72	8150.95
b	-3714	11852	-3894	6900	-13911	6889	13119	63686	-4363	-12326	-2152	-18122

CAL YR 2002 b -10924
WTR YR 2003 b 43964

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11214600 HELMS CREEK BELOW COURTRIGHT DAM, CA

LOCATION.—Lat 37° 04'35", long 118° 58'04", in SW 1/4 NW 1/4 sec.7, T.10 S., R.28 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on left bank, 500 ft downstream from Courtright Dam, 2.5 mi upstream from North Fork Kings River, and 17 mi southeast of town of Huntington Lake.

DRAINAGE AREA.—39.7 mi^2.

PERIOD OF RECORD.—October 1958 to February 1986, May 1986 to current year.

REVISED RECORDS.—WSP 1715: 1959. WSP 2130: 1959.

GAGE.—Water-stage recorder and broad-crested weir (with low-water 90° V-notch weir since Nov. 13, 1990). Elevation of gage is 7,836 ft above NGVD of 1929, from photogrammetry survey.

REMARKS.—Flow regulated since October 1958 by Courtright Reservoir (station 11214550) 500 ft upstream. Water bypasses this gage through Helms Powerplant (station 11214540). See schematic diagram of Kings River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission Project nos. 175 and 1988.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,340 ft^3/s, Aug. 29, 1969, gage height, 5.81 ft, maximum gage height, 7.70 ft, Aug. 23, 1978; no flow on several days in 1970.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	8.8	11	10	12	7.9	10	13	27	35	33	26
2	13	8.7	11	11	12	8.0	10	13	28	34	33	26
3	12	8.8	11	12	12	7.8	11	14	28	34	33	26
4	13	8.7	11	12	12	7.8	11	14	28	35	32	26
5	13	8.8	11	13	12	7.7	11	14	29	35	29	25
6	13	8.9	11	14	12	7.7	11	14	30	36	28	25
7	13	11	11	13	12	7.6	11	14	30	35	28	25
8	13	29	11	12	12	7.5	12	14	31	35	28	25
9	13	17	11	11	12	7.5	12	15	31	36	28	25
10	13	14	11	9.8	12	7.3	12	15	31	38	28	25
11	13	14	11	9.9	11	7.3	12	15	31	37	28	25
12	13	14	11	10	11	7.2	12	15	30	37	28	25
13	14	13	11	10	11	7.2	13	15	31	38	28	24
14	14	13	11	10	11	7.2	13	15	31	37	28	24
15	14	13	10	11	11	7.1	13	15	32	36	28	24
16	14	13	10	11	11	7.1	13	15	31	37	28	24
17	14	12	9.9	11	11	7.0	13	15	31	37	28	24
18	14	12	9.7	11	10	7.0	13	15	32	36	28	24
19	14	12	9.4	11	9.9	6.9	13	16	33	36	28	24
20	14	12	9.2	11	9.6	6.9	13	17	32	36	28	24
21	14	11	9.6	12	9.3	7.1	13	18	32	36	28	24
22	14	12	9.9	12	9.0	7.3	13	19	33	35	28	23
23	14	11	9.6	12	8.8	7.5	13	21	33	35	28	23
24	13	11	9.2	12	8.6	7.7	13	22	33	34	28	23
25	13	11	9.4	12	8.4	8.0	13	23	33	34	28	22
26	13	11	9.7	12	8.2	8.3	13	25	34	34	27	22
27	13	11	10	12	8.0	8.6	13	26	34	34	27	22
28	12	11	10	12	7.9	8.9	13	26	33	34	27	23
29	11	11	10	12	---	9.2	13	26	34	34	26	23
30	9.1	11	10	12	---	9.7	13	26	35	33	26	22
31	9.1	---	10	12	---	10	---	26	---	33	26	---
TOTAL	402.2	362.7	319.6	355.7	294.7	240.0	369	551	941	1096	879	723
MEAN	13.0	12.1	10.3	11.5	10.5	7.74	12.3	17.8	31.4	35.4	28.4	24.1
MAX	14	29	11	14	12	10	13	26	35	38	33	26
MIN	9.1	8.7	9.2	9.8	7.9	6.9	10	13	27	33	26	22
AC-FT	798	719	634	706	585	476	732	1090	1870	2170	1740	1430

11214600 HELMS CREEK BELOW COURTRIGHT DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1983, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	32.4	25.7	25.0	43.0	31.3	43.3	77.0	83.9	73.4	111	209	146
MAX	235	145	212	373	408	642	645	488	410	576	734	890
(WY)	1970	1964	1979	1979	1979	1983	1983	1961	1961	1968	1980	1969
MIN	2.29	.42	.051	.095	.17	.42	1.53	3.35	4.02	3.38	2.39	1.97
(WY)	1973	1971	1971	1971	1971	1971	1971	1971	1971	1976	1977	1977

SUMMARY STATISTICS	WATER YEARS 1959 - 1983	
ANNUAL MEAN	75.4	
HIGHEST ANNUAL MEAN	185	1983
LOWEST ANNUAL MEAN	2.29	1971
HIGHEST DAILY MEAN	986	Aug 29 1969
LOWEST DAILY MEAN	.00	Nov 21 1970
ANNUAL SEVEN-DAY MINIMUM	.00	Dec 3 1970
MAXIMUM PEAK FLOW	1340	Aug 29 1969
MAXIMUM PEAK STAGE	7.70	Aug 23 1978
ANNUAL RUNOFF (AC-FT)	54610	
10 PERCENT EXCEEDS	287	
50 PERCENT EXCEEDS	10	
90 PERCENT EXCEEDS	2.5	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.5	8.77	7.98	8.08	8.26	7.62	10.1	13.9	19.8	21.3	18.8	14.4
MAX	58.3	24.0	22.0	20.6	19.7	19.0	30.5	35.6	41.8	41.5	38.8	33.8
(WY)	1985	1999	1999	1999	1999	2000	2001	2002	2001	2001	1999	2000
MIN	5.32	4.15	2.92	3.47	3.30	3.48	3.24	5.15	6.80	6.82	6.07	5.71
(WY)	1991	1986	1987	1987	1991	1991	1998	1990	1990	1990	1992	1990

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1985 - 2003	
ANNUAL TOTAL	8059.5		6533.9			
ANNUAL MEAN	22.1		17.9		12.8	
HIGHEST ANNUAL MEAN					25.1	2001
LOWEST ANNUAL MEAN					5.65	1987
HIGHEST DAILY MEAN	43	Jun 24	38	Jul 10	679	Oct 13 1984
LOWEST DAILY MEAN	8.7	Nov 2	6.9	Mar 19	0.90	Apr 17 1998
ANNUAL SEVEN-DAY MINIMUM	8.8	Oct 31	7.0	Mar 15	1.5	Apr 16 1998
MAXIMUM PEAK FLOW			40	Nov 8	1340	Aug 29 1969
MAXIMUM PEAK STAGE			4.55	Jul 9	7.70	Aug 23 1978
ANNUAL RUNOFF (AC-FT)	15990		12960		9260	
10 PERCENT EXCEEDS	40		33		28	
50 PERCENT EXCEEDS	17		13		8.3	
90 PERCENT EXCEEDS	11		8.8		4.2	

11214800 WISHON RESERVOIR NEAR CLIFF CAMP, CA

LOCATION.—Lat 37° 00'19", long 118° 58'07", in NW 1/4 NW 1/4 sec.6, T.11 S., R.28 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on right end of dam on North Fork Kings River, 1.2 mi north of Cliff Camp, and 20 mi southeast of Big Creek.

DRAINAGE AREA.—177 mi^2.

PERIOD OF RECORD.—December 1957 to September 1982 (monthend elevation and contents only), October 1982 to current year.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.—Reservoir is formed by rockfill dam completed in 1957. Capacity, 128,600 acre-ft, between elevations 6,317 ft, bottom of slide gates, and 6,550 ft, operating crest of spillway gates. Dead storage negligible. Water is diverted to Haas Powerplant (station 11216050). Records, including extremes, represent contents at 2400 hours. See schematic diagram of Kings River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission Project nos. 175 and 1988.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 129,700 acre-ft, July 29, 1958, elevation, 6,551.1 ft; no contents in 1960.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 122,000 acre-ft, June 29, elevation, 6,543.03 ft; minimum, 34,700 acre-ft, Mar. 16, elevation, 6,431.63 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated Apr. 13, 1959)

6,317	40	6,385	11,618	6,440	39,471	6,520	99,807
6,360	2,810	6,400	18,359	6,460	51,900	6,550	128,606
6,370	5,738	6,420	28,362	6,490	74,128	6,551.1	129,733

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77400	69300	52100	41600	38100	40200	38800	46100	75800	119000	108000	84400
2	78000	69200	52400	41900	36300	40200	39700	45800	80900	117000	107000	84200
3	77200	68600	52200	42700	36900	40400	40800	43300	86800	116000	104000	84700
4	76300	68400	51900	41800	37400	40100	41300	41900	89600	113000	102000	85500
5	74700	67500	51600	40300	38400	39800	39900	43100	94000	110000	100000	86800
6	73900	66300	51500	40500	39100	39600	39900	45200	98500	108000	98400	85500
7	72200	65600	51100	41300	38500	38300	40300	47900	98300	107000	97000	83600
8	71600	68300	51000	42900	37700	37800	40500	49500	100000	106000	96000	81600
9	71500	68600	50100	43800	37000	36800	40900	52100	102000	106000	95500	79600
10	70500	65800	49800	45100	37200	36100	41200	48500	105000	107000	94600	79100
11	70200	64500	50400	43400	37200	35600	41900	49100	107000	108000	94300	80800
12	69600	64100	50700	42200	38100	35800	41100	50200	108000	106000	93900	82700
13	67900	63500	50800	41900	38600	36200	39400	52500	109000	107000	94900	83400
14	67000	62800	48800	42100	38300	36500	38300	53700	108000	107000	94300	82300
15	65500	63400	46900	41900	37800	36500	37700	54300	110000	107000	93600	80500
16	65400	61900	46500	42200	36900	34700	37200	54500	113000	107000	92000	78200
17	65400	60000	48300	42800	36800	35400	37100	52700	114000	107000	90700	76700
18	65400	59200	49500	40100	37100	36900	38300	51700	116000	108000	90900	77200
19	65300	58100	49900	39500	37600	38600	39300	51300	118000	107000	92200	78100
20	65100	57700	49600	40200	38100	39800	39600	51500	118000	108000	92200	79200
21	65400	57300	48100	40500	38300	41200	40200	51800	117000	109000	92900	82100
22	64500	56500	46400	41100	37400	41400	40400	52800	116000	110000	92500	85600
23	64600	54700	47000	41300	38300	40500	40200	53700	115000	111000	90600	85900
24	65400	53700	47300	41300	39200	40900	43700	49600	114000	111000	89800	85800
25	66000	53300	46300	39000	40200	41400	44700	48800	115000	111000	90700	85400
26	65700	53000	45600	37100	40800	42400	44800	50500	116000	109000	91400	83700
27	67700	53000	44700	36800	40400	42000	43900	54500	118000	108000	91400	81400
28	68300	52500	42400	37900	40700	41900	44400	63300	120000	108000	90800	79900
29	69300	52800	41800	37700	---	39500	44500	70900	122000	108000	89500	78700
30	68500	52100	41700	37400	---	37900	44700	74600	121000	109000	87200	78500
31	68900	---	42600	38300	---	37700	---	74700	---	108000	85300	---
MAX	78000	69300	52400	45100	40800	42400	44800	74700	122000	119000	108000	86800
MIN	64500	52100	41700	36800	36300	34700	37100	41900	75800	106000	85300	76700
a	6483.40	6460.25	6445.30	6438.02	6442.03	6436.91	6448.76	6409.74	6541.96	6529.45	6503.49	6495.32
b	-10500	-16800	-9500	-4300	2400	-3000	7000	30000	46300	-13000	-22700	-6800

CAL YR 2002 b -7400
WTR YR 2003 b -900

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11214900 NORTH FORK KINGS RIVER BELOW WISHON RESERVOIR, CA

LOCATION.—Lat 37° 00'05", long 118° 58'20", in SE 1/4 NE 1/4 sec.1, T.11 S., R.27 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on right bank, 1,700 ft downstream from Wishon Dam, and 20 mi southeast of Big Creek.

DRAINAGE AREA.—178 mi^2.

PERIOD OF RECORD.—October 1986 to current year (since October 1990, low-flow records only).

GAGE.—Water-stage recorder, 90° V-notch steel weir and concrete control. Elevation of gage is 6,300 ft above NGVD of 1929, from topographic map.

REMARKS.—No records computed above 25 ft^3/s. Flow regulated by Wishon Reservoir (station 11214800) and Courtright Reservoir (station 11214550). Water diverted for power from Wishon Reservoir by tunnel to Haas Powerplant (station 11216050). See schematic diagram of Kings River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission Project nos. 175 and 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	25	21	19	21	18	18	20	---	---	---	---
2	---	25	21	20	21	18	19	21	---	---	---	---
3	---	25	21	20	21	18	19	22	---	---	---	---
4	---	25	21	21	21	18	19	22	---	---	---	---
5	---	25	21	22	21	19	19	22	---	---	---	---
6	---	24	20	22	20	19	19	21	---	---	---	---
7	25	---	20	22	20	19	19	21	---	---	---	---
8	25	---	20	22	20	19	19	21	---	---	---	---
9	25	---	20	22	20	19	19	22	---	---	---	---
10	25	---	19	22	20	18	19	23	---	---	---	---
11	25	25	19	21	20	18	19	22	---	---	---	---
12	25	24	19	21	20	18	19	21	---	---	---	---
13	25	24	19	21	20	18	20	21	---	---	---	---
14	---	24	18	21	20	18	---	22	---	---	---	---
15	---	24	18	21	20	---	20	22	---	---	---	---
16	24	24	18	21	19	---	20	22	---	---	---	---
17	24	24	18	21	19	19	20	22	---	---	---	---
18	24	23	19	21	19	19	19	22	---	---	---	---
19	24	23	19	21	19	19	20	21	---	---	---	---
20	24	23	19	21	19	19	20	21	---	---	---	---
21	24	22	18	21	18	19	20	21	---	---	---	---
22	24	22	18	21	19	20	20	21	---	---	---	---
23	24	22	---	21	18	19	20	21	---	---	---	---
24	24	21	20	21	18	19	20	21	---	---	---	---
25	24	21	19	21	18	19	21	21	---	---	---	---
26	24	21	19	21	18	19	21	20	---	---	---	---
27	24	21	19	21	18	19	20	21	---	---	---	---
28	25	21	19	21	18	19	21	21	---	---	---	---
29	25	21	19	21	---	19	21	22	---	---	---	---
30	25	21	19	20	---	18	20	24	---	---	---	---
31	25	---	18	20	---	18	---	---	---	---	---	---
TOTAL	---	---	---	651	545	---	---	---	---	---	---	---
MEAN	---	---	---	21.0	19.5	---	---	---	---	---	---	---
MAX	---	---	---	22	21	---	---	---	---	---	---	---
MIN	---	---	---	19	18	---	---	---	---	---	---	---
AC-FT	---	---	---	1290	1080	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1990, BY WATER YEAR (WY)

MEAN	17.7	18.2	16.5	16.5	16.6	17.3	16.7	19.5	20.0	15.3	13.5	13.6
MAX	22.9	23.5	22.8	22.0	21.5	22.5	20.3	25.6	28.3	19.5	17.0	17.1
(WY)	1987	1987	1987	1987	1987	1987	1989	1987	1987	1989	1989	1989
MIN	14.9	16.2	8.60	8.23	8.52	9.84	8.74	10.2	8.67	9.01	8.40	8.20
(WY)	1988	1988	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990

SUMMARY STATISTICS	WATER YEARS 1987 - 1990	
ANNUAL MEAN	16.8	
HIGHEST ANNUAL MEAN	20.9	1987
LOWEST ANNUAL MEAN	10.1	1990
HIGHEST DAILY MEAN	30	Mar 6 1987
LOWEST DAILY MEAN	7.2	Feb 18 1990
ANNUAL SEVEN-DAY MINIMUM	7.8	Jan 5 1990
MAXIMUM PEAK FLOW	35	Nov 23 1988
MAXIMUM PEAK STAGE	3.59	Nov 23 1988
ANNUAL RUNOFF (AC-FT)	12150	
10 PERCENT EXCEEDS	23	
50 PERCENT EXCEEDS	17	
90 PERCENT EXCEEDS	8.6	

11215000 NORTH FORK KINGS RIVER NEAR CLIFF CAMP, CA

LOCATION.—Lat 36° 59'38", long 118° 58'49", in NE 1/4 NW 1/4 sec.12, T.11 S., R.27 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on right bank, at Cliff Camp Bridge, 1 mi northwest of Cliff Camp, 1.2 mi downstream from Wishon Dam, and 2 mi downstream from Woodchuck Creek.

DRAINAGE AREA.—181 mi^2.

PERIOD OF RECORD.—August 1921 to current year (since October 1990, high-flow records only). Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.—WSP 1715: 1951, drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 6,143.95 ft above NGVD of 1929 (levels by San Joaquin Light and Power Corp.). Prior to Nov. 24, 1922, at site 1 mi upstream at different datum.

REMARKS.—No records computed below 25 ft^3/s. Flow regulated since Dec. 5, 1957, by Wishon Reservoir (station 11214800) 1.2 mi upstream, and since Oct. 17, 1958, by Courtright Reservoir (station 11214550). Water diverted for power from Wishon Reservoir by tunnel to Haas Powerplant (station 11216050) since Dec. 10, 1958. Monthly chemical, trace-element, biological, and sediment data are available in files of the U.S. Geological Survey and in U.S. Geological Survey Open-File Report 88-479. Also available in the same report are daily maximum, minimum, and mean specific-conductance and water-temperature values. See schematic diagram of Kings River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission Project nos. 175 and 1988.

EXTREMES FOR PERIOD OF RECORD (Prior to regulation by Wishon Reservoir).—Maximum discharge, 14,000 ft^3/s, Dec. 11, 1937, gage height, 18.0 ft, from floodmarks, from rating curve extended above 4,200 ft^3/s, on basis of velocity-area studies.
From 1957 to 1990.—Maximum discharge, 5,110 ft^3/s, Sept. 5, 1978, gage height, 11.96 ft.

EXTREME FOR CURRENT YEAR (Maximum only).—Maximum discharge, 389 ft^3/s, Nov. 8, gage height, 5.22 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	---	---	---	27	---	---	29	30	37	31	26
2	35	---	---	---	---	25	27	34	29	37	31	26
3	34	---	---	25	---	---	27	45	30	36	31	26
4	33	---	---	---	---	---	26	49	31	36	30	26
5	31	---	---	25	---	---	26	40	32	35	30	26
6	30	---	---	---	---	---	25	36	32	35	30	26
7	28	90	---	---	---	---	27	35	33	35	29	26
8	27	171	---	---	---	---	29	37	33	34	29	26
9	26	37	---	---	---	28	29	37	32	34	29	26
10	---	28	---	26	---	---	27	36	32	34	29	25
11	---	25	---	---	---	---	26	35	33	33	29	25
12	---	---	---	---	---	---	25	34	34	33	29	25
13	---	---	---	---	---	---	37	34	34	33	29	26
14	---	---	---	---	---	---	35	38	35	33	29	26
15	---	---	---	---	---	---	36	39	35	32	29	26
16	---	---	---	---	26	25	38	35	35	31	29	25
17	---	---	---	---	26	25	36	33	35	31	28	27
18	---	---	---	---	---	26	32	32	35	31	28	26
19	---	---	---	---	---	27	31	30	35	31	28	26
20	---	---	---	---	25	28	31	29	36	31	28	26
21	---	---	---	---	25	28	35	29	37	31	28	27
22	---	---	---	---	26	28	33	28	37	31	28	27
23	---	---	---	---	29	28	32	28	37	31	28	28
24	---	---	---	---	30	27	32	28	37	31	28	29
25	---	---	---	---	---	26	35	27	36	31	28	29
26	---	---	---	25	---	26	33	26	36	31	28	29
27	---	---	---	26	---	27	31	26	37	31	28	29
28	---	---	---	---	---	26	38	27	37	31	28	28
29	---	---	---	---	---	---	34	29	37	31	28	28
30	---	---	---	---	---	---	30	29	37	31	27	27
31	---	---	---	26	---	---	---	30	---	31	27	---
TOTAL	---	---	---	---	---	---	---	1024	1029	1013	891	798
MEAN	---	---	---	---	---	---	---	33.0	34.3	32.7	28.7	26.6
MAX	---	---	---	---	---	---	---	49	37	37	31	29
MIN	---	---	---	---	---	---	---	26	29	31	27	25
AC-FT	---	---	---	---	---	---	---	2030	2040	2010	1770	1580
a	11380	12120	16080	2040	17650	10830	5220	6780	17030	25820	24690	22890

a Diversion, in acre-feet, to Haas Powerplant (station 11216050), provided by Pacific Gas and Electric Co.

11215000 NORTH FORK KINGS RIVER NEAR CLIFF CAMP, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1957, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	18.3	49.3	84.9	62.2	93.6	197	709	1670	1177	211	27.7	9.45
MAX	121	550	605	300	212	402	1210	3232	3395	1161	131	37.4
(WY)	1946	1951	1956	1956	1945	1956	1926	1952	1938	1938	1938	1938
MIN	5.54	6.25	7.00	11.6	20.3	36.0	306	357	35.7	5.52	1.83	1.60
(WY)	1956	1930	1931	1924	1948	1924	1948	1934	1924	1924	1924	1924

SUMMARY STATISTICS	WATER YEARS 1922 - 1957		
ANNUAL MEAN	360		
HIGHEST ANNUAL MEAN	749		1938
LOWEST ANNUAL MEAN	80.2		1924
HIGHEST DAILY MEAN	7460	Dec 23	1955
LOWEST DAILY MEAN	1.3	Sep 9	1924
ANNUAL SEVEN-DAY MINIMUM	1.4	Sep 9	1924
MAXIMUM PEAK FLOW	14000	Dec 11	1937
MAXIMUM PEAK STAGE	18.00	Dec 11	1937
ANNUAL RUNOFF (AC-FT)	260600		
10 PERCENT EXCEEDS	1240		
50 PERCENT EXCEEDS	63		
90 PERCENT EXCEEDS	6.5		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1990, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.3	17.5	15.8	17.8	18.4	20.7	36.1	96.1	173	97.3	17.9	19.1
MAX	24.5	29.4	41.0	49.8	66.9	49.2	298	1170	1339	918	27.0	84.1
(WY)	1987	1966	1967	1969	1986	1986	1986	1969	1983	1967	1986	1978
MIN	7.67	7.53	7.45	7.62	8.20	9.21	8.62	8.45	8.21	7.37	7.56	7.83
(WY)	1960	1960	1963	1964	1964	1961	1961	1961	1961	1964	1961	1964

SUMMARY STATISTICS	WATER YEARS 1960 - 1990		
ANNUAL MEAN	45.5		
HIGHEST ANNUAL MEAN	241		1969
LOWEST ANNUAL MEAN	10.0		1964
HIGHEST DAILY MEAN	3040	Jul 1	1967
LOWEST DAILY MEAN	3.9	Dec 9	1967
ANNUAL SEVEN-DAY MINIMUM	4.2	Dec 6	1967
MAXIMUM PEAK FLOW	5110	Sep 5	1978
MAXIMUM PEAK STAGE	11.96	Sep 5	1978
ANNUAL RUNOFF (AC-FT)	32970		
10 PERCENT EXCEEDS	29		
50 PERCENT EXCEEDS	17		
90 PERCENT EXCEEDS	8.6		

11216100 BLACK ROCK RESERVOIR NEAR BALCH CAMP, CA

LOCATION.—Lat 36° 55'13", long 119° 01'20", in NW 1/4 NW 1/4 sec.6, T.12 S., R.27 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on right bank, at intake tower on North Fork Kings River, and 5.6 mi east-northeast of Balch Camp.

DRAINAGE AREA.—233 mi^2.

PERIOD OF RECORD.—October 1986 to current year.

GAGE.—Water-stage recorder. Elevation of gage is NGVD of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.—Reservoir is formed by concrete arch-type dam, completed to elevation 4,054 ft in 1927 and raised to 4,098 ft in 1958. Storage began in 1927. Spillway is ungated. Capacity, 1,260 acre-ft, between elevation 4,054 ft, fish release valve, and 4,098 ft, top of spillway crest. Water is diverted from reservoir through tunnel to Balch Powerplant 3.7 mi downstream and returns to the North Fork Kings River at Balch Afterbay. Flow is again diverted from Balch Afterbay in a closed conduit to Kings River Powerplant. Records, including extremes, represent contents at 2400 hours. See schematic diagram of Kings River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 175 and 1988.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 1,324 acre-ft, July 7, 1998, elevation, 4,099.81 ft; minimum, 359 acre-ft, Nov. 3, 1986, elevation, 4,064.51 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 1,280 acre-ft, Nov. 8, elevation, 4,098.57 ft; minimum, 225 acre-ft, Oct. 1, elevation, 4,055.51 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas and Electric Co., dated Dec. 1, 1958)

4,050	165	4,065	367	4,080	706	4,095	1,157
4,055	219	4,070	465	4,085	846	4,100	1,331
4,060	286	4,075	579	4,090	996	4,108	1,635

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225	925	890	911	987	1040	775	884	1070	1070	1030	1060
2	1130	911	877	918	1010	1050	871	944	1130	1010	901	914
3	1070	897	1010	1030	1120	1030	985	940	983	1070	950	874
4	1110	859	1000	1100	1160	1080	971	900	990	972	950	860
5	1130	865	960	936	1100	1120	1050	1070	968	994	861	902
6	1080	871	950	1110	1030	1020	1050	1040	990	1030	843	1010
7	286	780	994	1190	884	966	936	859	764	1060	788	1080
8	1090	1280	1030	1060	960	960	1030	994	820	1030	884	1050
9	1110	837	962	855	947	975	925	1150	1100	1030	812	972
10	1120	855	936	807	941	1130	865	1100	968	961	776	970
11	1150	930	832	975	1070	1050	870	1040	892	992	770	956
12	1080	960	791	865	920	936	778	953	916	982	770	949
13	1040	975	769	832	1010	848	847	953	977	989	998	938
14	1050	956	680	884	871	778	936	235	964	986	1040	972
15	1060	1010	772	744	756	1230	897	987	1060	942	923	978
16	1080	997	791	762	701	818	873	809	1000	919	962	952
17	1100	967	758	791	734	807	779	861	919	937	947	983
18	1130	890	729	877	777	871	774	854	874	937	808	945
19	1150	843	733	691	841	929	813	950	850	850	871	895
20	1090	1030	738	744	881	953	911	764	892	861	843	796
21	1130	1010	707	716	950	1010	877	943	879	885	876	764
22	987	1050	744	865	1090	1070	1040	1030	861	927	824	796
23	953	1060	716	855	991	940	990	926	809	944	833	966
24	918	1080	780	838	826	877	894	1010	803	912	1190	944
25	871	1110	813	960	907	818	990	1090	892	948	1160	855
26	826	1100	710	927	966	784	1060	1040	892	910	1160	855
27	786	1130	778	862	1080	1020	1020	1110	938	929	1170	824
28	769	1180	888	859	1030	994	985	1180	964	892	1130	833
29	843	936	859	832	---	907	1050	883	892	895	957	718
30	890	906	933	784	---	800	1100	1020	1050	942	1020	827
31	920	---	1080	790	---	815	---	820	---	963	1040	---
MAX	1150	1280	1080	1190	1160	1230	1100	1180	1130	1070	1190	1080
MIN	225	780	680	691	701	778	774	235	764	850	770	718
a	4087.51	4087.03	4092.66	4083.03	4091.09	4083.27	4093.27	4084.09	4091.72	4088.92	4091.41	4084.33
b	-180	-14	174	-290	240	-215	285	-280	230	-87	77	-213

CAL YR 2002b 166
WTR YR 2003b -273

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11216200 NORTH FORK KINGS RIVER BELOW BALCH DIVERSION DAM, CA

LOCATION.—Lat 36° 54'10", long 119° 03'00", in NE 1/4 sec.8, T.12 S., R.27 E., Fresno County, Hydrologic Unit 18030010, on right bank, 2.0 mi downstream from Balch Diversion Dam (Black Rock Reservoir), 400 ft upstream from Weir Creek, and 4 mi east of Balch Camp.

DRAINAGE AREA.—238 mi^2.

PERIOD OF RECORD.—October 1983 to current year.

GAGE.—Water-stage recorder and sharp-crested rectangular weir. Elevation of gage is 2,890 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow regulated by Courtright Reservoir (station 11214550), Wishon Reservoir (station 11214800), and Balch Diversion Reservoir (station 11216100). Water diverted past station from Black Rock Reservoir through tunnel to Balch Powerplant (station 11216300) 1.7 mi downstream and returns to the North Fork Kings River at Balch Afterbay. Flow is again diverted from Balch Afterbay in a closed conduit to Kings River Powerplant. See schematic diagram of Kings River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission Project nos. 175 and 1988.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,690 ft^3/s, Jan. 2, 1997, gage height, 10.54 ft, from rating curve extended above 827 ft^3/s, on basis of computation of spill over Balch Diversion Dam; minimum daily, 0.62 ft^3/s, Oct. 19, 2000.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	5.8	7.8	11	8.2	11	9.2	13	9.5	7.8	6.9	6.7
2	6.4	5.8	7.8	12	8.8	10	12	15	9.7	7.8	6.9	6.7
3	6.3	5.9	7.7	11	8.7	10	11	27	9.5	7.9	6.7	7.8
4	6.3	5.8	8.1	11	8.8	11	11	35	9.2	8.0	6.7	6.4
5	6.4	5.6	8.1	10	8.8	11	11	22	9.1	7.6	6.5	6.2
6	6.4	5.6	8.0	10	8.7	11	11	19	9.1	7.6	6.3	7.4
7	6.3	6.9	7.9	9.7	8.5	10	10	18	9.2	7.6	6.2	8.8
8	6.3	1230	8.1	10	8.2	9.8	10	20	8.7	7.6	6.4	8.6
9	6.3	385	8.2	10	8.3	9.7	10	21	9.1	7.6	6.4	7.3
10	6.3	14	8.0	9.0	8.4	9.7	9.7	18	9.5	7.5	6.2	6.9
11	6.4	11	7.9	9.0	8.5	9.8	9.5	16	9.4	7.2	6.0	6.9
12	6.4	10	7.5	9.0	11	9.7	9.5	15	9.0	7.3	6.0	6.8
13	6.2	9.7	7.2	10	11	9.4	21	14	9.2	7.2	6.4	6.8
14	6.1	9.3	7.6	8.5	12	9.2	24	14	9.4	7.2	6.6	6.8
15	6.1	9.0	8.9	8.5	9.6	328	16	14	9.1	7.0	6.6	6.9
16	6.2	9.1	15	8.3	13	22	13	14	9.3	6.7	6.6	6.9
17	6.2	9.1	12	8.3	9.9	17	14	13	9.0	6.7	6.6	6.6
18	6.3	9.1	9.8	8.5	9.3	14	14	13	8.6	6.7	6.2	6.8
19	6.4	8.8	9.0	8.3	9.4	12	13	12	8.4	6.8	6.1	6.6
20	6.3	8.7	9.8	8.3	9.4	12	12	12	8.1	6.5	6.0	6.5
21	6.2	9.2	8.5	8.3	9.2	11	15	11	8.3	6.4	6.1	6.2
22	6.3	9.4	8.3	9.0	9.1	11	19	11	8.1	6.5	6.1	6.1
23	6.0	9.5	8.0	8.0	9.3	11	16	11	7.9	6.7	6.1	6.2
24	5.9	8.8	8.0	9.0	9.0	11	14	11	7.7	6.7	6.3	6.7
25	5.8	8.5	8.3	9.0	10	11	14	11	7.4	6.6	7.1	6.6
26	5.7	8.6	8.0	9.0	11	10	14	11	7.6	6.6	7.3	6.4
27	5.5	8.5	12	8.0	13	10	13	11	7.6	6.6	7.0	6.4
28	5.5	8.5	19	9.0	11	10	16	11	7.6	6.3	7.2	6.3
29	5.6	8.7	13	9.0	---	9.9	14	10	7.7	6.4	6.9	6.3
30	5.8	8.0	13	8.2	---	9.5	13	9.7	7.3	6.5	6.5	6.0
31	5.8	---	11	8.0	---	9.3	---	10	---	6.7	6.6	---
TOTAL	190.0	1851.9	291.5	284.9	270.1	660.0	398.9	462.7	259.3	218.3	201.5	203.6
MEAN	6.13	61.7	9.40	9.19	9.65	21.3	13.3	14.9	8.64	7.04	6.50	6.79
MAX	6.4	1230	19	12	13	328	24	35	9.7	8.0	7.3	8.8
MIN	5.5	5.6	7.2	8.0	8.2	9.2	9.2	9.7	7.3	6.3	6.0	6.0
AC-FT	377	3670	578	565	536	1310	791	918	514	433	400	404
a	11540	17490	18250	7280	22670	19550	14510	25270	27080	28870	26030	24820

a Diversion, in acre-feet, to Balch Powerplant (station 11216300), provided by Pacific Gas and Electric Co.

11216200 NORTH FORK KINGS RIVER BELOW BALCH DIVERSION DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.68	11.1	7.78	30.5	31.5	45.8	73.3	165	289	129	7.25	6.57
MAX	10.9	61.7	23.5	440	201	441	541	1004	1792	1194	23.7	10.7
(WY)	2000	2003	1997	1997	1997	1986	1986	1995	1998	1998	1998	1998
MIN	3.48	3.54	3.18	3.16	4.69	4.61	3.59	3.25	2.84	3.10	3.14	3.06
(WY)	1988	1991	1987	1987	1985	1994	1987	1987	1987	1987	1987	1987

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1984 - 2003	
ANNUAL TOTAL	4378.3		5292.7			
ANNUAL MEAN	12.0		14.5		66.9	
HIGHEST ANNUAL MEAN					353	1995
LOWEST ANNUAL MEAN					3.97	1987
HIGHEST DAILY MEAN	1230	Nov 8	1230	Nov 8	4990	Jul 8 1998
LOWEST DAILY MEAN	5.2	Sep 9	5.5	Oct 27	0.62	Oct 19 2000
ANNUAL SEVEN-DAY MINIMUM	5.4	Sep 4	5.7	Oct 25	0.74	Oct 19 2000
MAXIMUM PEAK FLOW			3980	Nov 8	7690	Jan 2 1997
MAXIMUM PEAK STAGE			7.45	Nov 8	10.54	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	8680		10500		48460	
10 PERCENT EXCEEDS	9.5		14		27	
50 PERCENT EXCEEDS	7.2		8.6		6.8	
90 PERCENT EXCEEDS	5.9		6.3		3.8	

11216400 DINKEY CREEK SIPHON FISH RELEASE AT BALCH CAMP, CA

LOCATION.—Lat 36° 54'29", long 119° 07'27", in NW 1/4 NE 1/4 sec.10, T.12 S., R.26 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, in concrete vault, on right bank of Dinkey Creek, 200 ft downstream from Dinkey Creek Siphon, at invert of Kings River Powerplant Conduit, and 1,700 ft northwest of Balch Camp.

PERIOD OF RECORD.—October 1986 to current year.

GAGE.—Ultrasonic flowmeter. Elevation of gage is 1,320 ft above NGVD of 1929, from topographic map. Prior to August 1995, pressure-differential flowmeter at same site and datum.

REMARKS.—Water diverted from North Fork Kings River is released into Dinkey Creek for fishery enhancement from June 1 to Sept. 30 when natural flow of Dinkey Creek is equal to or less than 60 ft^3/s. See schematic diagram of Kings River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission Project nos. 175 and 1988.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 25 ft^3/s, several days in June and July 1997; no flow many days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	11	11	10	11	11	11	11	11	11	11	12
2	12	11	11	11	11	11	11	11	11	11	12	12
3	12	11	10	10	11	11	11	11	11	11	11	12
4	12	11	11	11	11	11	11	11	11	12	11	11
5	12	11	11	10	11	11	11	11	11	12	11	12
6	11	11	10	11	11	11	11	11	11	12	11	12
7	11	11	11	11	11	11	11	11	11	12	11	12
8	11	11	11	11	11	11	11	11	11	12	11	11
9	10	11	11	10	11	11	11	11	11	11	12	12
10	11	11	10	11	11	11	11	11	11	11	12	12
11	10	11	11	10	11	11	11	11	11	12	11	11
12	11	11	11	11	11	11	11	11	12	11	12	11
13	10	11	11	11	11	11	11	11	11	11	12	11
14	11	11	10	11	11	11	11	11	11	11	12	11
15	10	11	11	11	11	11	11	11	11	11	11	12
16	11	10	11	10	11	11	11	11	11	11	12	12
17	10	11	11	11	11	11	11	11	11	11	12	12
18	11	11	10	11	11	11	11	11	12	11	12	11
19	10	11	11	10	11	11	11	11	11	12	12	11
20	11	10	11	11	11	11	11	11	12	11	12	11
21	10	10	11	11	11	11	11	11	12	11	12	11
22	11	11	11	11	11	11	11	11	12	11	12	11
23	11	11	11	11	11	11	11	11	11	11	12	11
24	11	10	10	11	11	11	11	11	11	11	12	12
25	10	10	11	11	11	11	11	11	11	11	12	12
26	11	11	11	11	11	11	11	11	11	11	11	12
27	11	11	11	11	11	11	11	11	11	11	12	12
28	11	11	10	11	11	11	11	11	11	11	11	12
29	11	10	11	11	---	11	11	11	11	11	12	12
30	11	11	10	11	---	11	11	11	11	11	12	12
31	11	---	11	11	---	11	---	11	---	11	12	---
TOTAL	338	324	333	334	308	341	330	341	335	348	361	348
MEAN	10.9	10.8	10.7	10.8	11.0	11.0	11.0	11.0	11.2	11.2	11.6	11.6
MAX	12	11	11	11	11	11	11	11	12	12	12	12
MIN	10	10	10	10	11	11	11	11	11	11	11	11
AC-FT	670	643	661	662	611	676	655	676	664	690	716	690

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	6.95	3.17	2.00	1.50	1.37	1.31	2.05	1.95	3.60	6.97	8.32	9.28
MAX	15.4	11.5	10.9	10.8	11.0	11.0	12.8	11.1	11.5	16.6	14.4	15.0
(WY)	2000	2002	2002	2003	2002	2002	2002	2001	2002	1997	1994	1992
MIN	0.15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.09	5.33
(WY)	1996	1987	1987	1987	1987	1987	1987	1987	1991	1993	1998	1987

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	4061.6		4041			
ANNUAL MEAN	11.1		11.1		4.05	
HIGHEST ANNUAL MEAN					11.2	2002
LOWEST ANNUAL MEAN					0.73	1995
HIGHEST DAILY MEAN	16	Apr 7	12	Oct 1	25	Jun 28 1997
LOWEST DAILY MEAN	8.9	Jun 4	10	Oct 9	0.00	Oct 3 1986
ANNUAL SEVEN-DAY MINIMUM	10	Jan 17	10	Oct 9	0.00	Oct 3 1986
ANNUAL RUNOFF (AC-FT)	8060		8020		2940	
10 PERCENT EXCEEDS	12		12		11	
50 PERCENT EXCEEDS	11		11		0.00	
90 PERCENT EXCEEDS	10		11		0.00	

11216500 NORTH FORK KINGS RIVER ABOVE DINKEY CREEK, AT BALCH CAMP, CA

LOCATION.—Lat 36° 54'12", long 119° 07'14", in SE 1/4 NE 1/4 sec.10, T.12 S., R.26 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on left bank, 12 ft downstream from bridge at Balch Camp, 300 ft upstream from Dinkey Creek, and 9.3 mi east of Trimmer.

DRAINAGE AREA.—250 mi^2.

PERIOD OF RECORD.—October 1919 to September 1930 (published as "above Dinkey Creek"), March 1960 to current year. Records for water year 1920 incomplete; yearly estimate and monthly discharge only for some months, published in WSP 1315-A.
WATER TEMPERATURE: Water years 1968–79.

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder and Cipolletti weir since May 9, 1988. Concrete control Apr. 15, 1966, to May 9, 1988. Elevation of gage is 1,240 ft above NGVD of 1929, from river-profile map. October 1919 to Sept. 30, 1930, and Mar. 24, 1960, to Apr. 14, 1966, at site 100 ft downstream at different datum.

REMARKS.—Flow regulated by Courtright Reservoir (station 11214550), Wishon Reservoir (station 11214800), and Balch Diversion Reservoir (station 11216100); Balch Afterbay, capacity, 318 acre-ft; and Haas and Balch Powerplants. Water is diverted from Balch Afterbay to Kings River Powerplant, beginning Mar. 1, 1962. See schematic diagram of Kings River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 175 and 1988.

EXTREMES FOR PERIOD OF RECORD (prior to regulation by Wishon and Courtright Reservoirs).—Maximum discharge, 6,080 ft^3/s, June 4, 1922, gage height, 12.18 ft, site and datum then in use; minimum, 4.0 ft^3/s, Aug. 29 to Sept. 1, 1924. From 1960 to current year: Maximum discharge, 14,000 ft^3/s, Feb. 1, 1963, gage height, 13.24 ft, site and datum then in use, backwater from Dinkey Creek, from rating curve extended above 890 ft^3/s; minimum daily, 0.30 ft^3/s, Nov. 3, 1964.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	20	20	21	18	19	19	19	19	20	21	24
2	19	20	20	21	18	19	19	19	19	20	20	24
3	20	20	19	20	18	19	19	20	20	19	20	26
4	20	20	18	20	18	19	19	22	20	20	20	28
5	20	20	18	19	18	19	19	22	19	20	20	28
6	19	20	20	19	18	19	19	21	20	20	20	28
7	20	22	21	19	18	19	18	21	19	21	20	28
8	20	e24	21	18	18	19	19	20	19	21	20	28
9	20	e209	21	35	18	19	18	21	20	20	20	25
10	20	e476	21	187	18	19	18	20	20	21	20	20
11	21	e73	21	242	18	19	18	20	19	21	20	22
12	20	e67	21	74	18	19	18	20	19	20	20	23
13	21	e64	21	158	19	19	19	20	19	20	21	23
14	21	e38	21	112	19	18	20	20	19	24	20	23
15	21	23	20	59	19	23	20	20	20	22	20	23
16	22	20	20	161	19	131	19	20	20	19	20	23
17	23	20	20	86	19	21	19	20	20	19	20	23
18	21	20	22	69	19	21	19	20	20	19	20	23
19	20	20	25	52	19	20	19	20	20	19	20	23
20	20	20	21	188	18	20	19	20	20	20	20	23
21	20	20	21	72	19	20	19	20	21	20	21	23
22	20	20	22	80	18	20	20	19	20	21	23	22
23	20	20	21	19	19	19	21	19	20	21	24	22
24	20	20	20	18	18	19	20	20	20	21	25	23
25	20	19	20	18	18	19	20	20	20	21	25	23
26	20	20	20	18	20	19	20	20	19	20	25	23
27	20	20	20	18	20	19	20	20	20	21	25	23
28	20	19	20	18	20	19	20	20	20	20	25	23
29	21	20	20	18	---	19	20	20	20	20	25	22
30	20	19	21	18	---	18	19	20	20	20	25	23
31	20	---	21	18	---	19	---	20	---	21	24	---
TOTAL	628	1413	637	1895	519	711	576	623	591	631	669	715
MEAN	20.3	47.1	20.5	61.1	18.5	22.9	19.2	20.1	19.7	20.4	21.6	23.8
MAX	23	476	25	242	20	131	21	22	21	24	25	28
MIN	19	19	18	18	18	18	18	19	19	19	20	20
AC-FT	1250	2800	1260	3760	1030	1410	1140	1240	1170	1250	1330	1420

e Estimated.

11216500 NORTH FORK KINGS RIVER ABOVE DINKEY CREEK, AT BALCH CAMP, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1930, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	25.2	69.3	65.4	66.4	132	280	779	1877	1136	164	29.0	15.3
MAX	52.1	225	130	111	397	498	1434	3040	3200	472	73.8	41.2
(WY)	1921	1928	1923	1923	1927	1921	1926	1922	1922	1922	1922	1923
MIN	10.0	11.2	18.7	24.1	42.2	54.6	389	552	42.2	9.50	5.40	5.09
(WY)	1922	1922	1930	1926	1924	1924	1924	1924	1924	1924	1924	1924

SUMMARY STATISTICS	WATER YEARS 1920 - 1930		
ANNUAL MEAN	387		
HIGHEST ANNUAL MEAN	646		1922
LOWEST ANNUAL MEAN	102		1924
HIGHEST DAILY MEAN	4890	Jun 4	1922
LOWEST DAILY MEAN	4.0	Aug 29	1924
ANNUAL SEVEN-DAY MINIMUM	4.2	Aug 28	1924
MAXIMUM PEAK FLOW	6080	Jun 4	1922
MAXIMUM PEAK STAGE	12.18	Jun 4	1922
ANNUAL RUNOFF (AC-FT)	280500		
10 PERCENT EXCEEDS	1300		
50 PERCENT EXCEEDS	74		
90 PERCENT EXCEEDS	11		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.8	20.7	25.8	57.8	48.8	43.6	65.2	206	302	163	43.8	27.5
MAX	60.5	92.3	332	499	239	405	490	1838	2042	1176	822	331
(WY)	1962	1962	1967	1997	1962	1986	1986	1969	1983	1967	1960	1960
MIN	5.80	5.42	5.87	8.07	7.32	7.29	7.18	4.54	6.81	7.34	8.86	8.72
(WY)	1978	1978	1978	1977	1964	1971	1971	1977	1977	1968	1976	1964

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1960 - 2003	
ANNUAL TOTAL	8084		9608			
ANNUAL MEAN	22.1		26.3		82.3	
HIGHEST ANNUAL MEAN					406	1983
LOWEST ANNUAL MEAN					8.47	1977
HIGHEST DAILY MEAN	476	Nov 10	476	Nov 10	7680	Dec 6 1966
LOWEST DAILY MEAN	17	Jan 30	18	Dec 4	0.30	Nov 3 1964
ANNUAL SEVEN-DAY MINIMUM	18	Mar 21	18	Jan 24	4.3	May 30 1977
MAXIMUM PEAK FLOW			1050	Mar 16	14000	Feb 1 1963
MAXIMUM PEAK STAGE			3.45	Mar 16	13.24	Feb 1 1963
ANNUAL RUNOFF (AC-FT)	16030		19060		59590	
10 PERCENT EXCEEDS	23		24		141	
50 PERCENT EXCEEDS	19		20		16	
90 PERCENT EXCEEDS	18		19		8.5	

11218400 NORTH FORK KINGS RIVER BELOW DINKEY CREEK, NEAR BALCH CAMP, CA

LOCATION.—Lat 36° 52'47", long 119° 07'40", in NE 1/4 NW 1/4 sec.22, T.12 S., R.26 E., Fresno County, Hydrologic Unit 18030010, Sierra National Forest, on right bank, 1.1 mi upstream from mouth, 1.7 mi south of Balch Camp, 2.1 mi downstream from Dinkey Creek, and 9 mi east of Trimmer.

DRAINAGE AREA.—387 mi^2.

PERIOD OF RECORD.—March 1960 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 1,035 ft above NGVD of 1929, from river-profile map.

REMARKS.—Flow regulated by Courtright Reservoir (station 11214550), Wishon Reservoir (station 11214800), and Balch Diversion Reservoir (station 11216100); Balch Afterbay, capacity, 318 acre-ft; and Haas and Balch Powerplants. Water is diverted from Balch Afterbay to Kings River Powerplant (station 11218700), beginning Mar. 1, 1962. Some water diverted from Balch Afterbay returns upstream from station at a release to Dinkey Creek. See schematic diagram of Kings River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 175 and 1988.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 27,400 ft^3/s, Feb. 1, 1963, gage height, 19.20 ft, from rating curve extended above 10,100 ft^3/s; minimum daily, 6.4 ft^3/s, Oct. 3, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	41	83	96	165	177	462	364	872	104	48	40
2	42	40	82	96	160	158	418	398	845	99	48	40
3	43	41	81	96	128	168	362	488	818	96	47	44
4	41	40	78	96	115	171	328	541	762	92	46	45
5	41	40	78	96	105	153	306	509	678	89	46	46
6	40	40	76	96	99	162	292	498	589	85	45	45
7	40	41	75	96	95	171	299	474	532	82	45	43
8	39	432	72	96	87	178	364	437	479	80	44	43
9	39	693	70	96	83	193	404	409	470	77	43	45
10	39	376	71	96	85	197	417	393	417	73	43	44
11	39	231	70	96	86	204	422	441	378	72	42	45
12	40	192	67	96	116	244	433	543	345	73	42	44
13	40	172	64	96	311	275	523	681	319	67	41	44
14	40	158	75	126	295	295	477	814	298	65	40	42
15	39	144	94	208	231	1480	413	873	276	63	40	42
16	38	132	98	149	216	706	391	889	260	61	40	43
17	39	123	98	137	200	452	402	878	236	60	39	44
18	39	115	98	135	186	366	364	934	218	59	38	43
19	39	110	98	267	172	334	351	988	205	58	37	43
20	39	108	98	155	171	330	352	1000	191	57	37	43
21	39	108	98	199	180	309	379	1080	181	56	39	42
22	39	108	98	113	175	350	359	1120	169	56	42	42
23	40	108	98	104	178	387	344	1180	158	55	43	42
24	39	108	98	109	175	332	387	1230	150	54	43	42
25	40	104	95	105	188	337	403	1190	142	53	43	42
26	40	95	91	116	192	363	404	1110	132	53	42	42
27	40	90	94	142	205	383	419	1220	124	52	43	42
28	41	85	96	144	186	359	447	1220	118	51	42	42
29	40	84	96	124	---	375	405	1110	113	50	42	42
30	41	83	93	123	---	412	353	1050	107	50	41	41
31	41	---	96	150	---	467	---	942	---	49	40	---
TOTAL	1236	4242	2679	3854	4585	10488	11680	25004	10582	2091	1311	1287
MEAN	39.9	141	86.4	124	164	338	389	807	353	67.5	42.3	42.9
MAX	43	693	98	267	311	1480	523	1230	872	104	48	46
MIN	38	40	64	96	83	153	292	364	107	49	37	40
AC-FT	2450	8410	5310	7640	9090	20800	23170	49600	20990	4150	2600	2550
a	10390	17840	18510	4560	22690	20750	15170	26600	27310	29150	25850	24110

a Diversion, in acre-feet, to Kings River Powerplant (station 11218700), provided by Pacific Gas & Electric Co.

11218400 NORTH FORK KINGS RIVER BELOW DINKEY CREEK, NEAR BALCH CAMP, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	48.7	88.3	134	238	278	363	610	1010	833	298	59.4	48.7
MAX	288	347	920	1492	1269	1329	2163	4253	4210	1894	422	233
(WY)	1983	1984	1967	1997	1986	1986	1982	1969	1983	1983	1961	1978
MIN	10.6	17.6	19.3	26.3	30.0	48.1	111	129	47.3	21.9	16.2	14.1
(WY)	1978	1978	1977	1991	1991	1977	1977	1977	1976	1976	1968	1968

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1961 - 2003		
ANNUAL TOTAL	65443		79039				
ANNUAL MEAN	179		217		334		
HIGHEST ANNUAL MEAN					1045		1983
LOWEST ANNUAL MEAN					49.2		1977
HIGHEST DAILY MEAN	913	Apr 14	1480	Mar 15	14900	Dec 6	1966
LOWEST DAILY MEAN	35	Jul 28	37	Aug 19	6.4	Oct 3	1977
ANNUAL SEVEN-DAY MINIMUM	35	Jul 28	39	Aug 15	9.6	Oct 2	1977
MAXIMUM PEAK FLOW			3400	Mar 15	27400	Feb 1	1963
MAXIMUM PEAK STAGE			8.48	Mar 15	19.20	Feb 1	1963
ANNUAL RUNOFF (AC-FT)	129800		156800		241800		
10 PERCENT EXCEEDS	487		478		829		
50 PERCENT EXCEEDS	104		99		95		
90 PERCENT EXCEEDS	37		40		30		

11224500 LOS GATOS CREEK ABOVE NUÑEZ CANYON, NEAR COALINGA, CA

LOCATION.—Lat 36° 12'53", long 120° 28'11", in NW 1/4 SE 1/4 sec.5, T.20 S., R.14 E., Fresno County, Hydrologic Unit 18030012, on left bank, 135 ft downstream from highway bridge, 1.1 mi upstream from Nunez Canyon, 3.0 mi downstream from White Creek, and 8.1 mi northwest of Coalinga.

DRAINAGE AREA.—95.8 mi^2.

PERIOD OF RECORD.—May 1945 to current year. Prior to October 1949, monthly discharge only published in WSP 1315-A.

REVISED RECORDS.—WSP 1215: 1950. WSP 1735: 1952(M), 1956(M). WSP 1930: Drainage area. WDR CA-72-2: 1971(P).

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 1,065.2 ft above NGVD of 1929. Aug. 2, 1959, to Jan. 11, 1985, at site on right bank at datum 2.00 ft higher. Prior to Aug. 2, 1959, at site 100 ft downstream on right bank at datum 2.00 ft higher.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Minor diversion for irrigation and stock ponds.

EXTREMES FOR PERIOD OF RECORD (SINCE 1950).—Maximum discharge, 5,700 ft^3/s, Mar. 10, 1995, gage height, 12.77 ft, present datum, in gage well, 13.41 ft from floodmarks, from rating curve extended above 3,000 ft^3/s, on basis of slope-area measurement at gage height 12.77 ft, maximum gage height, 13.95 ft, from floodmarks, Jan. 16, 1978; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 40 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 20	0015	180	5.05	May 4	0115	72	4.49
Mar. 15	1415	80	4.51				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	e0.65	0.14	0.38	0.07	0.15	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	e0.60	0.14	0.32	0.07	0.15	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	e0.50	0.12	0.30	0.07	22	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	e0.45	0.12	0.29	0.08	32	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	e0.40	0.11	0.25	0.11	5.0	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	e0.35	0.10	0.21	0.10	1.8	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	e0.30	0.10	0.17	0.10	1.1	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	e0.25	0.10	0.15	0.10	0.98	0.00	0.00	0.00	0.00
9	e0.00	0.00	0.00	e0.23	0.10	0.12	0.12	0.90	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	e0.21	0.10	0.12	0.14	0.81	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	e0.19	0.11	0.10	0.13	0.68	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	e0.18	0.18	0.10	0.17	0.45	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	e0.16	0.41	0.07	0.19	0.13	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	e0.15	0.40	0.06	0.19	0.09	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	e0.14	0.33	23	0.21	0.05	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.13	0.30	15	0.26	0.04	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.13	0.30	3.6	0.29	0.03	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.13	0.30	0.86	0.28	0.03	0.00	0.00	0.00	0.00
19	0.00	0.00	1.1	0.13	0.27	0.56	0.30	0.03	0.00	0.00	0.00	0.00
20	0.00	0.00	41	0.12	0.27	0.35	0.29	0.03	0.00	0.00	0.00	0.00
21	0.00	0.00	e3.2	0.12	0.26	0.25	0.29	0.03	0.00	0.00	0.00	0.00
22	0.00	0.00	e2.5	0.11	0.24	0.19	0.27	0.03	0.00	0.00	0.00	0.00
23	0.00	0.00	e2.1	0.12	0.23	0.16	0.25	0.02	0.00	0.00	0.00	0.00
24	0.00	0.00	e1.8	0.12	0.23	0.16	0.24	0.02	0.00	0.00	0.00	0.00
25	0.00	0.00	e1.6	0.13	0.51	0.13	0.23	0.02	0.00	0.00	0.00	0.00
26	0.00	0.00	e1.4	0.12	0.47	0.12	0.20	0.02	0.00	0.00	0.00	0.00
27	0.00	0.00	e1.2	0.12	0.41	0.13	0.20	0.02	0.00	0.00	0.00	0.00
28	0.00	0.00	e1.1	0.14	0.43	0.10	0.19	0.02	0.00	0.00	0.00	0.00
29	0.00	0.00	e1.0	0.15	---	0.09	0.16	0.01	0.00	0.00	0.00	0.00
30	0.00	0.00	e0.85	0.12	---	0.07	0.15	0.00	0.00	0.00	0.00	0.00
31	0.00	---	e0.75	0.12	---	0.07	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	59.60	6.77	6.78	47.48	5.45	66.64	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	1.92	0.22	0.24	1.53	0.18	2.15	0.000	0.000	0.000	0.000
MAX	0.00	0.00	41	0.65	0.51	23	0.30	32	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.11	0.10	0.06	0.07	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	118	13	13	94	11	132	0.00	0.00	0.00	0.00

e Estimated.

11224500 LOS GATOS CREEK ABOVE NUÑEZ CANYON, NEAR COALINGA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.28	0.89	3.57	13.1	23.7	20.4	8.80	3.15	1.07	0.29	0.10	0.25
MAX	7.18	18.2	36.3	139	287	236	160	43.0	16.4	5.71	2.92	8.33
(WY)	1946	1966	1967	1969	1978	1995	1958	1998	1983	1983	1983	1976
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1947	1948	1948	1948	1948	1961	1949	1948	1948	1947	1945	1945

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1945 - 2003	
ANNUAL TOTAL	121.65		192.72			
ANNUAL MEAN	0.33		0.53		6.21	
HIGHEST ANNUAL MEAN					48.5	1983
LOWEST ANNUAL MEAN					0.000	1989
HIGHEST DAILY MEAN	41	Dec 20	41	Dec 20	2940	Mar 10 1995
LOWEST DAILY MEAN	0.00	May 26	0.00	Oct 1	0.00	Jul 5 1945
ANNUAL SEVEN-DAY MINIMUM	0.00	May 26	0.00	Oct 1	0.00	Jul 5 1945
MAXIMUM PEAK FLOW			180	Dec 20	5700	Mar 10 1995
MAXIMUM PEAK STAGE			5.05	Dec 20	13.95	Jan 16 1978
ANNUAL RUNOFF (AC-FT)	241		382		4500	
10 PERCENT EXCEEDS	0.61		0.41		6.6	
50 PERCENT EXCEEDS	0.00		0.00		0.01	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

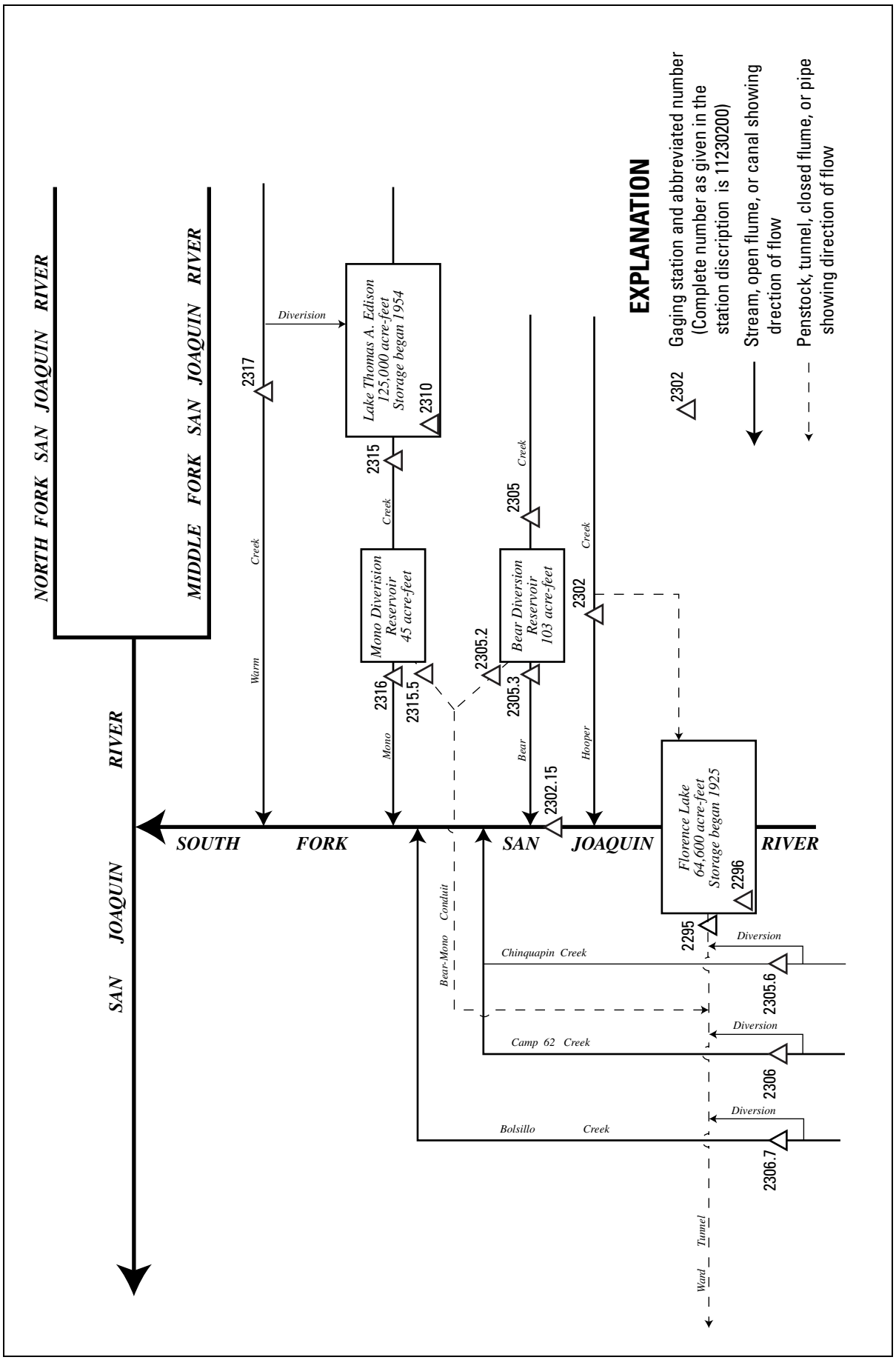


Figure 27. Diversions and storage in upper San Joaquin River Basin.

11229500 WARD TUNNEL INTAKE AT FLORENCE LAKE, CA

LOCATION.—Lat 37° 16'20", long 118° 58'17", unsurveyed, T.8 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in gatehouse at entrance of tunnel, 0.4 mi south of left abutment of Florence Lake Dam, and 16 mi northeast of town of Big Creek.

PERIOD OF RECORD.—April 1925 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "Florence Lake Tunnel at Intake" 1925–36 and as "Ward Tunnel at Intake" 1937–60.

REVISED RECORDS.—WSP 1515: 1931.

GAGE.—Water-stage recorder, concrete control, and Venturi meter. Datum of gage is 7,213.89 ft above NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Ward Tunnel diverts from Florence Lake (station 11229600), a reservoir on South Fork San Joaquin River, to Huntington Lake (station 11236000) via Portal Powerplant (station 11235500). Water used again in Big Creek powerplants. See schematic diagram of upper San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 67 and 120.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 1,990 ft^3/s, Apr. 30, 1926; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	0.30	13	48	65	47	227	129	527	887	545	622
2	2.3	0.30	11	55	62	40	201	130	663	822	233	540
3	211	0.30	9.1	56	52	39	166	150	721	831	231	216
4	435	0.30	8.5	58	45	40	142	166	834	827	228	106
5	415	0.30	9.2	60	40	36	123	181	1110	822	249	365
6	404	0.30	10	63	35	35	116	175	1240	818	292	571
7	393	0.37	10	62	34	35	110	177	988	815	238	571
8	469	151	7.3	61	28	36	131	167	819	831	82	509
9	612	275	7.3	59	26	38	170	164	824	840	272	161
10	386	128	7.0	53	27	41	207	167	894	795	448	44
11	50	93	6.7	48	29	50	234	170	1200	630	595	268
12	515	84	6.0	46	33	61	241	208	1190	591	590	251
13	571	77	7.2	45	57	77	214	289	1310	586	371	248
14	472	65	10	45	69	92	202	387	1290	582	332	246
15	212	53	13	41	63	142	189	420	1290	581	439	244
16	97	45	16	42	59	133	182	447	1290	610	437	258
17	25	38	14	49	55	124	179	e515	1290	663	429	272
18	11	32	20	56	50	104	169	e540	1290	696	272	269
19	6.7	30	37	60	47	96	161	e570	1290	695	287	277
20	4.5	31	51	61	44	102	168	e610	1410	661	285	268
21	2.9	35	52	59	41	102	179	e650	1370	627	284	253
22	1.8	35	56	55	40	130	170	697	1060	626	379	250
23	1.1	32	51	53	40	151	155	742	887	624	317	270
24	0.76	28	45	50	40	128	163	780	920	623	281	284
25	0.50	23	41	47	42	121	168	821	909	314	279	281
26	0.32	18	39	47	46	129	159	852	964	278	268	278
27	0.30	18	37	55	47	134	163	681	967	277	262	275
28	0.29	16	38	60	48	125	171	222	962	235	279	271
29	0.30	16	40	56	---	125	157	201	958	184	279	266
30	0.30	15	41	54	---	148	138	97	955	266	432	262
31	0.30	---	46	58	---	193	---	191	---	514	615	---
TOTAL	5302.67	1340.17	759.3	1662	1264	2854	5155	11696	31422	19151	10530	8996
MEAN	171	44.7	24.5	53.6	45.1	92.1	172	377	1047	618	340	300
MAX	612	275	56	63	69	193	241	852	1410	887	615	622
MIN	0.29	0.30	6.0	41	26	35	110	97	527	184	82	44
AC-FT	10520	2660	1510	3300	2510	5660	10220	23200	62330	37990	20890	17840

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2003, BY WATER YEAR (WY)

MEAN	232	126	105	75.6	75.3	112	272	462	573	537	425	344
MAX	634	745	1064	546	240	297	588	949	1161	1199	856	897
(WY)	1996	1938	1946	1939	1986	1986	1997	1974	1974	1967	1995	1998
MIN	0.000	0.47	1.61	2.13	0.64	22.5	35.4	0.85	1.49	90.1	48.3	1.50
(WY)	1946	1965	2000	1991	1991	1977	1991	1939	1938	1931	1977	1949

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1925 - 2003	
ANNUAL TOTAL	80225.94		100132.14			
ANNUAL MEAN	220		274		280	
HIGHEST ANNUAL MEAN					460	1956
LOWEST ANNUAL MEAN					98.1	1977
HIGHEST DAILY MEAN	1360	Jun 9	1410	Jun 20	1990	Apr 30 1926
LOWEST DAILY MEAN	0.29	Oct 28	0.29	Oct 28	0.00	Oct 7 1925
ANNUAL SEVEN-DAY MINIMUM	0.30	Oct 27	0.30	Oct 27	0.00	Nov 5 1925
ANNUAL RUNOFF (AC-FT)	159100		198600		203000	
10 PERCENT EXCEEDS	508		818		675	
50 PERCENT EXCEEDS	107		157		162	
90 PERCENT EXCEEDS	7.3		12		11	

e Estimated.

11229600 FLORENCE LAKE NEAR BIG CREEK, CA

LOCATION.—Lat 37° 16'20", long 118° 58'17", unsurveyed, T.8 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in gatehouse of Ward Tunnel intake, 0.3 mi west of dam on South Fork San Joaquin River, and 16 mi northeast of town of Big Creek.

DRAINAGE AREA.—171 mi^2.

PERIOD OF RECORD.—November 1925 to current year. Prior to October 1931, published in WSP 721. Maximum and minimum daily contents (water years 1926–39) summarized in WSP 881. Prior to 1960, maximum and minimum daily contents were published.

REVISED RECORDS.—WDR CA-78-3: 1977; WDR CA-02-3: 2001, Extremes for current year.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Lake is formed by multiple-arch concrete dam; storage began in April 1925. Usable capacity, 64,406 acre-ft, between elevations 7,220.94 ft, throat of Venturi tube in Ward Tunnel intake (station 11229500), and 7,327.50 ft, top of spillway drum gates. Additional storage of 168 acre-ft is not available for diversion. Water is diverted through Ward Tunnel to Huntington Lake (station 11236000) via Portal Powerplant (station 11235500) and used for further power development in Big Creek powerplants. Records, including extremes, represent contents at 2400 hours. See schematic diagram of upper San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 67 and 120. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 65,990 acre-ft, July 3, 1932, elevation, 7,329.14 ft; minimum occurred during period of no record, Oct. 2–4, 1926, or Nov. 30 to Dec. 2, 1927.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 64,079 acre-ft, June 18, elevation, 7,327.16 ft; minimum, 1,052 acre-ft, Oct. 26, elevation, 7,231.06.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Southern California Edison Co., dated Aug. 26, 1926)

7,220.80	0	7,235	1,774	7,255	8,950	7,290	31,966
7,222	63	7,240	2,976	7,260	11,608	7,310	48,284
7,225	281	7,245	4,666	7,270	17,755	7,330	66,826
7,230	887	7,250	6,648	7,280	24,588		

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12114	1079	1092	1129	1165	1159	1350	1260	44368	55640	39778	24902
2	12112	1081	1089	1130	1154	1150	1319	1276	48520	54996	40186	23914
3	11705	1081	1083	1129	1143	1153	1298	1294	52725	54272	40448	23598
4	10823	1083	1087	1141	1141	1149	1271	1318	56064	53505	40521	23521
5	9981	1085	1092	1145	1128	1140	1262	1307	57479	52752	40448	22917
6	9148	1086	1094	1146	1127	1139	1248	1303	57415	51996	40202	21908
7	8327	1120	1093	1144	1116	1137	1255	1305	57740	51208	39990	20893
8	7365	1605	1083	1145	1143	1152	1287	1307	58505	50247	40071	19965
9	6166	1317	1084	1153	1137	1150	1326	1314	60224	49081	39713	19689
10	5415	1242	1084	1156	1132	1158	1361	1305	61777	48015	39023	19676
11	5327	1219	1077	1153	1130	1174	1375	1321	62614	47362	38047	19161
12	4141	1209	1080	1155	1155	1188	1364	1380	63225	46774	37058	18669
13	2863	1195	1086	1152	1186	1217	1348	1498	63340	46147	36446	18181
14	1896	1177	1103	1150	1180	1230	1336	1725	63570	45506	35908	17690
15	1424	1165	1097	1151	1164	1289	1323	1874	63810	44833	35147	17191
16	1127	1154	1103	1154	1174	1264	1319	2221	63993	44079	34404	16664
17	1089	1148	1096	1163	1164	1251	1316	2602	64031	43197	33673	16096
18	1076	1138	1114	1167	1174	1237	1303	3083	63982	42263	33233	15527
19	1068	1137	1149	1174	1165	1235	1298	3800	63772	41335	32755	14946
20	1063	1139	1150	1174	1157	1235	1301	4752	63024	40464	32295	14385
21	1065	1144	1156	1171	1150	1251	1316	6106	62100	39656	31882	13844
22	1063	1141	1154	1168	1143	1287	1298	7479	61682	38862	31259	13314
23	1062	1135	1129	1163	1137	1275	1291	9378	61397	38272	30730	12737
24	1061	1130	1129	1157	1140	1257	1303	11391	60753	37968	30255	12126
25	1057	1120	1125	1157	1143	1258	1296	13410	59998	38426	29782	11530
26	1055	1114	1124	1159	1139	1275	1294	15609	59141	38643	29341	10938
27	1062	1114	1122	1168	1155	1264	1300	18955	58336	38991	28910	10348
28	1070	1105	1121	1173	1149	1258	1307	24290	57619	39355	28435	9761
29	1073	1102	1119	1164	---	1273	1285	29676	56969	39770	27941	9177
30	1077	1099	1123	1158	---	1307	1267	35241	56303	39900	27164	8599
31	1080	---	1125	1161	---	1353	---	40219	---	39867	26045	---
MAX	12114	1605	1156	1174	1186	1353	1375	40219	64031	55640	40521	24902
MIN	1055	1079	1077	1129	1116	1137	1248	1260	44368	37968	26045	8599
a	7231.23	7231.33	7231.49	7231.70	7231.63	7232.79	7232.31	7300.45	7318.91	7300.02	7282.03	7254.28
b	-11046	+19	+26	+36	-12	+204	-86	+38952	+16084	-16436	-13822	-17446

CAL YR 2002 b -157
WTR YR 2003 b -3527

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11230200 HOOPER CREEK BELOW DIVERSION DAM, NEAR FLORENCE LAKE, CA

LOCATION.—Lat 37° 18'21", long 118° 56'59", unsurveyed, T.7 S., R.28 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank, 300 ft downstream from diversion dam, 0.7 mi upstream from mouth, 2.5 mi north of Florence Lake, and 17.6 mi northeast of town of Big Creek.

DRAINAGE AREA.—7.22 mi^2.

PERIOD OF RECORD.—October 1986 to current year. Prior to October 1991, published as "Hooper Creek at diversion dam near Florence Lake."

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 7,440 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow regulated by diversion dam 300 ft upstream. Most of the water is diverted at the diversion dam to Florence Lake (station 11229600). See schematic diagram of upper San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 67 and 120.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 112 ft^3/s, July 17, 1995; minimum daily, 0.50 ft^3/s, estimated during period of ice effect, Dec. 23, 2002.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	1.7	1.7	e1.8	2.4	1.9	4.5	3.3	12	3.1	1.8	3.0
2	1.9	1.8	1.7	1.9	2.2	e1.6	3.8	3.3	12	3.1	1.8	3.0
3	2.0	1.9	1.9	1.9	e2.0	e1.5	3.9	3.3	41	3.1	1.8	3.2
4	2.0	1.8	1.8	2.0	e1.9	e1.7	3.4	3.3	46	3.1	1.8	3.0
5	1.9	1.8	1.9	2.0	e1.7	e1.8	3.6	2.9	51	3.1	2.0	2.9
6	1.9	1.8	1.9	2.0	e1.5	e1.8	3.5	2.6	34	3.2	2.6	2.9
7	1.9	2.1	1.9	2.0	e1.4	1.9	3.5	2.6	10	3.1	2.3	2.8
8	1.9	7.9	1.9	2.0	e1.3	2.0	3.9	2.6	10	3.1	2.1	2.8
9	1.7	3.0	1.8	1.9	e1.5	2.0	3.6	2.6	10	3.1	2.1	2.9
10	1.7	2.5	1.9	1.9	e1.9	2.1	3.2	2.5	6.9	3.1	2.1	2.7
11	1.7	2.6	1.9	1.9	2.2	2.2	3.2	2.4	4.7	3.1	2.1	2.7
12	1.7	2.5	1.9	1.9	2.0	2.4	3.3	2.4	4.6	3.1	2.1	2.6
13	1.6	2.2	1.9	1.9	2.2	2.6	3.2	2.4	4.6	3.1	2.1	2.6
14	1.6	2.1	2.0	1.8	2.1	2.6	3.2	2.4	4.4	3.1	2.0	2.5
15	1.6	2.1	1.9	1.9	2.0	e2.9	3.2	2.4	4.4	3.0	2.0	2.5
16	e1.6	2.0	1.4	1.9	2.0	e2.6	3.2	2.4	4.3	3.1	2.8	2.5
17	e1.6	2.0	1.4	2.0	1.9	e2.4	3.2	2.3	3.4	3.0	3.1	2.4
18	e1.6	1.9	e1.3	2.0	2.1	e2.5	3.1	2.3	3.3	3.0	3.3	2.4
19	e1.6	2.1	e1.6	2.0	1.8	e2.6	3.2	2.4	3.4	3.0	3.5	2.4
20	e1.6	2.2	e2.1	2.0	2.0	2.7	3.2	2.4	3.5	3.0	3.5	2.3
21	e1.7	2.2	e1.6	2.0	1.9	2.8	3.2	2.3	3.4	4.7	4.3	2.3
22	e1.7	2.1	e1.2	2.0	1.9	3.1	3.2	2.3	3.3	5.3	4.0	2.3
23	1.7	2.1	e0.50	2.0	1.9	3.0	3.3	2.4	3.3	2.3	3.5	2.3
24	1.7	2.0	e0.90	2.0	1.9	3.0	3.2	2.3	3.2	2.2	3.3	2.2
25	1.7	1.8	e1.1	2.1	1.9	3.0	3.3	2.3	3.2	2.2	3.2	2.2
26	1.6	1.9	e1.5	2.2	2.0	3.1	3.3	2.3	3.2	2.2	3.9	2.2
27	1.7	1.9	e1.6	2.3	2.0	3.0	3.3	2.4	3.1	2.2	3.5	2.1
28	1.7	1.8	e1.7	2.1	2.0	3.0	3.3	12	3.2	2.2	3.3	2.1
29	1.7	1.8	e1.7	2.1	---	3.2	3.3	6.4	3.1	2.2	3.1	2.1
30	1.8	1.8	e1.7	2.2	---	3.8	3.3	11	3.1	2.2	3.0	2.1
31	1.7	---	e1.7	2.3	---	4.7	---	12	---	2.1	3.1	---
TOTAL	53.7	67.4	51.00	62.0	53.6	79.5	101.6	110.5	305.6	91.4	85.1	76.0
MEAN	1.73	2.25	1.65	2.00	1.91	2.56	3.39	3.56	10.2	2.95	2.75	2.53
MAX	2.0	7.9	2.1	2.3	2.4	4.7	4.5	12	51	5.3	4.3	3.2
MIN	1.6	1.7	0.50	1.8	1.3	1.5	3.1	2.3	3.1	2.1	1.8	2.1
AC-FT	107	134	101	123	106	158	202	219	606	181	169	151

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	2.64	2.57	2.34	2.71	2.58	3.66	6.38	10.3	12.8	11.7	4.62	2.76
MAX	4.75	4.54	3.57	10.2	5.14	8.03	18.8	60.9	45.7	68.3	18.8	4.76
(WY)	1996	1999	1999	1997	1997	1997	1997	1997	1998	1995	1995	1998
MIN	1.68	1.82	1.59	1.55	1.55	2.10	3.07	2.50	2.42	2.59	2.32	1.85
(WY)	1991	1991	1989	1991	1991	1990	1996	1991	2002	2002	1989	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	862.10		1137.40			
ANNUAL MEAN	2.36		3.12		5.44	
HIGHEST ANNUAL MEAN					15.6	1995
LOWEST ANNUAL MEAN					2.39	2002
HIGHEST DAILY MEAN	15	Apr 26	51	Jun 5	112	Jul 17 1995
LOWEST DAILY MEAN	0.50	Dec 23	0.50	Dec 23	0.50	Dec 23 2002
ANNUAL SEVEN-DAY MINIMUM	1.2	Dec 21	1.2	Dec 21	1.2	Dec 21 2002
ANNUAL RUNOFF (AC-FT)	1710		2260		3940	
10 PERCENT EXCEEDS	2.9		3.5		7.0	
50 PERCENT EXCEEDS	2.2		2.3		2.8	
90 PERCENT EXCEEDS	1.7		1.7		1.8	

e Estimated.

11230215 SOUTH FORK SAN JOAQUIN RIVER BELOW HOOPER CREEK, NEAR FLORENCE LAKE, CA

LOCATION.—Lat 37° 18'35", long 118° 57'40", unsurveyed, T.7 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank, 0.1 mi downstream from Hooper Creek, 3.5 mi downstream from Florence Lake Dam, and 17 mi northeast of town of Big Creek.

DRAINAGE AREA.—184 mi^2.

PERIOD OF RECORD.—October 1978 to September 1997, October 1998 to current year. October 1946 to September 1978, operated as a low-flow station only, in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder, Parshall flume, and concrete control. Datum of gage is 6,949.41 ft above NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Flow regulated by Florence Lake (station 11229600) 3.5 mi upstream, and Hooper Creek Diversion Dam (capacity less than 2 acre-ft) 0.7 mi upstream. Most of the water is diverted at Florence Lake to Ward Tunnel (station 11229500). See schematic diagram of upper San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 67 and 120.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 5,950 ft^3/s, Sept. 26, 1982, gage height, 11.42 ft; minimum daily, 3.9 ft^3/s, Oct. 24, 1979.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	18	19	20	25	21	18	22	51	25	25	22
2	19	17	18	21	24	20	18	24	51	25	25	22
3	19	17	18	21	21	20	18	26	90	25	25	23
4	18	17	18	22	21	20	16	28	142	25	24	22
5	18	17	19	22	20	20	15	27	289	24	23	21
6	18	16	19	23	19	20	15	25	728	24	24	21
7	18	17	19	23	19	20	24	24	697	24	23	21
8	19	58	18	24	e18	20	20	24	588	58	23	21
9	18	42	18	23	e18	20	20	26	59	123	23	21
10	18	22	18	23	19	21	19	25	61	105	23	22
11	18	19	18	23	19	21	19	24	45	50	23	22
12	18	18	18	22	21	22	19	23	35	26	22	22
13	18	17	18	22	27	24	20	23	34	25	22	22
14	17	16	19	22	28	25	23	24	33	24	22	22
15	19	17	19	22	25	55	23	25	32	30	22	22
16	19	17	22	22	24	35	24	25	32	30	23	22
17	19	17	24	22	23	28	24	24	31	29	23	22
18	19	17	e22	23	22	26	25	25	30	29	23	22
19	19	17	e25	23	21	25	23	26	30	29	23	22
20	19	17	e23	23	21	24	22	27	29	28	23	22
21	19	17	e21	23	20	25	24	28	29	26	24	22
22	19	17	e20	23	20	27	24	29	28	26	24	21
23	19	16	e20	24	20	26	23	31	28	23	23	21
24	18	16	e19	24	20	25	22	32	28	23	23	21
25	18	16	e17	24	21	25	21	34	27	23	22	21
26	18	16	19	25	21	23	20	36	27	23	23	22
27	18	16	20	27	22	18	20	38	26	24	23	21
28	18	16	20	26	21	16	20	47	27	24	22	21
29	18	16	20	23	---	16	20	45	27	23	22	22
30	18	19	20	22	---	17	20	49	25	24	22	24
31	18	---	20	23	---	18	---	50	---	28	22	---
TOTAL	577	578	608	710	600	723	619	916	3359	1025	714	652
MEAN	18.6	19.3	19.6	22.9	21.4	23.3	20.6	29.5	112	33.1	23.0	21.7
MAX	26	58	25	27	28	55	25	50	728	123	25	24
MIN	17	16	17	20	18	16	15	22	25	23	22	21
AC-FT	1140	1150	1210	1410	1190	1430	1230	1820	6660	2030	1420	1290

e Estimated.

11230215 SOUTH FORK SAN JOAQUIN RIVER BELOW HOOPER CREEK, NEAR FLORENCE LAKE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.3	17.3	16.4	18.2	20.5	25.8	29.5	44.3	334	276	63.8	36.6
MAX	30.5	28.7	25.3	53.0	42.6	49.0	53.1	164	2429	1799	661	268
(WY)	1990	2001	1984	1997	1986	1995	1995	1983	1983	1995	1983	1982
MIN	7.87	11.8	8.93	11.9	12.2	14.5	14.3	20.9	20.5	21.4	13.1	7.19
(WY)	1980	1979	1979	1979	1991	2002	2002	1981	1981	1981	1979	1979

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1979 - 2003	
ANNUAL TOTAL	8300		11081			
ANNUAL MEAN	22.7		30.4		75.2	
HIGHEST ANNUAL MEAN					396	1983
LOWEST ANNUAL MEAN					18.5	1979
HIGHEST DAILY MEAN	58	Nov 8	728	Jun 6	5200	Sep 26 1982
LOWEST DAILY MEAN	11	Mar 5	15	Apr 5	3.9	Oct 24 1979
ANNUAL SEVEN-DAY MINIMUM	12	Mar 5	16	Nov 23	4.4	Oct 13 1979
MAXIMUM PEAK FLOW			870	Jun 6	5950	Sep 26 1982
MAXIMUM PEAK STAGE			5.96	Jun 6	11.42	Sep 26 1982
ANNUAL RUNOFF (AC-FT)	16460		21980		54490	
10 PERCENT EXCEEDS	30		30		47	
50 PERCENT EXCEEDS	20		22		23	
90 PERCENT EXCEEDS	14		18		14	

11230500 BEAR CREEK NEAR LAKE THOMAS A. EDISON, CA

LOCATION.—Lat 37° 20'22", long 118° 58'21", unsurveyed, T.7 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank, 0.2 mi upstream from diversion dam, 1.7 mi upstream from mouth, 2.1 mi south of Lake Thomas A. Edison, and 2.4 mi northeast of Mono Hot Springs.

DRAINAGE AREA.—52.5 mi^2.

PERIOD OF RECORD.—October 1921 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1954, published as "near Vermilion Valley."

REVISED RECORDS.—WSP 611: 1922(M). WSP 1345: 1931–35. WSP 1515: 1922–30. WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 7,366.94 ft above NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—No storage or diversion upstream from station. See schematic diagram of upper San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 67 and 120.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,660 ft^3/s, Sept. 26, 1982, gage height, 8.35 ft, from rating curve extended above 570 ft^3/s; minimum daily, 1.2 ft^3/s, Sept. 29 to Oct. 5, 1924.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	4.5	12	79	31	20	77	45	769	175	134	21
2	5.5	4.5	11	66	26	20	59	46	798	157	121	19
3	6.2	4.6	12	51	25	20	52	49	807	148	138	40
4	6.7	4.7	11	47	23	20	44	54	726	142	98	48
5	6.5	4.5	10	45	21	19	44	59	592	138	75	34
6	6.2	4.5	9.7	44	21	19	40	59	547	141	61	29
7	5.8	5.1	9.2	39	18	20	42	56	509	133	51	26
8	5.4	28	8.6	38	17	20	56	51	439	121	44	24
9	5.4	24	8.4	30	21	21	71	53	419	110	38	22
10	5.0	32	7.8	26	20	22	77	55	455	105	35	20
11	5.0	38	8.0	25	16	26	80	64	450	102	33	19
12	5.0	36	10	22	16	32	79	87	415	93	31	18
13	5.0	30	8.6	24	19	38	64	128	381	86	28	17
14	5.0	25	9.5	20	22	37	62	167	391	81	27	16
15	4.8	22	11	20	21	40	61	163	401	77	26	15
16	4.8	20	32	21	21	39	58	192	395	72	25	14
17	4.8	19	82	23	21	39	56	211	372	69	24	13
18	4.7	18	94	26	21	35	53	264	360	71	23	13
19	4.6	18	124	28	20	34	53	273	333	72	23	13
20	4.5	24	169	28	20	36	59	312	301	70	22	12
21	4.4	27	169	27	19	37	58	392	263	67	26	11
22	4.4	24	150	25	19	49	53	472	242	65	44	11
23	4.5	21	105	24	18	52	53	516	210	72	36	10
24	4.6	19	87	23	19	41	63	505	168	77	30	9.8
25	4.6	17	72	23	19	42	60	511	153	82	26	9.3
26	4.6	18	53	24	20	45	58	570	162	76	28	8.8
27	4.7	15	45	30	21	42	60	741	178	123	31	8.3
28	4.9	15	43	30	21	41	58	909	195	143	27	7.8
29	5.0	13	53	29	---	46	52	906	205	123	25	7.6
30	4.8	12	68	26	---	60	47	867	202	95	23	7.4
31	4.6	---	62	29	---	78	---	797	---	109	22	---
TOTAL	157.0	547.4	1554.8	992	576	1090	1749	9574	11838	3195	1375	524.0
MEAN	5.06	18.2	50.2	32.0	20.6	35.2	58.3	309	395	103	44.4	17.5
MAX	6.7	38	169	79	31	78	80	909	807	175	138	48
MIN	4.4	4.5	7.8	20	16	19	40	45	153	65	22	7.4
AC-FT	311	1090	3080	1970	1140	2160	3470	18990	23480	6340	2730	1040

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

MEAN	14.8	15.4	20.0	22.8	23.9	33.5	87.2	256	347	200	65.2	28.0
MAX	62.2	56.1	71.2	107	61.0	79.8	172	586	740	747	349	260
(WY)	1983	1951	1956	1997	1986	1986	1926	1969	1983	1995	1983	1982
MIN	2.71	3.10	4.86	4.50	5.80	9.00	33.1	71.3	42.2	12.2	3.15	1.63
(WY)	1925	1930	1930	1924	1991	1924	1975	1977	1924	1924	1924	1924

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	27116.3		33172.2			
ANNUAL MEAN	74.3		90.9		93.0	
HIGHEST ANNUAL MEAN					201	1983
LOWEST ANNUAL MEAN					29.2	1924
HIGHEST DAILY MEAN	469	May 31	909	May 28	2610	Sep 26 1982
LOWEST DAILY MEAN	4.4	Oct 21	4.4	Oct 21	1.2	Sep 29 1924
ANNUAL SEVEN-DAY MINIMUM	4.5	Oct 19	4.5	Oct 19	1.2	Sep 29 1924
MAXIMUM PEAK FLOW			1370	May 28	3660	Sep 26 1982
MAXIMUM PEAK STAGE			6.43	May 28	8.35	Sep 26 1982
ANNUAL RUNOFF (AC-FT)	53790		65800		67410	
10 PERCENT EXCEEDS	220		223		292	
50 PERCENT EXCEEDS	32		32		30	
90 PERCENT EXCEEDS	5.0		6.4		7.0	

11230520 BEAR CREEK CONDUIT NEAR LAKE THOMAS A. EDISON, CA

LOCATION.—Lat 37° 20'10", long 118° 58'28", unsurveyed, T.7 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank, at diversion dam, 2.2 mi northeast of Mono Hot Springs, and 2.5 mi south of Lake Thomas A. Edison.

PERIOD OF RECORD.—October 1986 to current year.

GAGE.—Discharge computed as difference between flows at Bear Creek near Lake Thomas A. Edison (station 11230500) and Bear Creek below diversion dam (station 11230530). Datum of conduit invert is 7,340 ft above NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Conduit diverts at diversion dam on Bear Creek to Ward Tunnel and Huntington Lake (station 11236000) via Portal Powerplant (station 11235500) for further power development in Big Creek powerplants. See schematic diagram of upper San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 67 and 120.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 537 ft^3/s, May 29, 2003; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.2	9.7	77	29	18	75	43	68	172	131	18
2	2.7	2.1	8.7	64	24	18	57	44	73	155	118	16
3	3.7	2.2	9.7	49	23	18	50	47	60	146	135	37
4	4.3	2.3	8.7	45	21	18	42	52	65	140	96	45
5	4.1	2.1	7.7	43	19	17	42	57	e64	136	72	31
6	3.8	2.1	7.4	42	19	17	38	57	e63	139	58	26
7	3.4	2.7	6.9	37	16	18	40	54	e185	131	48	23
8	3.0	26	6.3	36	15	18	54	49	e401	119	42	21
9	3.0	22	6.1	28	19	19	69	51	e386	108	36	19
10	2.6	30	5.5	24	18	20	75	53	e392	103	32	18
11	2.6	36	5.7	23	14	24	78	62	e383	100	30	16
12	2.6	34	7.7	20	14	30	77	85	e376	91	28	16
13	2.6	28	6.3	22	17	36	62	126	e362	70	26	14
14	2.6	23	7.2	18	20	35	60	164	e363	79	24	14
15	2.4	20	8.7	18	19	38	59	160	e364	75	24	12
16	2.4	18	30	19	18	37	56	190	e363	70	22	12
17	2.4	17	80	21	18	37	54	208	e355	66	22	10
18	2.3	16	92	24	18	33	51	262	352	68	20	10
19	2.2	16	122	26	18	32	51	270	330	70	20	10
20	2.1	22	167	26	18	34	57	310	298	68	19	9.5
21	2.0	25	167	25	16	35	56	371	261	64	23	8.5
22	2.0	22	148	23	16	47	51	417	240	62	41	8.5
23	2.1	19	103	22	16	50	51	436	208	70	33	7.5
24	2.2	17	85	21	17	39	61	431	166	74	27	7.3
25	2.2	15	70	21	17	40	58	426	151	80	23	6.8
26	2.2	16	51	22	18	43	56	439	160	74	25	6.3
27	2.3	13	43	28	19	40	58	480	176	120	28	5.7
28	2.5	13	41	28	19	39	56	536	192	140	24	5.2
29	2.6	11	51	27	---	44	50	537	202	120	22	5.1
30	2.4	9.7	66	24	---	58	45	524	200	92	20	4.9
31	2.2	---	60	27	---	76	---	345	---	106	19	---
TOTAL	81.3	484.4	1488.3	930	515	1028	1689	7286	7259	3108	1288	443.3
MEAN	2.62	16.1	48.0	30.0	18.4	33.2	56.3	235	242	100	41.5	14.8
MAX	4.3	36	167	77	29	76	78	537	401	172	135	45
MIN	1.8	2.1	5.5	18	14	17	38	43	60	62	19	4.9
AC-FT	161	961	2950	1840	1020	2040	3350	14450	14400	6160	2550	879

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	12.0	12.4	15.1	19.6	19.4	33.1	89.2	218	189	75.0	44.8	20.1
MAX	45.3	26.5	48.0	50.8	41.3	52.4	138	345	343	168	181	84.1
(WY)	1995	1995	2003	1997	1996	1995	1989	1997	1999	1996	1995	1995
MIN	2.22	3.68	3.23	3.46	0.000	0.000	43.2	59.2	0.000	0.000	10.1	2.56
(WY)	2002	1991	1991	1991	1997	1997	1991	1995	1995	1995	2001	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	26051.3		25600.3			
ANNUAL MEAN	71.4		70.1		62.4	
HIGHEST ANNUAL MEAN					82.4	1999
LOWEST ANNUAL MEAN					49.2	1990
HIGHEST DAILY MEAN	433	May 31	537	May 29	537	May 29 2003
LOWEST DAILY MEAN	1.3	Sep 24	1.8	Oct 1	0.00	Oct 18 1988
ANNUAL SEVEN-DAY MINIMUM	1.3	Sep 22	2.1	Oct 19	0.00	May 18 1995
ANNUAL RUNOFF (AC-FT)	51670		50780		45190	
10 PERCENT EXCEEDS	217		180		200	
50 PERCENT EXCEEDS	31		30		23	
90 PERCENT EXCEEDS	2.5		4.0		3.2	

e Estimated.

11230530 BEAR CREEK BELOW DIVERSION DAM, NEAR LAKE THOMAS A. EDISON, CA

LOCATION.—Lat 37° 20'08", long 118° 58'29", unsurveyed, T.7 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank, 60 ft downstream from diversion dam, 2.5 mi south of Lake Thomas A. Edison, and 18.3 mi east of town of Big Creek.

DRAINAGE AREA.—52.8 mi^2.

PERIOD OF RECORD.—October 1986 to current year. Prior to October 1991, published as "at Diversion Dam."

GAGE.—Water-stage recorder, Parshall flume, and concrete control. Datum of gage is 7,338.30 ft above NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Low and medium flow regulated at diversion dam. Most of the flow is diverted at the diversion dam to Bear Creek Conduit (station 11230520), then to Ward Tunnel and Huntington Lake (station 11236000) via Portal Powerplant (station 11235500) for further power development in Big Creek powerplants. See schematic diagram of upper San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 67 and 120.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,730 ft^3/s, July 9, 1995, gage height, 14.75 ft; minimum daily, 0.94 ft^3/s, Oct. 15, 1987.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	2.3	2.3	2.3	2.4	2.4	2.4	2.4	701	2.5	2.6	2.6
2	2.8	2.4	2.3	2.3	2.4	2.4	2.4	2.4	725	2.4	2.6	2.6
3	2.5	2.4	2.3	2.3	2.4	2.4	2.4	2.4	747	2.4	2.6	2.6
4	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.5	661	2.4	2.5	2.6
5	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.4	e528	2.4	2.5	2.6
6	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.4	e484	2.4	2.5	2.6
7	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.4	e324	2.4	2.5	2.6
8	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.4	e38	2.3	2.5	2.6
9	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.4	e33	2.3	2.5	2.6
10	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.4	e63	2.3	2.5	2.5
11	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.4	e67	2.3	2.5	2.5
12	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.4	e39	2.3	2.5	2.5
13	2.4	2.4	2.3	2.3	2.4	2.3	2.4	2.4	e19	16	2.5	2.5
14	2.4	2.4	2.3	2.3	2.5	2.3	2.4	2.5	e28	2.4	2.5	2.5
15	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.5	e37	2.4	2.5	2.5
16	2.4	2.4	2.3	2.3	2.5	2.4	2.4	2.5	e32	2.4	2.5	2.5
17	2.4	2.4	2.3	2.3	2.5	2.4	2.4	2.5	e17	2.5	2.5	2.5
18	2.4	2.4	2.3	2.4	2.5	2.4	2.4	2.5	7.5	2.5	2.6	2.5
19	2.4	2.4	2.2	2.4	2.5	2.4	2.4	2.5	2.7	2.5	2.6	2.5
20	2.4	2.4	2.3	2.4	2.5	2.4	2.4	2.5	2.5	2.5	2.6	2.5
21	2.4	2.4	2.3	2.4	2.5	2.4	2.4	21	2.4	2.5	2.6	2.5
22	2.4	2.3	2.2	2.4	2.5	2.4	2.4	55	2.4	2.5	2.6	2.5
23	2.4	2.3	2.3	2.4	2.4	2.4	2.4	80	2.4	2.5	2.6	2.5
24	2.4	2.3	2.3	2.4	2.4	2.4	2.4	74	2.4	2.5	2.6	2.5
25	2.4	2.3	2.2	2.4	2.4	2.4	2.4	85	2.4	2.5	2.6	2.5
26	2.4	2.3	2.2	2.4	2.4	2.4	2.4	131	2.4	2.5	2.6	2.5
27	2.4	2.3	2.3	2.4	2.4	2.4	2.4	261	2.4	2.5	2.6	2.6
28	2.4	2.3	2.3	2.4	2.4	2.4	2.4	373	2.5	2.5	2.6	2.6
29	2.4	2.3	2.3	2.4	---	2.4	2.4	369	2.5	2.5	2.7	2.5
30	2.4	2.3	2.3	2.4	---	2.4	2.4	343	2.5	2.5	2.6	2.5
31	2.4	---	2.3	2.4	---	2.4	---	452	---	2.6	2.6	---
TOTAL	75.7	71.0	70.9	72.7	68.0	74.2	72.0	2292.8	4580.0	89.2	79.3	76.1
MEAN	2.44	2.37	2.29	2.35	2.43	2.39	2.40	74.0	153	2.88	2.56	2.54
MAX	3.2	2.4	2.3	2.4	2.5	2.4	2.4	452	747	16	2.7	2.6
MIN	2.4	2.3	2.2	2.3	2.4	2.3	2.4	2.4	2.4	2.3	2.5	2.5
AC-FT	150	141	141	144	135	147	143	4550	9080	177	157	151

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	2.79	2.47	2.75	5.40	3.36	5.72	7.59	27.2	112	96.0	12.4	3.85
MAX	8.62	6.29	12.5	55.8	20.4	59.8	67.1	121	555	747	109	11.1
(WY)	2001	2001	1996	1997	1997	1997	1997	1995	1995	1995	1995	1996
MIN	1.33	1.36	1.38	1.44	1.35	1.48	1.42	2.57	2.43	2.25	2.25	2.44
(WY)	1988	2002	2002	2002	1995	1988	1990	1991	1994	1994	1994	1994

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	1078.4		7621.9			
ANNUAL MEAN	2.95		20.9		23.6	
HIGHEST ANNUAL MEAN					131	1995
LOWEST ANNUAL MEAN					1.98	1990
HIGHEST DAILY MEAN	39	Jun 6	747	Jun 3	1420	Jul 9 1995
LOWEST DAILY MEAN	1.3	Jan 18	2.2	Dec 19	0.94	Oct 15 1987
ANNUAL SEVEN-DAY MINIMUM	1.4	Jan 15	2.3	Dec 19	1.0	Nov 5 1992
MAXIMUM PEAK FLOW			1240	Jun 1	1730	Jul 9 1995
MAXIMUM PEAK STAGE			2.86	Jun 1	14.75	Jul 9 1995
ANNUAL RUNOFF (AC-FT)	2140		15120		17100	
10 PERCENT EXCEEDS	3.3		2.6		8.1	
50 PERCENT EXCEEDS	2.4		2.4		2.5	
90 PERCENT EXCEEDS	1.5		2.3		1.5	

e Estimated.

11230560 CHINQUAPIN CREEK BELOW DIVERSION DAM, NEAR BIG CREEK, CA

LOCATION.—Lat 37° 18'26", long 119° 01'08", unsurveyed, T.7 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, 30 ft downstream from diversion dam to Ward Tunnel, 0.7 mi upstream from mouth, 1.7 mi south of Mono Hot Springs, and 14.0 mi northeast of town of Big Creek.

DRAINAGE AREA.—1.65 mi^2.

PERIOD OF RECORD.—October 1986 to September 1998, October 2000 to current year. Prior to October 1991 published as "at Diversion Dam."

GAGE.—Water-stage recorder and 90° V-notch weir control. Elevation of gage is 7,260 ft above NGVD of 1929, from topographic map.

REMARKS.—Records of fishery release normally computed only during periods of diversion to Ward Tunnel. Diversion during the current water year occurred May 20 to July 8. See schematic diagram of upper San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 67 and 120.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	1.3	1.2	---	---
2	---	---	---	---	---	---	---	---	1.8	1.2	---	---
3	---	---	---	---	---	---	---	---	1.5	1.2	---	---
4	---	---	---	---	---	---	---	---	1.4	1.1	---	---
5	---	---	---	---	---	---	---	---	e47	1.1	---	---
6	---	---	---	---	---	---	---	---	e43	1.1	---	---
7	---	---	---	---	---	---	---	---	e39	1.2	---	---
8	---	---	---	---	---	---	---	---	e35	1.1	---	---
9	---	---	---	---	---	---	---	---	e31	---	---	---
10	---	---	---	---	---	---	---	---	e27	---	---	---
11	---	---	---	---	---	---	---	---	e23	---	---	---
12	---	---	---	---	---	---	---	---	1.2	---	---	---
13	---	---	---	---	---	---	---	---	1.2	---	---	---
14	---	---	---	---	---	---	---	---	1.2	---	---	---
15	---	---	---	---	---	---	---	---	1.2	---	---	---
16	---	---	---	---	---	---	---	---	1.2	---	---	---
17	---	---	---	---	---	---	---	---	1.2	---	---	---
18	---	---	---	---	---	---	---	---	1.2	---	---	---
19	---	---	---	---	---	---	---	---	1.2	---	---	---
20	---	---	---	---	---	---	---	1.2	1.1	---	---	---
21	---	---	---	---	---	---	---	1.2	1.1	---	---	---
22	---	---	---	---	---	---	---	1.2	1.1	---	---	---
23	---	---	---	---	---	---	---	1.2	1.2	---	---	---
24	---	---	---	---	---	---	---	1.2	1.2	---	---	---
25	---	---	---	---	---	---	---	1.2	1.2	---	---	---
26	---	---	---	---	---	---	---	1.2	1.2	---	---	---
27	---	---	---	---	---	---	---	3.0	1.2	---	---	---
28	---	---	---	---	---	---	---	3.6	1.2	---	---	---
29	---	---	---	---	---	---	---	3.1	1.2	---	---	---
30	---	---	---	---	---	---	---	2.6	1.2	---	---	---
31	---	---	---	---	---	---	---	1.8	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	273.5	---	---	---
MEAN	---	---	---	---	---	---	---	---	9.12	---	---	---
MAX	---	---	---	---	---	---	---	---	47	---	---	---
MIN	---	---	---	---	---	---	---	---	1.1	---	---	---
AC-FT	---	---	---	---	---	---	---	---	542	---	---	---

e Estimated.

11230600 CAMP 62 CREEK BELOW DIVERSION DAM, NEAR BIG CREEK, CA

LOCATION.—Lat 37° 18'32", long 119° 01'37", unsurveyed, T.7 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank, 30 ft downstream from diversion dam, 1.4 mi southwest of Mono Hot Springs, and 13.5 mi northeast of town of Big Creek.

DRAINAGE AREA.—1.97 mi^2.

PERIOD OF RECORD.—October 1986 to September 1998, October 2000 to current year. Prior to October 1991 published as "at Diversion Dam."

GAGE.—Water-stage recorder and 90° V-notch weir control. Elevation of gage is 7,320 ft above NGVD of 1929, from topographic map.

REMARKS.—Records of fishery release normally computed only during periods of diversion to Ward Tunnel. Diversion during the current water year occurred May 20 to July 21. Flow over spillway bypasses this station. Discharge represents the combined flow of spill and (or) release from diversion dam. See schematic diagram of upper San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 67 and 120.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	e24	3.0	---	---
2	---	---	---	---	---	---	---	---	e23	2.6	---	---
3	---	---	---	---	---	---	---	---	e21	2.5	---	---
4	---	---	---	---	---	---	---	---	e19	2.2	---	---
5	---	---	---	---	---	---	---	---	e18	2.0	---	---
6	---	---	---	---	---	---	---	---	e18	1.8	---	---
7	---	---	---	---	---	---	---	---	e18	1.6	---	---
8	---	---	---	---	---	---	---	---	19	1.4	---	---
9	---	---	---	---	---	---	---	---	19	1.2	---	---
10	---	---	---	---	---	---	---	---	17	1.1	---	---
11	---	---	---	---	---	---	---	---	15	0.98	---	---
12	---	---	---	---	---	---	---	---	15	0.84	---	---
13	---	---	---	---	---	---	---	---	15	0.71	---	---
14	---	---	---	---	---	---	---	---	16	0.60	---	---
15	---	---	---	---	---	---	---	---	15	0.53	---	---
16	---	---	---	---	---	---	---	---	14	0.45	---	---
17	---	---	---	---	---	---	---	---	13	0.39	---	---
18	---	---	---	---	---	---	---	---	12	0.39	---	---
19	---	---	---	---	---	---	---	---	11	0.41	---	---
20	---	---	---	---	---	---	---	15	9.0	0.43	---	---
21	---	---	---	---	---	---	---	19	7.6	0.37	---	---
22	---	---	---	---	---	---	---	22	6.5	---	---	---
23	---	---	---	---	---	---	---	24	5.4	---	---	---
24	---	---	---	---	---	---	---	25	4.6	---	---	---
25	---	---	---	---	---	---	---	27	4.4	---	---	---
26	---	---	---	---	---	---	---	27	4.4	---	---	---
27	---	---	---	---	---	---	---	32	4.3	---	---	---
28	---	---	---	---	---	---	---	e31	4.2	---	---	---
29	---	---	---	---	---	---	---	e29	4.0	---	---	---
30	---	---	---	---	---	---	---	e28	3.5	---	---	---
31	---	---	---	---	---	---	---	e26	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	379.9	---	---	---
MEAN	---	---	---	---	---	---	---	---	12.7	---	---	---
MAX	---	---	---	---	---	---	---	---	24	---	---	---
MIN	---	---	---	---	---	---	---	---	3.5	---	---	---
AC-FT	---	---	---	---	---	---	---	---	754	---	---	---

e Estimated.

11230670 BOLSILLO CREEK BELOW DIVERSION DAM, NEAR BIG CREEK, CA

LOCATION.—Lat 37° 18'43", long 119° 02'23", unsurveyed, T.7 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, 50 ft downstream from diversion dam, 1.5 mi upstream from mouth, 1.7 mi southwest of Mono Hot Springs, and 13.3 mi northeast of town of Big Creek.

DRAINAGE AREA.—1.40 mi^2.

PERIOD OF RECORD.—October 1986 to September 2000, October 2001 to current year.

GAGE.—Water-stage recorder and 90° V-notch weir control. Elevation of gage is 7,600 ft above NGVD of 1929, from topographic map.

REMARKS.—Records of fishery release normally computed only during periods of diversion to Ward Tunnel. Diversion during the current water year occurred May 20 to June 5, June 9 to July 10. See schematic diagram of upper San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 67 and 120.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	3.2	0.46	---	---
2	---	---	---	---	---	---	---	---	e4.6	0.46	---	---
3	---	---	---	---	---	---	---	---	e6.2	0.46	---	---
4	---	---	---	---	---	---	---	---	e5.7	0.46	---	---
5	---	---	---	---	---	---	---	---	e11	0.46	---	---
6	---	---	---	---	---	---	---	---	---	0.46	---	---
7	---	---	---	---	---	---	---	---	---	0.46	---	---
8	---	---	---	---	---	---	---	---	---	0.46	---	---
9	---	---	---	---	---	---	---	---	e6.4	0.46	---	---
10	---	---	---	---	---	---	---	---	0.57	0.46	---	---
11	---	---	---	---	---	---	---	---	0.55	---	---	---
12	---	---	---	---	---	---	---	---	0.54	---	---	---
13	---	---	---	---	---	---	---	---	0.52	---	---	---
14	---	---	---	---	---	---	---	---	0.53	---	---	---
15	---	---	---	---	---	---	---	---	0.53	---	---	---
16	---	---	---	---	---	---	---	---	0.53	---	---	---
17	---	---	---	---	---	---	---	---	0.53	---	---	---
18	---	---	---	---	---	---	---	---	0.53	---	---	---
19	---	---	---	---	---	---	---	---	0.51	---	---	---
20	---	---	---	---	---	---	---	0.50	0.51	---	---	---
21	---	---	---	---	---	---	---	0.74	0.51	---	---	---
22	---	---	---	---	---	---	---	3.7	0.51	---	---	---
23	---	---	---	---	---	---	---	7.7	0.51	---	---	---
24	---	---	---	---	---	---	---	8.5	0.51	---	---	---
25	---	---	---	---	---	---	---	9.2	0.51	---	---	---
26	---	---	---	---	---	---	---	9.6	0.51	---	---	---
27	---	---	---	---	---	---	---	11	0.49	---	---	---
28	---	---	---	---	---	---	---	11	0.48	---	---	---
29	---	---	---	---	---	---	---	10	0.47	---	---	---
30	---	---	---	---	---	---	---	10	0.46	---	---	---
31	---	---	---	---	---	---	---	7.5	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated.

11231000 LAKE THOMAS A. EDISON NEAR BIG CREEK, CA

LOCATION.—Lat 37° 22'09", long 118° 59'17", unsurveyed, T.6 1/2 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in outlet works of Vermillion Valley Dam, on Mono Creek, and 18.1 mi northeast of town of Big Creek.

DRAINAGE AREA.—90.0 mi^2.

PERIOD OF RECORD.—October 1954 to current year. Prior to 1960, maximum and minimum daily contents were published.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Lake is formed by earthfill dam; dam completed and storage began Oct. 12, 1954. Usable capacity, 125,035 acre-ft, between elevations 7,508.9 ft, invert of outlet works, and 7,642.50 ft, top of gates in service spillway. Water is diverted at times into lake from Warm Creek (station 11231700). Water is released for diversion to Ward Tunnel via Mono Creek Conduit (station 11231550). Records, including extremes, represent contents at 2400 hours. See schematic diagram of upper San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2086. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 125,983 acre-ft, Sept. 26, 1982, elevation, 7,643.55 ft; minimum since appreciable storage was attained, 4,553 acre-ft, Dec. 27, 1987, elevation, 7,552.07 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 116,199 acre-ft, July 2, elevation, 7,637.69 ft; minimum, 45,318 acre-ft, Feb. 11, elevation, 7,593.77 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Southern California Edison Co., dated July 22, 1955)

7,550	3,567	7,570	18,137	7,600	53,769	7,630	102,367
7,555	6,147	7,580	28,515	7,610	68,616	7,640	120,424
7,560	9,521	7,590	40,454	7,620	85,006	7,644	127,820

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51947	48348	49361	50232	46745	46256	49010	53961	82247	115962	103896	83889
2	51477	48322	49307	50258	46560	46269	49118	54184	84554	116126	103433	83128
3	51077	48307	49320	50177	46467	46308	49280	54294	86914	116053	102936	82505
4	50654	48281	49307	50013	46308	46361	49415	54487	89050	116035	102402	81766
5	50258	48268	49280	49835	46176	46361	49442	54626	90939	116035	101836	81012
6	49821	48227	49307	49808	46004	46388	49564	54792	92647	115980	101235	80326
7	49402	48430	49307	49835	45885	46414	49727	54930	94395	115854	100563	79627
8	49077	48781	49280	49712	45713	46454	49863	55166	95960	115743	99944	78897
9	49105	48889	49280	49549	45567	46507	50053	55263	97442	115615	99221	78151
10	49064	48982	49280	49495	45437	46507	50245	55374	98912	115262	98606	77360
11	49105	49010	49253	49307	45358	46600	50463	55542	100337	114784	97922	76636
12	49036	49036	49226	49226	45489	46692	50695	55781	101642	114272	97254	75916
13	49010	49131	49267	49104	45542	46719	50982	56049	102807	113723	96608	75198
14	48982	49159	49293	48995	45567	46851	51243	56532	103976	113139	95891	74434
15	48943	49198	49293	48874	45567	47104	51381	56873	105203	112556	95228	73688
16	48822	49226	49686	48794	45713	47212	51574	57345	106359	111812	94532	72866
17	48767	49226	49727	48672	45792	47265	51767	57933	107468	111267	93888	72095
18	48727	49226	49712	48537	45766	47291	51892	58512	108526	110669	93229	71263
19	48727	49267	49849	48375	45832	47358	52029	59238	109549	110124	92536	70562
20	48699	49267	49891	48281	45898	47465	52237	60087	110380	109509	91861	69800
21	48686	49280	49891	48133	45925	47505	52486	61132	111117	108877	91377	69074
22	48632	49334	49931	47987	45964	47639	52584	62380	111804	108281	90705	68303
23	48645	49374	49904	47853	45977	47746	52736	63810	112348	107775	90014	67537
24	48578	49402	49904	47706	46030	47853	52904	65285	112763	107216	89309	66852
25	48551	49388	49917	47572	46123	47947	53029	66854	113143	106766	88640	66033
26	48497	49374	49904	47452	46150	48067	53210	68506	113634	106369	87973	65310
27	48484	49361	49904	47265	46242	48187	53337	70524	114070	105928	87323	64576
28	48510	49307	50081	47225	46242	48268	53574	72970	114597	105536	86655	63845
29	48484	49320	50108	47077	---	48415	53699	75381	115087	105090	86026	63106
30	48430	49361	50177	46918	---	48538	53795	77740	115562	104607	85295	62367
31	48415	---	50245	46851	---	48767	---	80039	---	104341	84651	---
MAX	51947	49402	50245	50258	46745	48767	53795	80039	115562	116126	103896	83889
MIN	48415	48227	49226	46851	45358	46256	49010	53961	82247	104341	84651	62367
a	7596.10	7596.80	7597.45	7594.93	7594.47	7596.36	7600.02	7617.05	7637.34	7631.11	7619.79	7605.93
b	-3932	+946	+884	-3394	-609	+2525	+5028	+26244	+35523	-11221	-19690	-22284

CAL YR 2002 b +1148
WTR YR 2003 b +10020

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11231500 MONO CREEK BELOW LAKE THOMAS A. EDISON, CA

LOCATION.—Lat 37° 21'41", long 118° 59'28", unsurveyed, T.6 1/2 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank, 0.5 mi upstream from diversion dam, 0.9 mi downstream from Vermilion Valley Dam, and 1.0 mi south of Lake Thomas A. Edison.

DRAINAGE AREA.—92.5 mi^2.

PERIOD OF RECORD.—October 1921 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1954, published as "near Vermilion Valley."

REVISED RECORDS.—WSP 1011: 1943. WSP 1515: 1956. WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 7,380 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow regulated by Lake Thomas A. Edison (station 11231000) 1 mi upstream beginning Oct. 12, 1954. Water is diverted at times into the basin from Warm Creek (station 11231700) to Lake Thomas A. Edison. See schematic diagram of upper San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2086.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,160 ft^3/s, Sept. 26, 1982, gage height, 8.87 ft; minimum daily, 0.3 ft^3/s, Nov. 11, 12, 1954.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	217	22	21	27	103	22	23	24	26	27	371	384
2	217	22	21	27	103	22	23	24	26	119	371	400
3	217	22	21	87	103	22	23	24	26	211	371	401
4	217	22	21	114	103	22	23	24	26	212	371	398
5	217	22	21	114	103	22	23	24	26	213	371	398
6	217	22	21	57	103	22	23	24	26	213	371	398
7	217	22	21	26	103	22	23	24	26	213	371	398
8	153	22	21	107	103	22	23	24	26	213	371	398
9	22	22	21	98	103	22	23	24	26	213	371	396
10	22	22	24	89	103	22	23	24	26	311	371	394
11	22	22	27	89	67	22	23	24	26	376	371	394
12	22	21	23	89	26	22	23	25	26	380	371	394
13	22	21	23	89	22	22	23	25	26	380	371	394
14	22	21	23	89	22	22	23	26	26	395	371	395
15	22	21	23	89	22	22	23	27	26	407	371	410
16	56	21	23	88	22	22	23	27	26	407	371	440
17	47	21	23	87	22	22	23	27	27	407	371	425
18	21	21	23	103	22	22	23	27	27	407	369	398
19	21	21	25	103	22	22	23	27	27	407	367	398
20	21	21	26	103	22	22	23	27	27	409	367	397
21	22	21	26	103	22	22	23	27	27	412	370	394
22	22	21	26	103	22	22	23	27	27	410	371	394
23	22	21	26	103	22	22	23	27	27	418	371	394
24	22	21	26	103	22	22	24	27	27	418	371	389
25	22	21	26	103	22	22	24	27	27	421	371	389
26	22	21	26	103	22	22	24	27	27	422	371	389
27	22	21	26	103	22	22	24	27	28	402	371	389
28	22	21	26	103	22	22	24	26	28	380	371	385
29	22	21	27	103	---	22	24	26	28	378	370	385
30	22	21	27	103	---	22	24	26	28	374	367	391
31	22	---	27	103	---	23	---	26	---	372	367	---
TOTAL	2234	641	741	2808	1475	683	697	795	798	10327	11481	11909
MEAN	72.1	21.4	23.9	90.6	52.7	22.0	23.2	25.6	26.6	333	370	397
MAX	217	22	27	114	103	23	24	27	28	422	371	440
MIN	21	21	21	26	22	22	23	24	26	27	367	384
AC-FT	4430	1270	1470	5570	2930	1350	1380	1580	1580	20480	22770	23620

11231500 MONO CREEK BELOW LAKE THOMAS A. EDISON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1954, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.4	29.4	31.4	33.3	39.8	59.4	170	457	548	270	79.6	31.3
MAX	60.8	124	127	76.8	74.4	94.8	282	714	1135	672	233	86.6
(WY)	1946	1951	1951	1951	1951	1934	1926	1952	1938	1938	1938	1938
MIN	11.3	10.5	12.0	14.0	17.0	25.0	77.8	197	79.6	36.6	17.6	11.5
(WY)	1925	1930	1931	1949	1949	1924	1948	1933	1924	1924	1924	1924

SUMMARY STATISTICS	WATER YEARS 1922 - 1954		
ANNUAL MEAN	148		
HIGHEST ANNUAL MEAN	268		1938
LOWEST ANNUAL MEAN	52.8		1924
HIGHEST DAILY MEAN	1550	Jun 3	1938
LOWEST DAILY MEAN	8.0	Sep 29	1924
ANNUAL SEVEN-DAY MINIMUM	8.1	Sep 28	1924
MAXIMUM PEAK FLOW	1760	Jun 2	1938
MAXIMUM PEAK STAGE	8.62	Jun 2	1938
ANNUAL RUNOFF (AC-FT)	107300		
10 PERCENT EXCEEDS	470		
50 PERCENT EXCEEDS	48		
90 PERCENT EXCEEDS	18		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	97.9	158	195	207	200	179	121	65.7	80.9	214	243	185
MAX	324	436	437	467	472	479	647	515	577	684	424	450
(WY)	1998	1999	1968	1984	1973	1973	1983	1983	1969	1995	1999	1994
MIN	11.0	12.1	9.05	9.95	10.4	13.8	12.7	12.7	11.5	12.1	12.2	14.0
(WY)	1972	1982	1991	1991	1991	1990	1966	1966	1977	1977	1981	1966

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1956 - 2003	
ANNUAL TOTAL	42865		44589			
ANNUAL MEAN	117		122		162	
HIGHEST ANNUAL MEAN					366	1983
LOWEST ANNUAL MEAN					53.2	1977
HIGHEST DAILY MEAN	426	Jul 31	440	Sep 16	2080	Sep 26 1982
LOWEST DAILY MEAN	18	Jan 1	21	Oct 18	4.1	Dec 12 1990
ANNUAL SEVEN-DAY MINIMUM	18	Jan 1	21	Nov 12	4.2	Dec 12 1990
MAXIMUM PEAK FLOW			455	Jul 26	2160	Sep 26 1982
MAXIMUM PEAK STAGE			6.46	Jul 26	8.87	Sep 26 1982
ANNUAL RUNOFF (AC-FT)	85020		88440		117500	
10 PERCENT EXCEEDS	389		392		424	
50 PERCENT EXCEEDS	82		26		92	
90 PERCENT EXCEEDS	20		22		14	

11231550 MONO CREEK CONDUIT NEAR MONO HOT SPRINGS, CA

LOCATION.—Lat 37° 21'36", long 118° 59'51", unsurveyed, T.6 1/2 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank, 40 ft upstream from diversion dam, 1.0 mi southwest of Lake Thomas A. Edison, and 2.5 mi northeast of Mono Hot Springs.

PERIOD OF RECORD.—October 1986 to current year.

GAGE.—Discharge computed as difference between flow at Mono Creek below Lake Thomas A. Edison (station 11231500) and Mono Creek below diversion dam (station 11231600). Datum of conduit invert is 7,338 ft above NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Conduit diverts at diversion dam on Mono Creek to Ward Tunnel and Huntington Lake (station 11236000) via Portal Powerplant (station 11235500) for further power development in Big Creek powerplants. See schematic diagram of upper San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 67.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 499 ft^3/s, Apr. 7, 1995; minimum daily, -18 ft^3/s, June 11, 1993 (reverse flow from Bear Creek Conduit).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	205	12	13	19	e95	14	15	14	16	17	360	374
2	208	12	13	19	e95	14	15	14	16	109	361	390
3	207	13	13	e78	e95	14	15	14	16	201	361	391
4	207	14	13	e104	e95	14	15	14	16	202	361	388
5	207	14	13	e104	e95	14	15	14	16	204	361	388
6	207	14	13	e48	e95	14	15	14	16	203	361	388
7	207	14	13	18	e95	14	15	14	16	203	361	388
8	143	14	13	e96	e95	14	15	14	16	203	361	388
9	13	14	13	e89	e95	14	15	14	16	203	361	386
10	13	14	16	81	e95	14	15	14	16	300	361	384
11	12	14	19	81	e59	14	15	14	16	366	361	384
12	12	13	15	81	18	14	15	15	16	370	361	384
13	12	13	15	81	14	14	15	15	16	370	361	384
14	12	13	15	81	14	14	15	16	16	385	361	385
15	12	13	15	81	14	14	15	17	16	397	361	e371
16	46	13	15	80	14	14	15	17	16	397	361	e366
17	37	13	15	79	14	14	15	17	17	397	361	e399
18	12	13	15	e95	14	14	15	17	17	397	359	388
19	12	13	17	e95	14	14	15	17	17	397	357	388
20	12	13	18	e95	14	14	15	17	17	399	357	387
21	12	13	18	e95	14	14	15	17	17	402	360	384
22	12	13	18	e95	14	14	15	17	17	400	361	384
23	12	13	18	e95	14	14	15	17	17	408	361	384
24	12	13	18	e95	14	14	16	17	17	408	361	379
25	12	13	18	e95	14	14	16	17	17	411	361	379
26	12	13	18	e95	14	14	16	17	17	412	361	379
27	12	13	18	e95	14	14	16	17	18	385	361	379
28	12	13	18	e95	14	14	16	16	18	370	361	375
29	12	13	19	e94	---	14	16	16	18	368	360	375
30	12	13	19	e95	---	14	15	16	18	364	357	381
31	12	---	19	e95	---	15	---	16	---	362	357	---
TOTAL	1928	396	493	2549	1251	435	456	485	498	10010	11170	11500
MEAN	62.2	13.2	15.9	82.2	44.7	14.0	15.2	15.6	16.6	323	360	383
MAX	208	14	19	104	95	15	16	17	18	412	361	399
MIN	12	12	13	18	14	14	15	14	16	17	357	366
AC-FT	3820	785	978	5060	2480	863	904	962	988	19850	22160	22810

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	95.8	133	126	98.8	90.7	147	110	55.6	59.5	190	288	208
MAX	311	426	421	364	395	464	400	207	203	417	409	440
(WY)	1998	1999	1987	1999	1996	1996	1996	1995	1997	1989	1999	1994
MIN	0.81	0.27	1.39	4.08	0.000	8.00	5.47	6.00	6.00	0.000	93.0	11.8
(WY)	2001	2001	1991	1991	1997	1990	2001	2001	2001	1995	1996	1989

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	39239.5		41171			
ANNUAL MEAN	108		113		134	
HIGHEST ANNUAL MEAN					227	1997
LOWEST ANNUAL MEAN					50.5	1990
HIGHEST DAILY MEAN	413	Jul 31	412	Jul 26	499	Apr 7 1995
LOWEST DAILY MEAN	5.5	Jun 10	12	Oct 11	-18	Jun 11 1993
ANNUAL SEVEN-DAY MINIMUM	5.5	Jun 8	12	Oct 18	0.00	Dec 5 1990
ANNUAL RUNOFF (AC-FT)	77830		81660		97040	
10 PERCENT EXCEEDS	376		379		404	
50 PERCENT EXCEEDS	72		17		64	
90 PERCENT EXCEEDS	6.6		13		6.2	

e Estimated.

11231600 MONO CREEK BELOW DIVERSION DAM, NEAR MONO HOT SPRINGS, CA

LOCATION.—Lat 37° 21'36", long 118° 59'51", unsurveyed, T.6 1/2 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank, 20 ft downstream from diversion dam, 1.0 mi southwest of Lake Thomas A. Edison, and 2.5 mi northeast of Mono Hot Springs.

DRAINAGE AREA.—92.8 mi^2.

PERIOD OF RECORD.—October 1986 to current year. Prior to October 1991, published as "at Diversion Dam."

GAGE.—Acoustic-velocity meter on low-flow discharge, and water-stage recorder on diversion reservoir. Elevation of gage is 7,340 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1991, at datum 10 ft higher.

REMARKS.—Flow regulated by diversion reservoir and Lake Thomas A. Edison (station 11231000). Most of the flow is diverted at the diversion dam to Mono Creek Conduit (station 11231550), then to Ward Tunnel and Huntington Lake (station 11236000) via Portal Powerplant (station 11235500) for further power development in Big Creek powerplants. Discharge, including extremes, represents the combined flow at Mono Creek and spill at diversion dam. See schematic diagram of upper San Joaquin River Basin.

COOPERATION.—Records collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 67.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 1,300 ft^3/s, July 11, 12, 1995; minimum daily, 4.1 ft^3/s, Dec. 12–16, 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	9.5	8.1	8.2	e8.4	8.2	8.1	10	10	10	11	10
2	9.5	9.5	8.1	8.1	e8.4	8.1	8.1	10	10	10	9.9	10
3	9.6	8.9	8.1	e9.3	e8.4	8.2	8.1	10	10	10	10	10
4	9.6	8.2	8.1	e10	e8.4	8.1	8.1	10	10	9.9	9.8	10
5	9.6	8.2	8.2	e10	e8.4	8.2	8.1	10	10	9.5	9.9	10
6	9.6	8.2	8.1	e9.3	e8.4	8.2	8.1	10	10	9.7	9.9	10
7	9.6	8.2	8.1	8.2	e8.4	8.2	8.1	10	10	10	9.9	10
8	9.5	8.2	8.1	e11	e8.4	8.2	8.1	10	10	10	9.8	10
9	9.4	8.2	8.1	e9.4	e8.4	8.2	8.1	10	10	10	9.8	10
10	9.5	8.2	8.1	8.4	e8.4	8.2	8.1	10	10	11	9.8	10
11	9.5	8.1	8.2	8.4	e8.3	8.2	8.1	10	10	9.8	9.8	10
12	9.5	8.1	8.2	8.4	8.2	8.1	8.1	10	10	9.9	9.8	10
13	9.5	8.2	8.2	8.4	8.2	8.2	8.1	10	10	9.9	9.8	10
14	9.5	8.2	8.2	8.4	8.2	8.2	8.1	10	10	9.9	9.8	10
15	9.5	8.2	8.1	8.4	8.2	8.1	8.1	10	10	10	9.9	e39
16	9.7	8.2	8.1	8.4	8.2	8.1	8.1	10	10	10	9.8	e74
17	9.6	8.1	8.1	8.4	8.2	8.1	8.1	10	10	10	9.8	e26
18	9.5	8.1	8.1	e8.4	8.2	8.1	8.1	10	10	10	9.8	10
19	9.5	8.1	8.2	e8.4	8.1	8.1	8.1	10	10	10	9.8	10
20	9.5	8.2	8.2	e8.4	8.1	8.1	8.1	10	10	10	9.8	10
21	9.5	8.2	8.2	e8.4	8.1	8.1	8.1	10	10	10	9.8	10
22	9.5	8.2	8.2	e8.4	8.2	8.1	8.1	10	10	10	9.8	10
23	9.5	8.2	8.2	e8.4	8.2	8.1	8.1	10	10	10	9.8	10
24	9.5	8.2	8.2	e8.4	8.2	8.1	8.1	10	10	10	9.8	10
25	9.5	8.1	8.2	e8.4	8.2	8.1	8.1	10	10	10	9.8	10
26	9.5	8.1	8.1	e8.4	8.2	8.1	8.1	10	10	10	9.9	10
27	9.5	8.1	8.2	e8.4	8.2	8.1	8.1	10	10	17	10	10
28	9.5	8.1	8.2	e8.4	8.2	8.1	8.1	10	10	10	10	10
29	9.5	8.1	8.1	e8.5	---	8.1	8.1	10	10	9.8	10	10
30	9.5	8.1	8.2	e8.4	---	8.1	8.9	10	10	9.8	10	10
31	9.5	---	8.2	e8.4	---	8.1	---	10	---	9.9	10	---
TOTAL	297.7	248.2	252.7	268.4	231.4	252.2	243.8	310	300	316.1	306.8	409
MEAN	9.60	8.27	8.15	8.66	8.26	8.14	8.13	10.0	10.0	10.2	9.90	13.6
MAX	12	9.5	8.2	11	8.4	8.2	8.9	10	10	17	11	74
MIN	9.4	8.1	8.1	8.1	8.1	8.1	8.1	10	10	9.5	9.8	10
AC-FT	590	492	501	532	459	500	484	615	595	627	609	811

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	10.2	9.65	9.25	8.57	8.86	8.49	9.33	12.8	39.5	66.2	21.4	12.9
MAX	22.9	23.1	27.0	20.9	25.5	17.7	18.5	18.6	336	684	141	16.9
(WY)	2001	1996	1996	1997	1997	1997	1995	1995	1997	1995	1995	1998
MIN	6.72	5.62	5.69	5.66	5.69	5.42	5.61	9.45	9.98	9.91	9.85	9.67
(WY)	1995	1992	1993	1993	1993	2002	2002	1994	1990	1991	1994	1994

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	3675.3		3436.3			
ANNUAL MEAN	10.1		9.41		18.2	
HIGHEST ANNUAL MEAN					79.4	1995
LOWEST ANNUAL MEAN					7.83	1992
HIGHEST DAILY MEAN	15	Feb 15	74	Sep 16	1300	Jul 11 1995
LOWEST DAILY MEAN	5.4	Feb 25	8.1	Nov 11	4.1	Dec 12 1990
ANNUAL SEVEN-DAY MINIMUM	5.4	Mar 4	8.1	Nov 25	4.2	Dec 12 1990
ANNUAL RUNOFF (AC-FT)	7290		6820		13160	
10 PERCENT EXCEEDS	14		10		16	
50 PERCENT EXCEEDS	9.5		9.5		10	
90 PERCENT EXCEEDS	5.4		8.1		5.9	

e Estimated.

11231700 WARM CREEK BELOW DIVERSION DAM, NEAR LAKE THOMAS A. EDISON, CA

LOCATION.—Lat 37° 23'31", long 119° 01'39", unsurveyed, T.6 S., R.27 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank, 40 ft downstream from diversion dam, 1.5 mi northwest of Lake Thomas A. Edison, and 17.4 mi northeast of town of Big Creek.

DRAINAGE AREA.—2.14 mi^2.

PERIOD OF RECORD.—October 1986 to current year.

GAGE.—Water-stage recorder and 90° V-notch weir control. Elevation of gage is 8,030 ft above NGVD of 1929, from topographic map.

REMARKS.—Records normally computed only in summer months or during periods of diversion to Lake Thomas A. Edison. Diversion occurred May 28 to Aug. 9. See schematic diagram of upper San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2086.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	0.39	0.42	0.37	---
2	---	---	---	---	---	---	---	---	0.39	0.42	0.37	---
3	---	---	---	---	---	---	---	---	0.39	0.42	0.37	---
4	---	---	---	---	---	---	---	---	0.38	0.42	0.34	---
5	---	---	---	---	---	---	---	---	0.38	0.42	0.32	---
6	---	---	---	---	---	---	---	---	0.38	0.41	0.31	---
7	---	---	---	---	---	---	---	---	0.38	0.39	0.30	---
8	---	---	---	---	---	---	---	---	0.38	0.38	0.28	---
9	---	---	---	---	---	---	---	---	0.38	0.38	0.26	---
10	---	---	---	---	---	---	---	---	0.38	0.37	---	---
11	---	---	---	---	---	---	---	---	0.38	0.36	---	---
12	---	---	---	---	---	---	---	---	0.38	0.36	---	---
13	---	---	---	---	---	---	---	---	e0.37	0.36	---	---
14	---	---	---	---	---	---	---	---	0.37	0.36	---	---
15	---	---	---	---	---	---	---	---	0.36	0.36	---	---
16	---	---	---	---	---	---	---	---	0.36	0.36	---	---
17	---	---	---	---	---	---	---	---	0.36	0.36	---	---
18	---	---	---	---	---	---	---	---	0.36	0.36	---	---
19	---	---	---	---	---	---	---	---	0.39	0.39	---	---
20	---	---	---	---	---	---	---	---	0.44	0.39	---	---
21	---	---	---	---	---	---	---	---	0.45	0.37	---	---
22	---	---	---	---	---	---	---	---	0.44	0.36	---	---
23	---	---	---	---	---	---	---	---	0.44	0.38	---	---
24	---	---	---	---	---	---	---	---	0.44	0.37	---	---
25	---	---	---	---	---	---	---	---	0.44	0.38	---	---
26	---	---	---	---	---	---	---	---	0.44	0.39	---	---
27	---	---	---	---	---	---	---	---	0.44	0.40	---	---
28	---	---	---	---	---	---	---	3.8	0.42	0.39	---	---
29	---	---	---	---	---	---	---	0.67	0.42	0.40	---	---
30	---	---	---	---	---	---	---	0.48	0.42	0.38	---	---
31	---	---	---	---	---	---	---	0.38	---	0.39	---	---
TOTAL	---	---	---	---	---	---	---	---	11.95	11.90	---	---
MEAN	---	---	---	---	---	---	---	---	0.40	0.38	---	---
MAX	---	---	---	---	---	---	---	---	0.45	0.42	---	---
MIN	---	---	---	---	---	---	---	---	0.36	0.36	---	---
AC-FT	---	---	---	---	---	---	---	---	24	24	---	---

e Estimated.

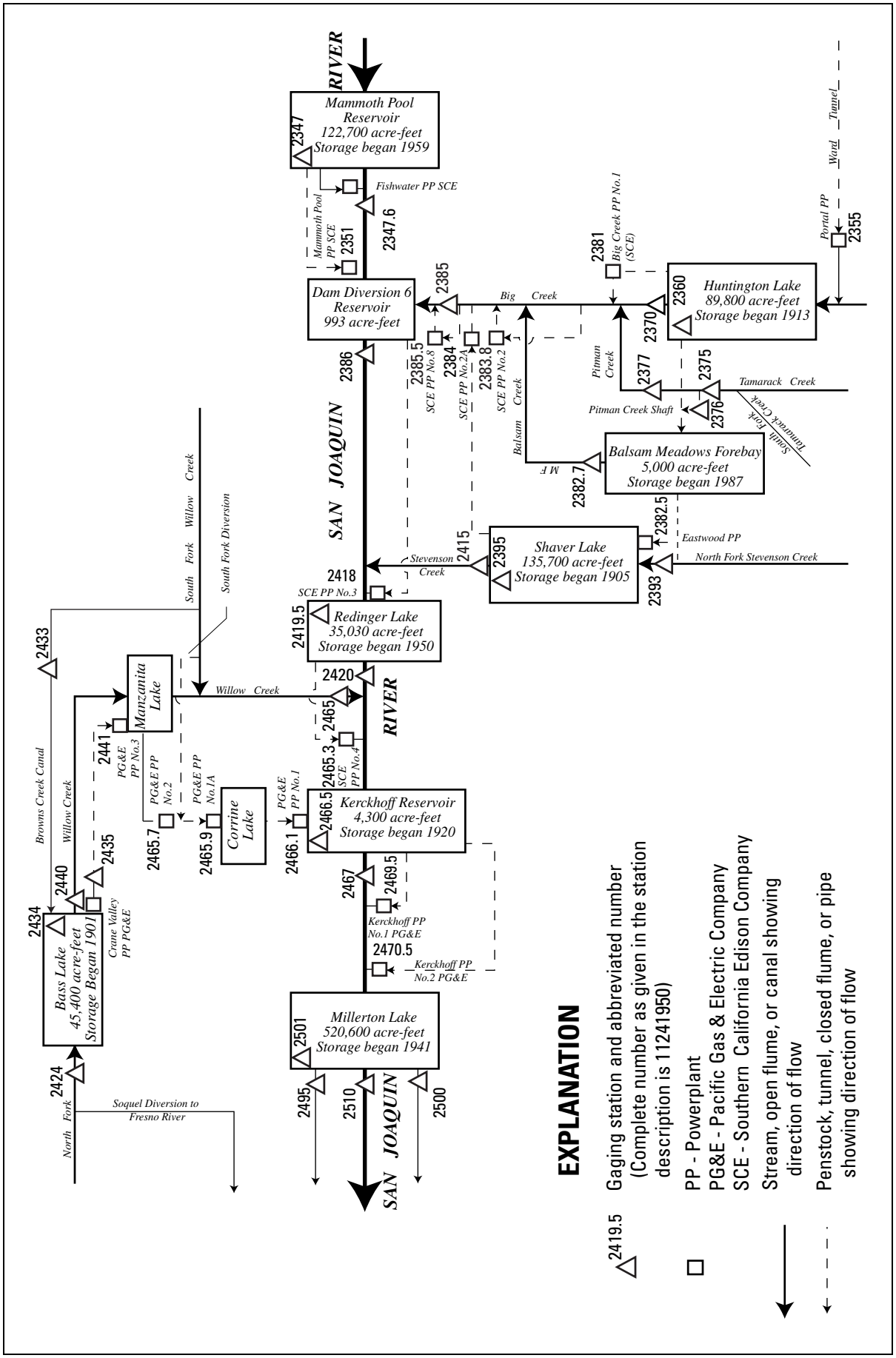


Figure 28. Diversions and storage in lower San Joaquin River Basin.

11234700 MAMMOTH POOL RESERVOIR NEAR BIG CREEK, CA

LOCATION.—Lat 37° 19'40", long 119° 19'38", in SE 1/4 SE 1/4 sec.10, T.7 S., R.24 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, in gatehouse of power tunnel intake, 0.7 mi northwest of dam on San Joaquin River, and 9.0 mi northwest of town of Big Creek.

DRAINAGE AREA.—995 mi^2.

PERIOD OF RECORD.—October 1959 to current year.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Reservoir is formed by an earthfill dam; storage began Oct. 8, 1959. Usable capacity, 119,940 acre-ft, between elevations 3,100.00 ft, invert of power tunnel, and 3,330.00 ft, crest of spillway. Additional storage of 2,780 acre-ft is not available for release. Water is diverted from basin through Ward Tunnel (stations 11229500 and 11235500). Water is diverted from Mammoth Pool through tunnel for power development and returned to river 8.5 mi downstream from dam. Records, including extremes, represent usable contents at 2400 hours. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2085. Records not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 128,944 acre-ft, Jan. 2, 1997, elevation, 3,338.00 ft; minimum contents since appreciable storage was attained, 1,134 acre-ft, Sept. 25, 1992, elevation, 3,112.82 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 123,312 acre-ft, June 3, elevation, 3,333.03 ft; minimum, 11,981 acre-ft, Mar. 6, elevation, 3,172.94 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Southern California Edison Co., dated Nov. 6, 1959)

3,100	0	3,130	3,114	3,180	14,060	3,260	56,381
3,105	417	3,140	4,605	3,190	17,414	3,280	72,109
3,110	861	3,150	6,402	3,200	21,400	3,300	89,781
3,115	1,355	3,160	8,618	3,220	31,109	3,320	109,336
3,120	1,900	3,170	11,165	3,240	42,787	3,340	131,255

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37947	19285	31201	23377	15409	16512	38936	28536	122825	109989	79221	44125
2	37776	18522	30249	23645	15911	15452	40303	26959	122926	108389	78906	43850
3	37581	18001	29842	23880	16073	14930	40108	26080	122976	107030	77840	43531
4	37114	17613	29431	24093	16225	13425	39664	25580	122623	106298	77040	43187
5	36522	16628	29018	24002	16229	12386	39773	25355	122272	105540	76140	42977
6	36123	16298	28181	23975	16093	12006	39336	24176	122422	104905	75369	42686
7	35187	16002	27797	23445	15844	12061	39051	22820	122205	104131	74050	42372
8	34419	24671	26844	23088	15921	12178	38466	22753	122071	103490	e72580	42072
9	33690	31569	26259	22421	15699	12461	38412	20930	121536	102589	70744	41766
10	32937	32966	25782	22328	15290	12902	38574	19013	121303	101633	68669	41455
11	32327	33497	25222	22678	14927	13488	38791	17247	121153	100572	67447	41120
12	31667	33774	24620	22447	14824	13900	40145	16276	120953	100186	66209	40769
13	30832	33879	24107	21820	15423	14611	42385	16123	120770	98910	65006	40585
14	30215	33643	23808	21664	16357	15393	44048	16471	120820	97833	64009	40145
15	29684	33654	23767	21150	16846	19485	45532	17989	120721	96287	62906	40011
16	29109	33725	24381	20497	17501	22385	45903	20797	120687	94907	61764	39488
17	28488	33807	24578	19930	17974	23726	45923	23577	120488	93513	60471	38792
18	27878	34309	24578	19609	18766	24290	44601	26884	120388	92495	59337	38552
19	27264	34259	24662	19211	19152	25179	43850	30744	120239	91593	57981	38278
20	26647	34192	24606	19263	18762	25927	42743	35066	119694	90778	56544	37975
21	26120	34035	24467	18950	18844	26553	41747	40855	119153	90163	55082	37703
22	25680	33924	24080	18284	18844	27521	40474	46986	118437	89921	54090	37232
23	25124	33985	23649	17716	18708	29128	38647	54219	117454	89077	52339	37006
24	24612	33890	23486	17265	18727	30361	37320	64192	116186	88061	50418	e36593
25	23858	33617	23305	17005	18649	31667	36262	73263	114744	86932	48928	e35968
26	23155	33250	23129	16605	18551	33007	34863	81312	114045	85882	47778	35715
27	22468	32869	22954	16103	18191	34661	33617	90919	113317	84937	46607	35384
28	21523	32488	23021	15911	17356	35032	33151	102540	112748	83761	45695	35509
29	20622	32077	23133	15689	---	35339	31880	113697	112212	82627	45435	34981
30	20181	31700	23075	15719	---	36008	30297	122590	111552	81045	45163	34690
31	19727	---	23359	15261	---	37320	---	122724	---	79860	44408	---
MAX	37947	34309	31201	24093	19152	37320	45923	122724	122976	109989	79221	44125
MIN	19727	16002	22954	15261	14824	12006	30297	16123	111552	79860	44408	34690
a	3195.96	3221.09	3204.44	3183.74	3189.84	3231.05	3218.48	3332.51	3322.13	3289.05	3242.54	3226.49
b	-18607	+11973	-8341	-8098	+2095	+19964	-7023	+92427	-11172	-31692	-35452	-9718

CAL YR 2002 b -9872
WTR YR 2003 b -3644

e Estimated.
a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11234760 SAN JOAQUIN RIVER ABOVE SHAKEFLAT CREEK, NEAR BIG CREEK, CA

LOCATION.—Lat 37° 19'00", long 119° 19'43", in NE 1/4 SE 1/4 sec.15, T.7 S., R.24 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on right bank, 1,500 ft upstream from Shakeflat Creek, 4,900 ft downstream from Mammoth Pool Dam, and 9.0 mi northwest of town of Big Creek.

DRAINAGE AREA.—1,003 mi^2.

PERIOD OF RECORD.—October 1959 to current year.

GAGE.—Water-stage recorder. Datum of gage is 2,865.50 ft above NGVD of 1929 (levels by Southern California Edison Co.). Since 1961, supplementary water-stage recorder and sharp-crested weir at different datum at outlet of dam 4,900 ft upstream, used for low flows of 60 ft^3/s or less.

REMARKS.—Flow regulated by Mammoth Pool Reservoir (station 11234700) 4,900 ft upstream. Diversions upstream through Ward Tunnel (see stations 11229500 and 11235500). Since March 1960, most of the water is diverted past this station to Mammoth Pool Powerplant (station 11235100). See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2085.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 80,000 ft^3/s, Jan. 2, 1997, gage height, 32.00 ft, from floodmarks, from rating curve extended above 20,300 ft^3/s; minimum daily, 0.3 ft^3/s, Oct. 14, Dec. 5, 1959.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	e22	e10	e32	13	13	13	14	4760	33	36	32
2	28	e11	e10	e31	13	13	13	14	4930	33	37	32
3	28	e10	e10	e31	13	13	14	14	5190	32	37	32
4	28	e10	e10	e31	13	13	15	14	4950	32	35	32
5	28	e10	e10	e31	13	13	14	14	3840	32	32	32
6	28	e10	e10	e31	13	13	14	14	3990	32	32	32
7	28	e13	e10	e31	13	13	14	13	3880	32	32	32
8	28	e42	e10	e22	13	13	14	13	3260	32	32	e31
9	28	e19	e10	e12	13	13	13	13	2280	32	32	e33
10	28	e13	e10	e13	13	13	13	e13	1790	32	32	e33
11	28	e12	e21	e12	13	13	13	e13	1420	32	32	e33
12	28	e12	e11	e12	13	13	13	e13	1230	32	32	e33
13	28	e12	e11	e12	13	13	14	248	834	31	32	e33
14	28	e12	e13	e12	13	13	14	761	769	31	32	e33
15	28	e12	e15	e11	13	13	14	329	800	31	32	e33
16	28	e12	e25	e11	12	13	14	148	615	31	32	e33
17	28	e12	e22	e11	12	13	14	94	572	31	32	e25
18	28	e12	e13	e11	12	12	14	70	349	31	32	15
19	28	e12	e15	e11	12	13	15	26	302	31	32	15
20	28	e12	e34	e11	12	13	15	26	99	31	32	15
21	28	e12	e32	e11	13	13	15	26	62	33	32	14
22	e27	e23	e31	e11	13	13	15	38	61	37	32	15
23	e27	e19	e31	12	13	13	15	53	38	37	32	14
24	e27	e10	e31	12	13	13	15	53	21	33	31	14
25	e27	e10	e30	12	13	13	15	54	21	32	32	14
26	e27	e10	e30	12	13	13	14	55	21	32	32	14
27	e27	e10	e30	12	13	13	14	55	21	32	32	15
28	e27	e10	e33	13	13	13	14	31	21	32	32	15
29	e27	e10	e33	13	---	13	14	38	21	32	32	14
30	e27	e10	e32	13	---	13	14	59	26	33	32	14
31	e27	---	e36	13	---	13	---	723	---	36	32	---
TOTAL	857	404	629	513	359	402	422	3049	46173	1003	1008	732
MEAN	27.6	13.5	20.3	16.5	12.8	13.0	14.1	98.4	1539	32.4	32.5	24.4
MAX	28	42	36	32	13	13	15	761	5190	37	37	33
MIN	27	10	10	11	12	12	13	13	21	31	31	14
AC-FT	1700	801	1250	1020	712	797	837	6050	91580	1990	2000	1450
a	24700	21990	29520	45980	35920	48560	111500	138600	124200	66120	42940	15870

e Estimated.
a Diversion, in acre-feet, to Mammoth Pool Powerplant (station 11235100), provided by Southern California Edison Co.

11234760 SAN JOAQUIN RIVER ABOVE SHAKEFLAT CREEK, NEAR BIG CREEK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.3	13.0	15.1	90.9	63.7	91.2	194	1332	2048	894	73.5	23.9
MAX	61.9	20.1	66.3	2872	754	1111	2489	9681	12400	7169	1184	45.3
(WY)	1960	1974	1967	1997	1980	1995	1995	1969	1983	1995	1983	1978
MIN	12.6	0.82	3.06	10.2	10.8	10.9	12.3	12.9	11.8	12.4	12.8	12.4
(WY)	1961	1960	1960	1986	1985	1960	1964	1961	1961	1961	1972	1960

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1960 - 2003	
ANNUAL TOTAL	8336		55551			
ANNUAL MEAN	22.8		152		406	
HIGHEST ANNUAL MEAN					2022	1983
LOWEST ANNUAL MEAN					13.2	1961
HIGHEST DAILY MEAN	42	Nov 8	5190	Jun 3	26000	Jan 3 1997
LOWEST DAILY MEAN	10	Nov 3	10	Nov 3	0.30	Oct 14 1959
ANNUAL SEVEN-DAY MINIMUM	10	Nov 24	10	Nov 24	0.57	Dec 1 1959
MAXIMUM PEAK FLOW			6410	Jun 3	80000	Jan 2 1997
MAXIMUM PEAK STAGE			12.63	Jun 3	32.00	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	16530		110200		294200	
TOTAL DIVERSION (AC-FT) a	663300		705900			
10 PERCENT EXCEEDS	34		40		384	
50 PERCENT EXCEEDS	27		21		15	
90 PERCENT EXCEEDS	11		12		12	

a Diversion, in acre-feet, to Mammoth Pool Powerplant (station 11235100), provided by Southern California Edison Co.

11235500 PORTAL POWERPLANT AT HUNTINGTON LAKE, CA

LOCATION.—Lat 37° 15'25", long 119° 09'30", in SE 1/4 SW 1/4 sec.5, T.8 S., R.26 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in powerplant at tunnel outlet, at east end of Huntington Lake, 0.9 mi east of Lakeshore Post Office, and 6 mi northeast of town of Big Creek.

PERIOD OF RECORD.—October 1927 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to October 1960, published as Ward Tunnel at Outlet. October 1960 to September 1991, published as Ward Tunnel Outlet at Huntington Lake.

GAGE.—Acoustic-velocity meter in tunnel since Dec. 1, 1987. Elevation of gage is 6,980 ft above NGVD of 1929, from topographic map. Oct. 1, 1968, to Nov. 30, 1987, pressure-differential recorder recorded discharge through penstock. November 1927 to May 23, 1956, water-stage recorder at datum 6,999.00 ft above NGVD of 1929 (levels by Southern California Edison Co.). May 24, 1956, to Sept. 30, 1968, no recorder, see REMARKS below.

REMARKS.—Daily discharge for the period May 24, 1956, to Sept. 30, 1968, computed as the sum of Ward Tunnel at Intake, Mono–Bear Conduit, Camp Creek Conduit, and corrected for change in contents of Portal Forebay. Powerplant receives water from Florence Lake (station 11229600) via Ward Tunnel, receives diversions from Bear and Mono Creeks (stations 11230520 and 11231550), and at times from several other small tributaries to South Fork San Joaquin River. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2174.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 2,080 ft^3/s, June 21, 1935; no flow at times many years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	191	0.13	0.00	138	212	118	342	272	629	1140	1120	1050
2	185	0.39	113	124	205	66	344	225	705	1100	811	997
3	411	0.00	0.04	155	149	126	321	206	783	1230	730	630
4	703	115	69	201	279	3.7	285	294	968	1220	796	620
5	678	0.00	0.00	147	163	134	148	285	1140	1210	735	739
6	678	0.00	0.00	264	168	80	272	289	1340	1210	828	1030
7	675	0.00	0.00	14	148	48	148	308	1300	1210	652	1020
8	672	240	126	274	148	146	270	285	1300	1210	587	999
9	663	361	0.00	144	148	0.00	302	269	1260	1220	630	575
10	403	207	0.00	163	149	121	327	289	1320	1270	937	481
11	60	142	0.00	225	159	100	347	299	1710	1140	1010	695
12	529	214	139	176	47	138	366	315	1700	1070	999	697
13	619	84	0.02	161	144	129	363	474	1750	1090	835	697
14	590	189	0.00	173	32	169	367	658	1760	1080	823	696
15	265	101	33	146	193	319	307	708	1760	1080	851	693
16	112	0.04	116	136	59	152	309	713	1760	1120	874	689
17	168	179	0.00	133	101	194	294	891	1750	1170	871	694
18	8.0	0.13	129	275	103	209	283	804	1750	1210	712	700
19	0.13	101	4.0	148	103	234	287	911	1740	1220	705	702
20	0.00	12	137	264	101	148	285	1090	1750	1200	708	705
21	100	95	130	115	101	150	287	1160	1750	1160	709	706
22	0.06	71	142	234	99	293	236	1320	1380	1130	887	702
23	0.00	75	0.04	221	40	187	300	1310	1110	1140	709	700
24	0.00	76	167	189	48	252	311	1330	1140	1110	709	702
25	0.00	115	117	153	103	149	292	1430	1100	903	711	704
26	0.00	23	0.12	143	103	282	247	1440	1130	838	712	709
27	14	118	168	285	102	219	300	1400	1210	837	710	717
28	88	0.00	0.08	209	116	271	299	874	1210	838	710	712
29	0.00	0.00	155	168	---	148	279	802	1240	732	709	711
30	0.00	130	0.00	148	---	279	148	734	1250	743	881	707
31	0.00	---	147	255	---	318	---	648	---	1010	1000	---
TOTAL	7812.19	2648.69	1892.30	5581	3523	5182.70	8666	22033	40695	33841	24661	22179
MEAN	252	88.3	61.0	180	126	167	289	711	1356	1092	796	739
MAX	703	361	168	285	279	319	367	1440	1760	1270	1120	1050
MIN	0.00	0.00	0.00	14	32	0.00	148	206	629	732	587	481
AC-FT	15500	5250	3750	11070	6990	10280	17190	43700	80720	67120	48920	43990

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

MEAN	327	262	269	252	253	294	518	852	930	837	671	507
MAX	757	908	1102	793	806	815	953	1459	1665	1321	1386	1104
(WY)	1996	1983	1946	1985	1985	1985	1936	1946	1974	1956	1995	1983
MIN	0.82	0.81	5.29	13.4	10.3	78.8	98.9	119	3.93	150	147	2.00
(WY)	1946	1946	1991	1991	1991	1976	1991	1983	1938	1931	1934	1949

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL	159747.18		178714.88			
ANNUAL MEAN	438		490		499	
HIGHEST ANNUAL MEAN					748	1997
LOWEST ANNUAL MEAN					196	1977
HIGHEST DAILY MEAN	1730	Jun 5	1760	Jun 14	2080	Jun 21 1935
LOWEST DAILY MEAN	0.00	Oct 20	0.00	Oct 20	0.00	Sep 18 1961
ANNUAL SEVEN-DAY MINIMUM	13	Oct 28	13	Oct 28	0.00	Dec 2 1969
ANNUAL RUNOFF (AC-FT)	316900		354500		361400	
10 PERCENT EXCEEDS	935		1210		1090	
50 PERCENT EXCEEDS	354		285		462	
90 PERCENT EXCEEDS	6.4		2.4		62	

11236000 HUNTINGTON LAKE NEAR BIG CREEK, CA

LOCATION.—Lat 37° 14'04", long 119° 12'44", in SW 1/4 sec.14, T.8 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in gate tower of dam No. 1 on Big Creek, and 2.7 mi northeast of town of Big Creek.

DRAINAGE AREA.—80.5 mi^2.

PERIOD OF RECORD.—April 1913 to current year. Prior to October 1926, monthly contents only, published in WSP 1315-A; 1926–31, published in WSP 721. Maximum and minimum daily contents (water years 1913–39) were summarized in WSP 881. Prior to 1960, maximum and minimum daily contents were published.

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Southern California Edison Co.). Prior to June 19, 1920, nonrecording gage at same site and datum.

REMARKS.—Lake is formed by four dams; storage began Apr. 11, 1913. Dams were raised in 1914 and again in 1917. Usable capacity, 89,166 acre-ft, between elevations 6,819.90 ft, invert of Outlet Tunnel No. 1, and 6,950.00 ft, spillway crest at Dam 1. Additional storage of 600 acre-ft is not available for release. Lake receives water from South Fork San Joaquin River Basin via Ward Tunnel through Portal Powerplant (station 11235500). Water is diverted from lake through Huntington–Shaver Conduit and Eastwood Powerplant (station 11238250) to Shaver Lake (station 11239500) since Apr. 21, 1928. Water is also diverted to Big Creek Powerplant No. 1 (station 11238100) on Big Creek. Records, including extremes, represent contents at 2400 hours. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2175. Records not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 90,491 acre-ft, May 31, 1926, elevation, 6,950.92 ft; minimum, 2,103 acre-ft, Nov. 6, 1937, elevation, 6,838.53 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 88,751 acre-ft, July 27, elevation, 6,949.71 ft; minimum, 31,985 acre-ft, Mar. 8, elevation, 6,901.28 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Southern California Edison Co., dated Sept. 24, 1964)

6,835	1,552	6,860	7,427	6,900	30,862	6,940	75,344
6,840	2,354	6,870	11,294	6,910	40,217	6,950	89,166
6,845	3,324	6,880	16,371	6,920	50,813	6,951	90,606
6,850	4,480	6,890	22,883	6,930	62,555		

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67980	59206	51869	44051	45537	34881	41051	57278	87710	87723	87965	87965
2	67586	58738	51205	44000	45430	34334	41385	57336	87512	87538	87837	88366
3	68082	57881	50623	44125	45008	33958	42057	57561	87358	87338	87736	88107
4	68388	57183	49766	44302	44913	33338	42497	57928	87171	87579	87622	87794
5	68362	56383	49215	44386	44638	33040	42570	58417	87057	88093	87168	87424
6	68770	55727	48830	44533	44155	32599	43044	58535	87084	88194	87013	87595
7	69438	55611	48523	44208	43749	32074	43188	58678	87410	87965	86742	87865
8	68732	57596	48491	44375	43385	32279	44218	58954	87423	87837	86148	88079
9	69181	58619	48175	44333	43136	32314	45008	58762	87052	87922	86544	88008
10	69039	58810	47803	44281	42755	32599	46165	58512	86796	88293	87054	87424
11	68337	58751	47446	44533	42292	32905	46907	58333	86809	87837	87636	87197
12	68680	58596	47305	44670	41659	33185	47575	58203	87177	87679	88107	87126
13	69193	58203	46971	44596	41364	33537	49040	57372	87275	87679	88293	87054
14	69386	58107	46582	44607	41001	33995	49756	57750	87317	87424	88208	86870
15	69167	58035	46017	44555	40951	34742	50219	57514	87458	87381	88165	86247
16	68898	57656	46240	44470	40659	35160	50208	57679	87622	87111	88165	86474
17	68796	57774	45878	44396	40367	35525	51011	58596	87794	86942	88451	86218
18	68376	57348	45867	44660	40057	35883	51315	59422	87523	87197	88308	85739
19	67688	56829	45718	44744	39808	36289	51890	59915	87268	87353	87993	85233
20	67079	56207	45750	45060	39281	36318	52286	61980	87324	87609	87481	84783
21	66486	55669	45569	45018	38771	36299	53094	64149	87723	88165	87126	84573
22	65896	55215	45399	45123	38535	36814	53554	66171	87353	88265	87666	84280
23	65294	54787	44976	45239	37825	37197	54197	68846	87069	88308	87552	84015
24	64434	54636	44913	45282	37110	37844	54717	72770	87281	88437	87538	83331
25	63689	54566	44776	45367	36242	38057	55203	76546	87183	88308	87281	83386
26	62776	54024	44417	45419	35789	38447	55540	80173	87240	88350	87311	83122
27	62273	53668	44365	45760	35487	38780	55984	e83537	87395	88380	87466	82609
28	61516	53061	44239	45867	35170	39193	56558	e85545	87523	88308	87622	82151
29	61077	52561	44365	45824	---	39302	56958	87187	87636	87595	87424	81945
30	60616	52367	44072	45781	---	39620	57124	87907	87764	86501	87225	81477
31	59602	---	44041	45856	---	40387	---	87809	---	86899	87622	---
MAX	69438	59206	51869	45867	45537	40387	57124	87907	87794	88437	88451	88366
MIN	59602	52367	44041	44000	35170	32074	41051	57278	86796	86501	86148	81477
a	6927.57	6921.38	6913.74	6915.46	6904.78	6910.17	6025.49	6949.05	6949.02	6948.41	6948.92	6944.53
b	-8760	-7235	-8326	+1815	-10686	+5217	+16737	+30685	-45	-865	+723	-6145

CAL YR 2002 b -1837
WTR YR 2003 b +13115

e Estamated.
a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11237000 BIG CREEK BELOW HUNTINGTON LAKE, CA

LOCATION.—Lat 37° 13'17", long 119° 12'42", in SE 1/4 NW 1/4 sec.23, T.8 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank, 800 ft upstream from Grouse Creek, 1.0 mi south of main dam of Huntington Lake, and 2.1 mi northeast of town of Big Creek.

DRAINAGE AREA.—81.1 mi^2.

PERIOD OF RECORD.—June 1925 to September 1970, October 1986 to current year.
WATER TEMPERATURE: Water years 1961–70.

REVISED RECORDS.—WSP 1315-A: 1943(M). WSP 1635: 1925–29. WSP 1930: Drainage area.

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 6,630 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1942, at datum 1.00 ft lower and Oct. 1, 1942, to Sept. 30, 1948, at datum 1.00 ft higher.

REMARKS.—Flow regulated by Huntington Lake (station 11236000). Diversions to Big Creek Powerplant No. 1 (station 11238100) and Eastwood Powerplant (station 11238250) bypass this station. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2175.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,040 ft^3/s, June 23, 1925, gage height, 11.3 ft, present datum; minimum daily, 0.1 ft^3/s, many days in 1931.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	3.2	2.7	2.7	3.1	2.6	3.1	4.2	6.3	4.9	4.6	5.5
2	3.4	3.2	2.7	2.7	3.1	2.5	3.1	4.4	6.1	4.8	4.7	5.5
3	3.4	3.2	2.7	2.7	3.0	2.5	3.1	4.6	5.8	4.8	4.6	5.6
4	3.4	3.2	2.7	2.7	2.9	2.4	3.0	5.0	5.6	4.8	4.5	5.5
5	3.4	3.2	2.7	2.7	2.9	2.4	3.0	4.9	5.5	4.9	4.4	5.4
6	3.4	3.1	2.7	2.8	2.9	2.4	3.0	4.9	5.5	4.8	4.4	5.4
7	3.4	3.6	2.7	2.8	2.9	2.4	3.1	4.8	5.5	4.8	4.4	5.5
8	3.4	10	2.7	2.8	2.8	2.4	3.2	4.7	5.5	4.7	4.4	5.5
9	3.4	6.2	2.7	2.8	2.8	2.4	3.3	4.6	5.5	4.7	4.3	5.4
10	3.4	3.9	2.7	2.8	2.8	2.5	3.4	4.7	5.4	4.8	4.4	5.5
11	3.4	3.5	2.7	2.8	2.8	2.5	3.4	4.9	5.4	4.8	4.4	5.4
12	3.4	3.3	2.7	2.8	3.0	2.6	3.4	4.9	5.3	4.8	4.4	5.4
13	3.4	3.2	2.7	2.8	3.4	2.8	3.6	5.1	5.3	4.8	4.4	5.4
14	3.4	3.1	2.8	2.8	3.3	2.9	3.6	5.1	5.3	4.8	4.4	5.4
15	3.4	3.0	2.8	2.8	3.2	4.9	3.6	5.2	5.3	4.8	4.3	5.3
16	3.4	3.0	2.8	2.8	3.1	3.7	3.7	5.2	5.3	4.8	4.3	5.3
17	3.4	2.9	2.8	2.8	3.0	3.3	3.8	5.2	5.2	4.8	4.4	5.4
18	3.4	2.9	2.7	2.8	2.9	3.1	3.8	5.2	5.2	4.8	4.3	5.3
19	3.4	2.9	2.8	2.9	2.9	3.1	3.9	5.2	5.2	4.9	5.0	5.3
20	3.4	2.9	2.8	2.9	2.8	3.1	4.1	5.2	5.1	4.9	6.0	5.3
21	3.4	2.8	2.7	2.9	2.8	3.1	4.2	5.2	5.1	4.9	5.7	5.3
22	3.4	2.8	2.7	2.8	2.8	3.1	4.1	5.2	5.1	4.9	5.6	5.4
23	3.4	2.8	2.7	2.9	2.8	3.2	4.2	5.1	5.1	4.9	5.6	5.3
24	3.4	2.8	2.7	2.9	2.8	3.1	3.9	5.1	5.1	4.9	5.5	5.2
25	3.3	2.8	2.7	2.9	2.8	3.2	4.1	5.1	5.0	4.9	5.5	5.2
26	3.3	2.8	2.7	2.9	2.8	3.2	4.1	5.1	5.0	4.9	5.5	5.2
27	3.3	2.8	2.7	3.0	2.8	3.2	4.1	5.6	4.9	5.0	5.5	5.1
28	3.3	2.8	2.7	3.0	2.7	3.2	4.3	8.7	5.0	4.8	5.5	4.5
29	3.3	2.8	2.7	3.0	---	3.2	4.2	8.5	4.9	4.7	5.6	3.9
30	3.3	2.7	2.7	3.0	---	3.0	4.2	7.7	4.9	4.9	5.5	3.8
31	3.2	---	2.7	3.1	---	3.1	---	6.8	---	4.8	5.5	---
TOTAL	104.6	101.4	84.3	88.1	81.9	91.1	109.6	166.1	159.4	149.8	151.6	157.2
MEAN	3.37	3.38	2.72	2.84	2.92	2.94	3.65	5.36	5.31	4.83	4.89	5.24
MAX	3.4	10	2.8	3.1	3.4	4.9	4.3	8.7	6.3	5.0	6.0	5.6
MIN	3.2	2.7	2.7	2.7	2.7	2.4	3.0	4.2	4.9	4.7	4.3	3.8
AC-FT	207	201	167	175	162	181	217	329	316	297	301	312
a	11400	7680	6850	6370	16180	9070	9230	26710	36040	32340	26150	24010

a Diversion, in acre-feet, to Big Creek Powerplant No. 1 (station 11238100), provided by Southern California Edison Co.

11237000 BIG CREEK BELOW HUNTINGTON LAKE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.57	1.58	1.61	1.42	1.42	1.77	2.84	8.88	8.88	9.76	2.20	1.74
MAX	4.79	4.55	4.70	6.45	3.53	5.90	7.09	297	242	293	8.34	5.24
(WY)	1994	1994	1956	1997	1995	1995	1995	1926	1926	1925	1969	2003
MIN	0.16	0.23	0.18	0.20	0.30	0.38	0.47	0.46	0.43	0.31	0.16	0.12
(WY)	1932	1932	1932	1932	1931	1948	1934	1934	1931	1931	1931	1931

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1925 - 2003	
ANNUAL TOTAL	1453.7		1445.1			
ANNUAL MEAN	3.98		3.96		3.26	
HIGHEST ANNUAL MEAN					45.9	1926
LOWEST ANNUAL MEAN					0.35	1931
HIGHEST DAILY MEAN	10	Nov 8	10	Nov 8	1160	May 23 1926
LOWEST DAILY MEAN	2.1	Feb 19	2.4	Mar 4	0.10	Jan 18 1931
ANNUAL SEVEN-DAY MINIMUM	2.2	Feb 17	2.4	Mar 3	0.10	Aug 21 1931
MAXIMUM PEAK FLOW			25	Nov 8	2040	Jun 23 1925
MAXIMUM PEAK STAGE			2.98	Nov 8	11.30	Jun 23 1925
ANNUAL RUNOFF (AC-FT)	2880		2870		2360	
TOTAL DIVERSION (AC-FT) a	207700		212000			
10 PERCENT EXCEEDS	6.0		5.4		4.4	
50 PERCENT EXCEEDS	3.4		3.4		1.7	
90 PERCENT EXCEEDS	2.4		2.7		0.40	

a Diversion, in acre-feet, to Big Creek Powerplant No. 1 (station 11238100), provided by Southern California Edison Co.

11237500 PITMAN CREEK BELOW TAMARACK CREEK, CA

LOCATION.—Lat 37° 11'55", long 119° 12'46", in NW 1/4 NW 1/4 sec.35, T.8 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank, 250 ft upstream from Huntington–Shaver Conduit Tunnel, 0.8 mi downstream from confluence of Tamarack and South Fork Tamarack Creeks, 1.4 mi upstream from mouth, and 1.9 mi east of town of Big Creek.

DRAINAGE AREA.—22.9 mi^2.

PERIOD OF RECORD.—October 1927 to current year. Records for water year 1928 incomplete, yearly estimate published in WSP 1315-A.

REVISED RECORDS.—WSP 931: 1940. WSP 1315-A: 1944. WSP 1395: 1928–29, 1938. WSP 1515: 1929. WSP 1930: Drainage area.

GAGE.—Water-stage recorder, Parshall flume and concrete control. Elevation of gage is 7,020 ft above NGVD of 1929, from topographic map. Prior to Sept. 28, 1940, at site 10 ft downstream at same datum.

REMARKS.—No diversion upstream from station; practically all flow is diverted downstream from station to Huntington–Shaver Conduit. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 67 and 120.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,500 ft^3/s, Jan. 2, 1997, gage height, 12.65 ft, from rating curve extended above 1,100 ft^3/s, on basis of slope-area measurement at gage height 10.77 ft; no flow Oct. 15–18, 1931.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.17	0.21	6.8	7.4	e25	e17	109	81	194	13	4.5	0.28
2	0.23	0.21	6.2	7.3	e22	e19	96	85	185	12	4.8	0.26
3	0.22	0.21	6.0	8.4	e20	e17	86	84	176	11	7.0	0.28
4	0.20	0.21	6.0	9.0	e19	16	76	88	162	10	4.0	0.28
5	0.18	0.21	6.2	8.4	e18	e16	70	97	143	9.5	2.9	0.27
6	0.18	0.21	6.1	8.4	e16	e18	66	101	127	8.8	2.3	0.24
7	0.18	0.77	5.7	7.5	e15	e18	69	95	113	8.2	1.9	0.22
8	0.18	137	5.1	9.6	e13	e18	80	93	104	7.6	1.7	0.22
9	0.18	127	5.4	11	e14	e20	93	102	98	6.9	1.4	0.21
10	0.18	33	5.1	10	e13	21	101	81	88	6.1	1.2	0.24
11	0.17	20	4.6	9.8	14	24	109	96	81	5.7	1.1	0.25
12	0.15	17	4.8	9.9	18	33	110	125	75	5.2	0.97	0.22
13	0.15	17	5.1	9.4	36	49	107	164	69	4.8	0.82	0.21
14	0.15	15	9.1	8.7	39	65	121	178	64	4.3	0.73	0.20
15	0.14	13	9.0	8.7	37	89	86	191	59	3.8	0.67	0.19
16	0.14	12	5.7	9.7	28	86	80	202	52	3.5	0.66	0.18
17	0.14	11	5.8	10	e25	69	78	209	43	3.2	0.58	0.18
18	0.16	9.9	11	11	e22	53	74	220	37	2.9	0.55	0.18
19	0.18	9.4	16	11	e20	47	73	236	34	3.1	0.50	0.18
20	0.17	10	13	12	e20	46	73	248	31	3.3	0.44	0.18
21	0.17	12	12	12	e19	47	76	272	29	2.8	0.44	0.18
22	0.18	12	11	12	e20	64	88	283	27	2.5	0.49	0.18
23	0.18	11	8.6	12	e20	70	71	295	25	2.6	0.51	0.18
24	0.18	10	7.1	13	19	65	78	300	23	2.9	0.41	0.18
25	0.18	8.7	4.6	13	19	71	80	275	21	2.4	0.36	0.18
26	0.19	8.3	4.5	14	18	78	87	262	19	2.1	0.42	0.18
27	0.21	7.3	6.7	17	18	82	91	283	18	1.9	0.54	0.18
28	0.21	6.8	7.9	18	e18	81	90	272	16	1.9	0.45	0.18
29	0.21	7.3	8.4	17	---	89	83	249	15	2.4	0.36	0.18
30	0.21	7.0	8.1	18	---	101	78	229	14	3.0	0.31	0.18
31	0.22	---	8.0	22	---	114	---	208	---	5.9	0.29	---
TOTAL	5.59	523.73	229.6	355.2	585	1603	2579	5704	2142	163.3	43.30	6.27
MEAN	0.18	17.5	7.41	11.5	20.9	51.7	86.0	184	71.4	5.27	1.40	0.21
MAX	0.23	137	16	22	39	114	121	300	194	13	7.0	0.28
MIN	0.14	0.21	4.5	7.3	13	16	66	81	14	1.9	0.29	0.18
AC-FT	11	1040	455	705	1160	3180	5120	11310	4250	324	86	12

e Estimated.

11237500 PITMAN CREEK BELOW TAMARACK CREEK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.83	5.52	10.4	11.7	14.1	28.1	93.8	199	116	20.1	2.34	1.34
MAX	42.0	110	135	194	91.1	136	264	550	648	180	21.4	18.9
(WY)	1983	1951	1951	1997	1986	1986	1982	1969	1983	1995	1983	1978
MIN	0.13	0.18	0.20	0.20	0.20	0.30	16.6	24.3	7.82	0.67	0.11	0.10
(WY)	1989	1930	1932	1930	1949	1949	1975	1977	1976	1934	1931	1928

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL	11439.42		13939.99			
ANNUAL MEAN	31.3		38.2		42.4	
HIGHEST ANNUAL MEAN					118	1983
LOWEST ANNUAL MEAN					6.16	1977
HIGHEST DAILY MEAN	207	Apr 14	300	May 24	2200	Jan 2 1997
LOWEST DAILY MEAN	0.13	Sep 26	0.14	Oct 15	0.00	Oct 15 1931
ANNUAL SEVEN-DAY MINIMUM	0.14	Sep 21	0.15	Oct 12	0.04	Oct 13 1931
MAXIMUM PEAK FLOW			387	May 23	5500	Jan 2 1997
MAXIMUM PEAK STAGE			4.67	May 23	12.65	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	22690		27650		30710	
10 PERCENT EXCEEDS	129		103		131	
50 PERCENT EXCEEDS	7.3		11		5.5	
90 PERCENT EXCEEDS	0.17		0.18		0.30	

11237600 PITMAN CREEK SHAFT BELOW TAMARACK CREEK, NEAR BIG CREEK, CA

LOCATION.—Lat 37° 11'54", long 119° 12'48", in NW 1/4 NW 1/4 sec.35, T.8 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank, at Huntington–Shaver Conduit Tunnel, 0.8 mi downstream from confluence of Tamarack and South Fork Tamarack Creeks, 1.4 mi upstream from mouth, and 1.9 mi east of town of Big Creek.

PERIOD OF RECORD.—October 1986 to February 1989, March 1989 to December 1995, April to November 1996, March 1997 to current year.

GAGE.—Discharge computed as difference between Pitman Creek below Tamarack Creek (station 11237500) and Pitman Creek near Tamarack Mountain (station 11237700). Elevation of diversion point is 7,010 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow is diversion from Pitman Creek into Huntington–Shaver Conduit for power development in Big Creek powerplants. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 67 and 120.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge unknown, Jan. 2, 1997; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	e6.3	e6.9	e24	e16	108	80	193	5.9	1.7	0.00
2	0.00	0.00	e5.7	e6.8	e22	e18	95	84	184	12	4.4	0.00
3	0.00	0.00	e5.5	e7.9	e20	e16	85	83	175	11	6.6	0.00
4	0.00	0.00	e5.5	e8.5	e19	15	75	87	161	9.6	3.6	0.00
5	0.00	0.00	e5.7	e7.9	e18	e15	69	96	142	9.1	2.5	0.00
6	0.00	0.00	e5.6	e7.9	e16	e17	65	100	127	8.4	1.9	0.00
7	0.00	0.46	e5.2	e7.0	e14	e18	68	94	113	7.8	1.5	0.00
8	0.00	136	e4.6	e9.1	e12	e18	79	92	104	7.2	1.3	0.00
9	0.00	126	e4.9	e10	e13	e20	92	101	98	6.5	1.0	0.00
10	0.00	33	e4.6	e9.5	e12	20	100	80	88	5.7	0.82	0.00
11	0.00	e20	e4.1	e9.3	13	23	108	95	81	5.3	0.72	0.00
12	0.00	e17	e4.3	e9.4	17	32	109	124	75	4.8	0.59	0.00
13	0.00	17	e4.6	e8.9	35	16	106	163	69	4.4	0.44	0.00
14	0.00	15	e8.6	e8.2	38	0.00	120	177	64	3.9	0.35	0.00
15	0.00	13	e8.5	e8.2	36	0.00	85	190	59	3.4	0.29	0.00
16	0.00	12	e5.2	e9.2	27	0.00	79	201	52	3.1	0.28	0.00
17	0.00	11	e5.3	e9.5	e24	0.00	77	208	43	2.8	0.20	0.00
18	0.00	9.5	e10	e10	e21	0.00	73	219	37	2.5	0.17	0.00
19	0.00	9.0	e16	e10	e19	28	72	235	34	2.7	0.12	0.00
20	0.00	9.6	e12	e12	e18	45	72	247	31	2.9	0.06	0.00
21	0.00	12	e12	e12	e19	46	75	271	29	2.4	0.06	0.00
22	0.00	12	e10	e12	e19	63	87	282	27	2.1	0.11	0.00
23	0.00	11	e8.1	e12	e19	69	70	294	25	2.2	0.13	0.00
24	0.00	9.6	e6.6	e12	18	64	77	299	23	2.5	0.03	0.00
25	0.00	8.3	e4.1	e12	18	70	79	274	20	2.0	0.00	0.00
26	0.00	7.9	e4.0	e14	17	77	86	261	19	1.7	0.00	0.00
27	0.00	6.9	e6.2	e16	17	81	90	282	18	1.5	0.00	0.00
28	0.00	e6.5	e7.4	e18	e17	80	89	271	16	1.5	0.00	0.00
29	0.00	e7.0	e7.9	e16	---	88	82	248	15	2.0	0.00	0.00
30	0.00	e6.5	e7.6	e18	---	100	77	228	7.8	2.6	0.00	0.00
31	0.00	---	e7.5	e22	---	113	---	207	---	4.4	0.00	---
TOTAL	0.00	516.26	213.6	340.2	562	1168.00	2549	5673	2129.8	143.9	28.87	0.00
MEAN	0.000	17.2	6.89	11.0	20.1	37.7	85.0	183	71.0	4.64	0.93	0.000
MAX	0.00	136	16	22	38	113	120	299	193	12	6.6	0.00
MIN	0.00	0.00	4.0	6.8	12	0.00	65	80	7.8	1.5	0.00	0.00
AC-FT	0.00	1020	424	675	1110	2320	5060	11250	4220	285	57	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	0.43	2.05	1.92	4.18	7.43	23.8	85.5	142	60.1	9.21	1.26	0.12
MAX	3.22	17.2	7.33	22.5	25.6	78.5	157	440	365	76.0	13.7	0.90
(WY)	1995	2003	1995	1995	1995	1995	2000	1993	1995	1995	1995	1995
MIN	0.000	0.000	0.000	0.000	0.000	0.000	40.7	53.3	9.14	0.83	0.000	0.000
(WY)	1989	1989	1989	1987	1987	1992	1995	1997	1992	1994	1988	1988

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	10661.97		13324.63			
ANNUAL MEAN	29.2		36.5		30.0	
HIGHEST ANNUAL MEAN					67.8	1993
LOWEST ANNUAL MEAN					13.5	1987
HIGHEST DAILY MEAN	206	Apr 14	299	May 24	888	May 16 1996
LOWEST DAILY MEAN	0.00	Feb 20	0.00	Oct 1	0.00	Nov 12 1986
ANNUAL SEVEN-DAY MINIMUM	0.00	Feb 20	0.00	Oct 1	0.00	Dec 5 1986
ANNUAL RUNOFF (AC-FT)	21150		26430		21750	
10 PERCENT EXCEEDS	127		102		100	
50 PERCENT EXCEEDS	4.6		9.5		2.2	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated.

11237700 PITMAN CREEK NEAR TAMARACK MOUNTAIN, CA

LOCATION.—Lat 37° 11'57", long 119° 12'51", in NW 1/4 NW 1/4 sec.35, T.8 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank, 400 ft downstream from Huntington–Shaver Conduit Tunnel, 0.9 mi downstream from confluence of Tamarack and South Fork Tamarack Creeks, 1.3 mi upstream from mouth, and 1.8 mi east of town of Big Creek.

DRAINAGE AREA.—23.0 mi^2.

PERIOD OF RECORD.—October 1986 to February 1989, March 1989 to December 1995, April to November 1996, March 1997 to current year.

GAGE.—Water-stage recorder and concrete control with V-notch sharp-crested weir. Elevation of gage is 7,000 ft above NGVD of 1929, from topographic map.

REMARKS.—Most of flow is diverted upstream from station at Pitman Creek Shaft below Tamarack Creek (station 11237600) to Huntington–Shaver Conduit. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 67 and 120.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge unknown, Jan. 2, 1997; no flow Feb. 15 to Apr. 4, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.20	0.25	e0.50	e0.50	e0.50	0.66	0.65	0.52	0.55	7.1	2.8	0.36
2	0.28	0.25	e0.50	e0.50	e0.50	0.64	0.64	0.52	0.55	0.43	0.43	0.32
3	0.27	0.25	e0.50	e0.50	e0.50	0.66	0.59	0.52	0.53	0.42	0.41	0.33
4	0.25	0.26	e0.50	e0.50	e0.49	0.66	0.51	0.51	0.51	0.42	0.40	0.35
5	0.22	0.26	e0.48	e0.50	e0.50	0.64	0.52	0.52	0.50	0.42	0.39	0.32
6	0.21	0.26	e0.50	e0.50	e0.45	0.61	0.51	0.52	0.49	0.42	0.38	0.31
7	0.20	0.31	e0.49	e0.50	0.70	0.47	0.50	0.52	0.48	0.41	0.38	0.28
8	0.19	1.1	e0.46	e0.50	0.67	0.49	0.51	0.51	0.46	0.40	0.38	0.28
9	0.19	0.55	e0.50	e0.50	0.66	0.49	0.52	0.51	0.46	0.40	0.38	0.29
10	0.19	0.31	e0.48	e0.50	0.69	0.50	0.52	0.51	0.44	0.38	0.38	0.29
11	0.19	e0.37	e0.48	e0.50	0.69	0.51	0.52	0.52	0.44	0.38	0.38	0.31
12	0.19	e0.37	e0.46	e0.50	0.70	0.53	0.52	0.67	0.44	0.38	0.38	0.30
13	0.19	0.36	e0.48	e0.50	0.72	e36	0.52	0.75	0.44	0.38	0.38	0.28
14	0.18	0.36	e0.50	e0.50	0.72	e65	0.52	0.71	0.44	0.38	0.38	0.25
15	0.17	0.36	e0.50	e0.50	0.72	e89	0.51	0.75	0.43	0.38	0.38	0.24
16	0.17	0.36	e0.45	e0.50	0.70	e86	0.52	0.76	0.42	0.38	0.38	0.24
17	0.17	0.36	e0.45	e0.50	0.69	e69	0.52	0.77	0.42	0.38	0.38	0.24
18	0.17	0.37	e0.50	e0.50	0.68	e53	0.51	0.76	0.42	0.38	0.38	0.24
19	0.18	0.37	e0.50	e0.50	0.69	e12	0.51	0.73	0.41	0.38	0.38	0.22
20	0.18	0.36	e0.50	e0.50	0.68	0.66	0.51	0.64	0.40	0.38	0.38	0.22
21	0.18	0.36	e0.50	e0.50	0.68	0.67	0.51	0.71	0.40	0.38	0.38	0.22
22	0.19	0.36	e0.50	e0.50	0.68	0.68	0.51	0.70	0.40	0.38	0.38	0.21
23	0.20	0.36	e0.50	e0.50	0.68	0.69	0.51	0.71	0.40	0.38	0.38	0.19
24	0.21	0.36	e0.50	e0.50	0.67	0.69	0.51	0.70	0.40	0.37	0.38	0.19
25	0.21	0.36	e0.50	e0.50	0.67	0.68	0.51	0.68	0.51	0.36	0.37	0.19
26	0.21	0.36	e0.50	e0.50	0.67	0.68	0.52	0.65	0.44	0.36	0.42	0.19
27	0.22	0.36	e0.50	e0.50	0.67	0.68	0.52	0.65	0.44	0.36	0.49	0.18
28	0.22	e0.30	e0.50	e0.50	0.67	0.67	0.52	0.64	0.44	0.36	0.53	0.18
29	0.22	e0.30	e0.50	e0.50	---	0.68	0.52	0.62	0.43	0.37	0.48	0.18
30	0.22	e0.50	e0.50	e0.50	---	0.69	0.52	0.60	6.2	0.39	0.41	0.17
31	0.22	---	e0.50	e0.50	---	0.67	---	0.57	---	1.5	0.38	---
TOTAL	6.29	11.06	15.23	15.50	18.04	425.00	15.78	19.45	19.29	19.81	14.73	7.57
MEAN	0.20	0.37	0.49	0.50	0.64	13.7	0.53	0.63	0.64	0.64	0.48	0.25
MAX	0.28	1.1	0.50	0.50	0.72	89	0.65	0.77	6.2	7.1	2.8	0.36
MIN	0.17	0.25	0.45	0.50	0.45	0.47	0.50	0.51	0.40	0.36	0.37	0.17
AC-FT	12	22	30	31	36	843	31	39	38	39	29	15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	0.61	0.87	0.89	1.15	2.16	6.14	20.7	33.9	42.3	16.2	0.95	0.57
MAX	1.61	1.74	1.50	2.17	8.31	24.8	126	265	506	132	6.17	2.92
(WY)	1999	1990	1990	1990	2002	1990	1997	1995	1998	1998	1998	1998
MIN	0.13	0.31	0.40	0.37	0.35	0.000	0.53	0.63	0.64	0.52	0.16	0.13
(WY)	1989	1991	2002	2002	1991	1991	2003	2003	2003	1992	1994	1987

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	781.79		587.75			
ANNUAL MEAN	2.14		1.61		9.80	
HIGHEST ANNUAL MEAN					56.5	1998
LOWEST ANNUAL MEAN					0.79	1991
HIGHEST DAILY MEAN	61	Apr 9	89	Mar 15	762	May 16 1996
LOWEST DAILY MEAN	0.12	Sep 24	0.17	Oct 15	0.00	Feb 15 1991
ANNUAL SEVEN-DAY MINIMUM	0.13	Sep 22	0.17	Oct 14	0.00	Feb 15 1991
ANNUAL RUNOFF (AC-FT)	1550		1170		7100	
10 PERCENT EXCEEDS	1.8		0.68		2.8	
50 PERCENT EXCEEDS	0.50		0.49		1.0	
90 PERCENT EXCEEDS	0.18		0.22		0.24	

e Estimated.

11238250 EASTWOOD POWERPLANT ABOVE SHAVER LAKE, NEAR BIG CREEK, CA

LOCATION.—Lat 37° 07'55", long 119° 15'39", in NE 1/4 SW 1/4 sec.20, T.9 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, 0.25 mi upstream from Shaver Lake and 5.0 mi south of Big Creek.

PERIOD OF RECORD.—October 1987 to current year.

GAGE.—Acoustic-flow meter in powerplant penstock. Elevation of gage is 5,400 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow is diverted from Huntington Lake (station 11236000) and Pitman Creek (station 11237600) to Balsam Meadows Forebay, then through a tunnel to the powerplant. Water is returned to Shaver Lake (station 11239500) 0.25 mi downstream for further power development in Big Creek powerplants. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 67 and 120 .

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 1,910 ft^3/s, May 24, 1993; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	87	322	356	110	161	2.6	0.00	1270	859	490	402
2	0.00	52	252	203	109	213	0.00	4.9	1400	643	437	544
3	0.00	109	188	254	192	321	0.00	0.00	1380	891	419	603
4	0.00	239	332	351	88	107	3.9	6.4	1360	623	391	503
5	0.00	207	201	391	130	311	0.00	2.5	1450	626	383	657
6	0.00	113	88	281	125	92	5.0	5.8	1340	594	596	711
7	0.00	58	73	266	117	197	5.2	0.00	1140	627	615	781
8	0.00	379	4.3	252	14	212	7.8	61	1240	724	619	620
9	0.00	313	109	116	73	75	1.4	285	1380	642	432	587
10	0.00	255	115	77	158	37	0.00	0.27	1340	698	382	556
11	0.00	172	181	149	167	14	0.00	299	1350	890	561	677
12	0.00	159	92	357	145	5.5	0.00	362	1350	745	574	753
13	0.00	115	251	224	164	0.00	3.9	440	1470	830	551	389
14	0.00	156	156	256	182	0.73	0.00	247	1380	856	564	676
15	0.00	184	260	283	193	3.5	5.4	141	1420	785	621	653
16	0.00	59	0.63	198	95	0.05	1.6	197	1400	833	595	470
17	0.00	300	272	78	57	0.00	0.00	45	1300	755	614	459
18	0.00	240	281	330	195	0.00	1.6	44	1570	647	469	495
19	0.00	235	170	164	81	1.4	3.2	7.0	1390	712	609	642
20	0.00	173	94	122	132	2.2	2.9	51	1400	854	529	547
21	0.00	169	319	171	242	0.00	3.2	845	1120	654	511	591
22	13	168	94	107	161	0.00	3.1	1130	1060	720	161	570
23	158	242	104	112	78	2.7	0.04	1120	881	562	484	557
24	146	339	110	194	58	1.9	0.00	352	799	746	490	482
25	194	239	100	110	69	0.00	4.4	916	831	713	421	538
26	9.9	139	132	155	95	0.00	0.25	852	823	725	392	585
27	283	147	99	98	183	1.4	0.00	1060	877	720	309	707
28	6.5	320	365	166	50	0.07	0.00	1150	809	766	206	604
29	38	409	340	138	---	0.00	0.38	1220	876	802	631	585
30	334	270	353	161	---	5.4	0.00	1330	872	817	495	348
31	164	---	274	144	---	3.2	---	1520	---	723	600	---
TOTAL	1346.40	6047	5731.93	6264	3463	1768.05	55.87	13693.87	36278	22782	15151	17292
MEAN	43.4	202	185	202	124	57.0	1.86	442	1209	735	489	576
MAX	334	409	365	391	242	321	7.8	1520	1570	891	631	781
MIN	0.00	52	0.63	77	14	0.00	0.00	0.00	799	562	161	348
AC-FT	2670	11990	11370	12420	6870	3510	111	27160	71960	45190	30050	34300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

MEAN	298	233	273	276	235	238	411	782	906	694	557	437
MAX	600	571	540	534	574	684	1081	1605	1502	1343	837	702
(WY)	1996	1996	1997	1997	1997	1997	1996	1993	1993	1995	1997	1996
MIN	0.000	0.000	21.4	6.19	0.000	19.5	1.86	159	270	156	181	81.7
(WY)	1988	1988	1991	1990	1996	1991	2003	1991	1990	1992	1992	1992

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1988 - 2003	
ANNUAL TOTAL	136443.93		129873.12			
ANNUAL MEAN	374		356		446	
HIGHEST ANNUAL MEAN					720	1997
LOWEST ANNUAL MEAN					141	1990
HIGHEST DAILY MEAN	1380	Jun 7	1570	Jun 18	1910	May 24 1993
LOWEST DAILY MEAN	0.00	Jan 10	0.00	Oct 1	0.00	Oct 1 1987
ANNUAL SEVEN-DAY MINIMUM	0.00	Mar 4	0.00	Oct 1	0.00	Oct 1 1987
ANNUAL RUNOFF (AC-FT)	270600		257600		323100	
10 PERCENT EXCEEDS	687		864		963	
50 PERCENT EXCEEDS	362		203		387	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

11238270 MIDDLE FORK BALSAM CREEK BELOW BALSAM MEADOWS FOREBAY, NEAR BIG CREEK, CA

LOCATION.—Lat 37° 09'46", long 119° 15'12", in NE 1/4 NW 1/4 sec.9, T.9 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on left bank, 80 ft downstream from control house at base of Balsam Meadows Dam, and 2.6 mi south of Big Creek.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—January 1989 to current year.

GAGE.—Water-stage recorder, 90° V-notch weir and concrete control. Elevation of gage is 6,560 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow consists of fishery maintenance release and spill over Balsam Meadows Dam. No record of flow over spillway Apr. 15, 1989. Diversion from Balsam Meadows Dam through penstock to Eastwood Powerplant (station 11238250). See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 67.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge unknown, Apr. 15, 1989, as there was no record of flow over spillway; minimum daily, 0.31 ft^3/s, Feb. 4, 1989.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	0.72	0.76	0.83	0.80	0.78	0.87	0.56	1.1	1.4	1.2	1.2
2	1.2	0.71	0.75	0.80	0.79	0.78	0.86	0.58	1.3	1.2	1.2	1.2
3	1.2	0.70	0.75	0.80	0.79	0.77	0.85	0.55	1.1	1.2	1.2	1.2
4	1.2	0.70	0.75	0.78	0.78	0.78	0.85	0.58	1.1	1.3	1.2	1.2
5	1.2	0.69	0.76	0.78	0.79	0.77	0.84	0.58	1.2	1.2	1.2	1.2
6	1.2	0.71	0.75	0.78	0.79	0.78	0.84	0.58	1.2	1.2	1.2	1.2
7	0.95	0.72	0.74	0.77	0.78	0.78	0.84	0.58	1.2	1.3	1.2	1.3
8	0.57	0.90	0.74	0.78	0.76	0.77	0.84	0.57	1.4	1.3	1.2	1.3
9	0.57	0.78	0.75	0.78	0.79	0.78	0.84	0.58	1.3	1.3	1.2	1.2
10	0.56	0.72	0.74	0.78	0.78	0.74	0.85	0.62	1.1	1.3	1.2	1.2
11	0.58	0.70	0.75	0.76	0.78	0.75	0.85	0.60	1.2	1.2	1.2	1.2
12	0.59	0.69	0.74	0.78	0.80	0.75	0.87	0.60	1.3	1.4	1.2	1.2
13	0.58	0.81	0.77	0.77	0.82	0.76	0.88	0.60	1.1	1.4	1.2	1.2
14	0.58	0.76	0.76	0.77	0.81	0.77	0.86	0.59	1.0	1.3	1.2	1.2
15	0.59	0.70	0.76	0.77	0.80	0.93	0.85	0.57	1.2	1.2	1.2	1.2
16	0.55	0.70	0.75	0.77	0.81	0.81	0.85	0.57	1.2	1.2	1.2	1.2
17	0.53	0.72	0.75	0.78	0.81	0.78	0.84	0.57	1.2	1.3	1.2	1.2
18	0.53	0.72	0.77	0.79	0.77	0.78	0.94	0.55	1.3	1.4	1.2	1.2
19	0.61	0.73	0.77	0.79	0.80	0.78	0.84	0.55	1.2	1.3	1.2	1.2
20	0.68	0.71	0.75	0.79	0.79	0.79	0.84	0.54	1.4	1.4	1.2	1.2
21	0.70	0.72	0.80	0.79	0.77	0.79	0.85	0.60	1.3	1.5	1.2	1.2
22	0.70	0.74	0.75	0.79	0.79	0.80	1.1	0.74	1.2	1.5	1.3	1.2
23	0.71	0.74	0.75	0.78	0.79	0.82	1.4	0.74	1.4	1.2	1.2	1.2
24	0.71	0.76	0.75	0.79	0.80	0.83	1.1	0.73	1.3	1.3	1.2	1.2
25	0.71	0.75	0.74	0.79	0.80	0.84	0.59	0.74	1.5	1.3	1.2	1.2
26	0.71	0.73	0.74	0.79	0.79	0.86	0.57	0.73	1.4	1.3	1.2	1.2
27	0.77	0.74	0.74	0.80	0.79	0.86	0.57	0.73	1.2	1.2	1.2	1.2
28	0.76	0.77	0.79	0.79	0.76	0.85	0.58	0.74	1.2	1.4	1.2	1.2
29	0.78	0.79	0.79	0.78	---	0.85	0.56	0.81	1.3	1.2	1.2	1.2
30	0.75	0.77	0.79	0.79	---	0.86	0.55	1.0	1.5	1.2	1.2	1.2
31	0.73	---	0.79	0.79	---	0.87	---	1.1	---	1.4	1.2	---
TOTAL	23.70	22.10	23.49	24.33	22.13	24.86	24.97	20.18	37.4	40.3	37.3	36.2
MEAN	0.76	0.74	0.76	0.78	0.79	0.80	0.83	0.65	1.25	1.30	1.20	1.21
MAX	1.2	0.90	0.80	0.83	0.82	0.93	1.4	1.1	1.5	1.5	1.3	1.3
MIN	0.53	0.69	0.74	0.76	0.76	0.74	0.55	0.54	1.0	1.2	1.2	1.2
AC-FT	47	44	47	48	44	49	50	40	74	80	74	72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)

MEAN	0.82	0.74	0.78	0.78	0.79	0.90	0.99	0.83	1.25	1.28	1.28	1.29
MAX	1.21	1.22	1.44	1.26	1.29	2.20	2.75	1.28	1.45	1.38	1.48	1.50
(WY)	2001	2001	1992	2001	2001	1992	1992	1995	1995	1992	1992	1992
MIN	0.59	0.57	0.58	0.56	0.57	0.56	0.57	0.60	1.10	1.11	1.10	1.11
(WY)	1998	1997	1998	1996	1996	1996	1996	1996	1998	2001	2001	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1989 - 2003	
ANNUAL TOTAL	314.56		336.96			
ANNUAL MEAN	0.86		0.92		0.98	
HIGHEST ANNUAL MEAN					1.38	1992
LOWEST ANNUAL MEAN					0.81	1996
HIGHEST DAILY MEAN	1.5	Jul 12	1.5	Jun 25	3.4	Apr 2 1992
LOWEST DAILY MEAN	0.53	Oct 17	0.53	Oct 17	0.31	Feb 4 1989
ANNUAL SEVEN-DAY MINIMUM	0.56	Oct 12	0.56	May 14	0.51	Nov 1 1996
MAXIMUM PEAK FLOW			2.0	Jul 28	unknown	Apr 15 1989
MAXIMUM PEAK STAGE			0.94	Jul 28	unknown	Apr 15 1989
ANNUAL RUNOFF (AC-FT)	624		668		707	
10 PERCENT EXCEEDS	1.2		1.3		1.4	
50 PERCENT EXCEEDS	0.73		0.80		0.84	
90 PERCENT EXCEEDS	0.63		0.60		0.61	

11238500 BIG CREEK NEAR MOUTH, NEAR BIG CREEK, CA

LOCATION.—Lat 37° 12'28", long 119° 19'13", in SE 1/4 NW 1/4 sec.26, T.8 S., R.24 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank, 0.6 mi upstream from mouth, and 3.9 mi west of town of Big Creek.

DRAINAGE AREA.—131 mi^2.

PERIOD OF RECORD.—June 1923 to May 1932, October 1986 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

GAGE.—Water-stage recorder. Elevation of gage is 2,620 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow regulated by Huntington Lake (station 11236000) and diversions for power development in Big Creek powerplants. Most of the water is diverted past this station to Big Creek Powerplant No. 8 (station 11238550). Big Creek Powerplant No. 2 (station 11238380) diverts water from Big Creek and then returns it between Big Creek below Huntington Lake (station 11237000) and this station. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records collected by the Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 67.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,400 ft^3/s, Jan. 2, 1997, gage height, 10.34 ft, from rating curve extended above 900 ft^3/s; no flow several days in 1925 and 1931.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	3.8	2.9	3.8	2.6	2.8	3.3	3.6	2.8	2.6	2.7	2.5
2	3.3	3.8	2.9	3.4	2.6	2.8	3.5	3.8	2.7	2.6	3.2	2.5
3	3.3	3.8	2.8	3.2	2.6	2.7	3.4	4.6	2.7	2.6	2.7	2.5
4	3.3	3.8	2.7	3.1	2.6	2.9	3.5	5.3	2.7	2.6	2.6	2.5
5	3.3	4.6	2.7	3.0	2.6	2.8	3.5	4.5	2.7	2.6	2.6	2.5
6	3.3	3.8	2.7	3.0	2.6	2.7	3.5	4.3	2.7	2.6	2.6	2.5
7	3.3	4.2	2.7	3.0	2.5	2.7	3.4	3.9	2.7	2.6	4.3	2.5
8	3.3	8.9	2.7	2.9	2.5	2.7	36	3.8	2.7	2.6	2.5	2.5
9	3.3	5.5	2.7	2.9	2.5	8.6	32	3.5	2.7	2.6	2.4	2.5
10	3.3	3.6	2.7	2.9	2.5	17	14	3.3	2.6	2.6	2.4	2.5
11	3.3	3.7	2.7	2.8	2.5	22	3.0	3.2	2.7	2.6	2.4	2.5
12	3.3	5.5	2.7	2.8	2.7	16	3.5	3.1	2.7	2.7	2.4	2.5
13	3.3	3.4	2.7	2.8	3.1	44	5.3	3.1	2.7	2.7	2.4	2.5
14	3.3	3.3	3.0	2.7	2.9	45	6.2	3.0	2.7	2.6	2.4	2.5
15	3.3	3.3	2.9	2.7	5.0	4.4	4.5	2.9	2.7	2.6	2.4	2.5
16	3.3	3.3	4.9	2.7	3.3	3.3	4.1	2.9	2.6	2.5	2.4	2.5
17	3.3	3.4	6.0	2.7	2.9	3.0	4.1	2.8	2.6	2.5	2.4	2.5
18	3.3	3.4	3.7	2.7	2.7	3.0	4.0	2.8	2.6	2.5	2.4	2.5
19	3.3	3.3	3.6	2.7	2.8	2.8	3.8	2.8	2.8	2.5	2.5	2.5
20	3.3	3.2	4.3	2.7	2.7	2.8	3.7	2.8	2.7	2.6	2.5	2.5
21	3.3	3.0	3.5	2.7	2.7	2.8	4.0	2.8	2.7	2.6	2.5	2.5
22	3.6	3.0	3.2	2.7	2.7	2.8	4.0	2.8	2.6	2.6	2.5	2.5
23	4.2	3.0	3.0	2.7	2.7	2.8	3.8	2.7	2.6	2.5	2.5	2.5
24	3.9	3.0	3.0	2.6	2.7	2.7	3.8	2.7	2.6	2.6	2.5	2.5
25	3.9	2.9	2.9	2.6	2.8	2.7	3.7	2.7	2.6	2.6	2.5	214
26	3.9	2.9	2.8	2.6	2.8	2.7	3.6	2.7	2.6	2.6	2.6	39
27	3.9	2.9	2.8	2.6	3.0	2.7	3.5	2.7	2.6	2.6	2.6	2.4
28	3.9	2.9	3.6	2.6	2.8	2.7	4.2	2.7	2.6	2.5	2.6	2.4
29	3.9	2.9	4.3	2.6	---	2.7	3.8	2.7	2.5	2.5	2.6	2.4
30	3.8	2.9	3.7	2.6	---	2.7	3.7	2.7	2.6	9.4	2.5	2.4
31	3.8	---	4.9	2.6	---	2.9	---	2.9	---	2.7	2.5	---
TOTAL	108.1	111.0	101.7	87.4	78.4	224.2	186.4	100.1	79.8	87.0	80.1	322.6
MEAN	3.49	3.70	3.28	2.82	2.80	7.23	6.21	3.23	2.66	2.81	2.58	10.8
MAX	4.2	8.9	6.0	3.8	5.0	45	36	5.3	2.8	9.4	4.3	214
MIN	3.3	2.9	2.7	2.6	2.5	2.7	3.0	2.7	2.5	2.5	2.4	2.4
AC-FT	214	220	202	173	156	445	370	199	158	173	159	640
a	9440	6910	5830	5680	14360	8600	8350	25560	32180	29760	23360	21580
b	10770	14540	17720	19010	39240	25350	22290	60330	70310	66800	55680	50380

a Diversion, in acre-feet, to Big Creek Powerplant No. 2 (station 11238380), provided by Southern California Edison Co.

b Diversion, in acre-feet, to Big Creek Powerplant No. 8 (station 11238550), provided by Southern California Edison Co.

11238500 BIG CREEK NEAR MOUTH, NEAR BIG CREEK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.64	39.5	54.7	51.9	24.2	39.2	11.4	32.2	55.4	24.7	5.20	5.54
MAX	88.9	357	554	786	331	377	58.3	327	569	137	26.7	25.4
(WY)	1999	1999	1997	1997	1997	1995	1995	1995	1998	1998	1998	1998
MIN	2.44	1.97	1.28	1.61	1.69	1.73	2.35	2.23	2.23	2.20	2.27	2.33
(WY)	1988	1988	1995	1989	1988	2002	1989	1987	1987	1987	1988	1987

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	1243.3		1566.8			
ANNUAL MEAN	3.41		4.29		29.4	
HIGHEST ANNUAL MEAN					171	1997
LOWEST ANNUAL MEAN					2.34	1988
HIGHEST DAILY MEAN	38	Apr 8	214	Sep 25	3540	Jan 2 1997
LOWEST DAILY MEAN	1.3	Mar 14	2.4	Aug 9	1.0	Dec 8 1994
ANNUAL SEVEN-DAY MINIMUM	1.4	Mar 12	2.4	Aug 9	1.1	Dec 4 1994
MAXIMUM PEAK FLOW			854	Sep 25	7400	Jan 2 1997
MAXIMUM PEAK STAGE			4.51	Sep 25	10.34	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	2470		3110		21330	
TOTAL DIVERSION (AC-FT) a	204700		191600			
TOTAL DIVERSION (AC-FT) b	432200		452400		488700	
10 PERCENT EXCEEDS	3.7		4.0		13	
50 PERCENT EXCEEDS	3.3		2.8		3.6	
90 PERCENT EXCEEDS	1.7		2.5		2.0	

a Diversion, in acre-feet, to Big Creek Powerplant No. 2 (station 11238380), provided by Southern California Edison Co.

b Diversion, in acre-feet, to Big Creek Powerplant No. 8 (station 11238550), provided by Southern California Edison Co.

11238600 SAN JOAQUIN RIVER ABOVE STEVENSON CREEK, NEAR BIG CREEK, CA

LOCATION.—Lat 37° 12'28", long 119° 19'44", unsurveyed, T.8 S., R.24 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, in intake structure near left bank, 300 ft upstream from Dam 6, 3.5 mi upstream from Stevenson Creek, and 4.4 mi west of town of Big Creek at mile 313.6.

DRAINAGE AREA.—1,197 mi^2.

PERIOD OF RECORD.—Water years 1987, 1993–94, October 1995 to current year. Records for water years 1951 to 1972 in files of Southern California Edison Co. Records for water years 1974 to 1986 in files of the U.S. Geological Survey.

GAGE.—Acoustic-velocity meter and water-stage recorder on Dam 6 since Oct. 1, 1992. Water-stage recorders at various sites downstream prior to 1992. Elevation of gage is 2,200 ft above NGVD of 1929, from topographic map.

REMARKS.—Record consists of computed flow over spillway at Dam 6 and flow through fish-water release valve. At times the sluice valve leaks and this flow bypasses the station. Flow regulated by Mammoth Pool Reservoir and Huntington Lake (stations 11234700 and 11236000) and diversions for power development in Big Creek powerplants. Most of the water is diverted past this station to Big Creek Powerplant No. 3 (station 11241800). See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records collected by the Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 120.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 72,500 ft^3/s, Jan. 2, 1997; minimum daily, 3.0 ft^3/s, at times in several years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	3.5	e3.5	e3.5	e3.5	3.5	3.5	e3.4	4630	3.4	3.5	3.5
2	3.5	3.5	e3.6	e3.5	e3.5	3.5	3.5	e3.4	4860	3.5	3.5	3.5
3	3.6	3.5	e3.6	e3.5	e3.6	3.5	3.5	e3.4	5030	3.5	3.5	3.5
4	3.5	3.5	e3.6	e3.5	e3.6	3.5	3.5	e3.4	4850	3.5	3.5	3.5
5	3.5	4.0	e3.6	e3.6	e3.5	3.5	3.5	e37	3900	3.5	3.5	3.5
6	3.4	3.5	e3.6	e3.6	e3.5	3.5	3.5	e710	3920	3.5	3.5	3.5
7	3.3	3.5	e3.6	e3.5	e3.5	3.5	3.5	e756	3740	3.5	3.5	3.5
8	3.6	128	e3.6	e3.4	e3.5	3.5	e3.5	e544	3230	3.5	3.5	3.5
9	3.5	3.5	e3.5	e3.5	e3.5	3.5	e3.5	169	2840	3.5	3.5	3.5
10	3.5	3.5	e3.6	e3.5	e3.5	3.5	e3.5	251	1940	3.5	3.5	3.5
11	3.5	3.5	e3.6	e3.5	e3.5	3.5	e3.5	259	e1610	3.5	3.5	3.5
12	3.5	3.5	e3.6	e3.5	e3.5	3.5	e3.5	321	1240	3.5	3.5	3.5
13	3.5	24	e3.6	e3.5	e3.5	3.5	e3.5	376	945	3.5	3.5	3.5
14	3.5	3.5	e3.5	e3.5	e3.5	3.5	e3.5	1070	811	3.5	3.5	3.5
15	3.5	3.5	e3.5	e3.5	e3.5	3.5	e3.4	485	811	3.5	3.5	3.5
16	3.5	3.5	e3.5	e3.5	e3.5	3.5	e3.4	46	670	3.5	3.5	e36
17	3.5	3.5	e3.5	e3.5	e3.5	3.5	e3.4	35	615	3.5	3.5	e56
18	3.5	3.5	e3.6	e3.5	e3.5	3.5	e197	101	469	3.5	3.5	3.5
19	3.5	3.5	e3.5	e3.5	e3.5	3.5	e366	147	150	3.5	3.5	3.5
20	3.5	3.5	e3.5	e3.6	3.5	3.5	e3.5	237	202	3.5	3.5	3.5
21	3.5	e3.5	e3.5	e3.6	3.5	3.5	e3.4	304	5.4	3.5	3.5	3.5
22	3.5	e3.5	e3.4	e3.6	3.5	3.5	e3.4	420	3.4	3.5	3.5	3.5
23	3.5	e3.5	e3.5	e3.6	3.5	3.5	e3.4	236	3.4	6.0	3.5	3.5
24	3.5	e3.5	e3.5	e3.6	3.5	3.5	e3.4	20	3.5	3.5	3.5	3.5
25	3.5	e3.5	e3.5	e3.6	3.5	3.5	e3.4	3.8	3.4	3.5	3.5	3.5
26	3.5	e3.5	e3.5	e3.5	3.5	3.5	e3.4	41	3.5	3.5	3.5	3.5
27	3.5	e3.5	e3.5	e3.5	3.5	3.5	e3.4	3.3	3.5	3.5	3.5	3.5
28	3.5	e3.5	e3.5	e3.5	3.5	3.5	e3.4	6.2	3.5	3.5	3.5	3.5
29	3.5	e3.5	e3.5	e3.5	---	3.5	e3.4	168	3.5	3.5	3.5	3.5
30	3.5	e3.5	e3.5	e3.5	---	3.5	e3.4	394	3.5	3.5	3.5	3.5
31	3.5	---	e3.5	e3.5	---	3.5	---	4650	---	3.5	3.5	---
TOTAL	108.5	250.5	109.6	109.2	98.2	108.5	659.7	11803.9	46499.6	110.9	108.5	190.0
MEAN	3.50	8.35	3.54	3.52	3.51	3.50	22.0	381	1550	3.58	3.50	6.33
MAX	3.6	128	3.6	3.6	3.6	3.5	366	4650	5030	6.0	3.5	56
MIN	3.3	3.5	3.4	3.4	3.5	3.5	3.4	3.3	3.4	3.4	3.5	3.5
AC-FT	215	497	217	217	195	215	1310	23410	92230	220	215	377
a	46180	41570	51640	69020	76230	73120	125700	185300	184600	139500	107800	68980

e Estimated.
a Diversion, in acre-feet, to Big Creek Powerplant No. 3 (station 11241800), provided by Southern California Edison Co.

11238600 SAN JOAQUIN RIVER ABOVE STEVENSON CREEK, NEAR BIG CREEK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.26	3.87	21.4	604	266	197	161	1120	1792	486	33.2	4.85
MAX	34.5	8.35	200	6605	1841	954	621	3726	7614	3623	291	11.7
(WY)	1999	2003	1997	1997	1997	1996	1996	1993	1998	1998	1998	2000
MIN	3.14	3.20	3.25	3.26	3.30	3.20	3.25	3.39	3.60	3.29	3.30	3.29
(WY)	1993	1993	1993	1993	1993	1994	1994	1994	1994	1997	1997	1993

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	3985.5		60157.1			
ANNUAL MEAN	10.9		165		391	
HIGHEST ANNUAL MEAN					1202	1997
LOWEST ANNUAL MEAN					3.38	1994
HIGHEST DAILY MEAN	389	Jun 3	5030	Jun 3	32000	Jan 3 1997
LOWEST DAILY MEAN	3.3	Oct 7	3.3	Oct 7	3.0	Dec 4 1993
ANNUAL SEVEN-DAY MINIMUM	3.4	May 21	3.4	Apr 21	3.1	Oct 6 1992
MAXIMUM PEAK FLOW			6190	Jun 3	72500	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	7910		119300		283400	
TOTAL DIVERSION (AC-FT)a	1112000		1170000		1150000	
10 PERCENT EXCEEDS	3.5		180		855	
50 PERCENT EXCEEDS	3.5		3.5		3.5	
90 PERCENT EXCEEDS	3.4		3.5		3.3	

a Diversion, in acre-feet, to Big Creek Powerplant No. 3 (station 11241800), provided by Southern California Edison Co.

11239300 NORTH FORK STEVENSON CREEK AT PERIMETER ROAD, NEAR BIG CREEK, CA

LOCATION.—Lat 37° 08'13", long 119° 15'13", in SE 1/4 NW 1/4 sec.21, T.9 S., R.25 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank, 100 ft upstream from Perimeter Road, and 4.8 mi south of town of Big Creek.

DRAINAGE AREA.—4.42 mi^2.

PERIOD OF RECORD.—January 1989 to current year.

GAGE.—Water-stage recorder, modified Parshall flume, and concrete control. Elevation of gage is 5,740 ft above NGVD of 1929, from topographic map.

REMARKS.—Releases for fishery maintenance from Balsam Meadows Forebay on Balsam Creek enter creek upstream from station. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 67.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,220 ft^3/s, May 16, 1996, gage height, 9.58 ft; minimum daily, 1.6 ft^3/s, Feb. 14, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	5.2	5.6	e5.8	7.6	7.6	108	74	13	4.9	4.2	4.6
2	4.9	5.2	6.0	6.2	7.2	e7.6	87	81	11	4.8	5.3	4.5
3	4.9	5.6	5.7	6.3	e7.0	7.7	71	82	10	4.7	5.1	4.5
4	5.0	5.7	6.1	6.2	e6.8	e7.8	62	87	9.4	4.6	4.5	4.5
5	5.4	5.6	5.7	6.2	e6.8	e7.7	53	98	8.6	4.4	4.3	4.6
6	5.3	5.6	5.5	6.3	e6.6	7.4	48	105	7.9	4.4	8.2	4.6
7	5.1	7.0	5.4	6.4	6.5	6.4	56	131	7.3	4.4	13	4.6
8	6.0	28	5.3	6.5	e6.5	6.3	70	106	7.0	4.3	7.2	4.9
9	5.2	18	5.4	6.5	e6.4	6.3	85	50	6.6	4.1	3.7	4.4
10	5.2	7.7	5.4	6.7	e6.3	5.8	95	14	6.4	3.9	4.7	4.7
11	5.2	6.7	5.5	6.3	6.4	4.9	106	15	6.2	4.0	4.7	4.5
12	5.1	6.6	5.5	6.2	8.6	4.3	109	17	6.0	4.0	4.6	4.7
13	4.9	6.5	5.6	6.3	12	4.8	96	19	5.8	5.7	4.5	4.6
14	5.3	6.3	6.8	6.3	11	5.7	87	20	5.4	6.6	4.7	4.4
15	5.1	5.8	7.0	e6.3	9.5	33	76	20	5.1	5.4	4.7	5.0
16	4.8	5.8	6.1	6.3	9.6	17	71	21	4.8	4.9	4.7	4.4
17	4.7	5.6	6.2	6.4	8.9	11	69	23	4.6	4.9	4.5	4.6
18	5.0	5.6	5.9	6.4	8.7	9.6	63	23	5.0	4.8	4.6	4.7
19	5.2	6.0	5.5	6.4	8.5	8.7	62	24	4.9	4.8	4.5	4.7
20	5.3	5.8	6.6	6.4	e8.4	8.4	63	24	4.8	4.6	4.7	4.7
21	5.5	5.8	6.0	6.4	8.1	7.9	65	26	4.7	4.6	4.6	4.5
22	5.4	5.8	5.9	6.5	7.9	8.0	60	27	4.6	4.5	4.5	4.5
23	5.1	5.8	e5.8	6.5	8.0	19	61	27	5.1	4.8	4.3	4.5
24	5.6	5.5	e5.8	6.6	8.0	29	70	25	4.9	4.5	4.4	4.7
25	5.4	5.4	e5.9	6.5	8.4	30	73	24	4.7	4.3	4.5	4.3
26	5.7	5.7	5.8	6.8	8.2	23	81	22	5.0	4.3	4.5	4.4
27	5.2	5.7	5.9	7.1	8.0	18	87	20	5.3	4.2	4.5	4.6
28	5.7	5.7	5.8	6.9	7.8	66	86	19	5.2	4.2	4.3	4.6
29	5.1	5.7	6.1	6.7	---	75	77	17	5.1	4.5	4.5	4.4
30	5.1	5.5	6.0	6.9	---	81	69	15	5.0	4.9	4.9	4.5
31	5.7	---	6.2	7.3	---	100	---	14	---	4.6	4.4	---
TOTAL	162.2	210.9	182.0	200.6	223.7	634.9	2266	1270	189.4	143.6	155.8	137.2
MEAN	5.23	7.03	5.87	6.47	7.99	20.5	75.5	41.0	6.31	4.63	5.03	4.57
MAX	6.0	28	7.0	7.3	12	100	109	131	13	6.6	13	5.0
MIN	4.7	5.2	5.3	5.8	6.3	4.3	48	14	4.6	3.9	3.7	4.3
AC-FT	322	418	361	398	444	1260	4490	2520	376	285	309	272

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)

MEAN	5.64	7.38	6.70	11.4	10.7	15.4	29.9	29.5	23.6	8.68	6.04	5.76
MAX	14.7	22.1	14.1	71.8	52.2	40.7	75.5	108	178	36.2	11.3	11.5
(WY)	2001	1998	1992	1997	1996	1995	2003	1996	1995	1995	1996	2000
MIN	3.65	3.80	4.29	4.59	3.89	5.05	8.99	5.80	4.66	4.00	4.08	4.14
(WY)	1991	1993	1993	1992	1991	2002	1994	1990	1989	1989	1989	1991

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1989 - 2003	
ANNUAL TOTAL	2355.0		5776.3			
ANNUAL MEAN	6.45		15.8		13.8	
HIGHEST ANNUAL MEAN					34.7	1995
LOWEST ANNUAL MEAN					5.57	1990
HIGHEST DAILY MEAN	28	Nov 8	131	May 7	1750	May 16 1996
LOWEST DAILY MEAN	3.8	Mar 16	3.7	Aug 9	1.6	Feb 14 1991
ANNUAL SEVEN-DAY MINIMUM	3.9	Mar 14	4.2	Jul 6	2.0	Feb 14 1991
MAXIMUM PEAK FLOW			204	May 7	3220	May 16 1996
MAXIMUM PEAK STAGE			4.38	May 7	9.58	May 16 1996
ANNUAL RUNOFF (AC-FT)	4670		11460		10020	
10 PERCENT EXCEEDS	9.8		62		26	
50 PERCENT EXCEEDS	5.7		5.9		6.4	
90 PERCENT EXCEEDS	4.7		4.5		4.3	

e Estimated.

11239500 SHAVER LAKE NEAR BIG CREEK, CA

LOCATION.—Lat 37° 08'41", long 119° 18'06", in SW 1/4 SE 1/4 sec.13, T.9 S., R.24 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, near center of dam on Stevenson Creek, and 5.2 mi southwest of town of Big Creek.

DRAINAGE AREA.—29.1 mi^2.

PERIOD OF RECORD.—November 1909 to current year. Prior to January 1927, monthly contents only, published in WSP 1315-A; January 1927 to September 1931, published in WSP 721. Maximum and minimum daily contents (water years 1928–39) summarized in WSP 881. Prior to 1960, maximum and minimum daily contents were published.

REVISED RECORDS.—WSP 1565: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Southern California Edison Co.). Prior to Jan. 11, 1927, gage on rockfill dam a short distance upstream at different datum.

REMARKS.—Storage began prior to 1905. Original lake formed by rockfill dam, usable capacity, 5,500 acre-ft. Water diverted by Fresno Flume and Lumber Co.'s Flumes No. 1 and 2 beginning prior to 1907 and discontinued July 7, 1920. Present lake formed by concrete-arch dam; dam completed Nov. 18, 1927. Usable capacity of present lake, 135,568 acre-ft, between elevations 5,225 ft, trash-rack foundation, and 5,370.13 ft, crest of spillway. Additional storage of 92 acre-ft is not available for release. Water is received from Pitman Creek (since Feb. 22, 1928) and Huntington Lake (since Apr. 21, 1928) via Huntington–Shaver Conduit and Eastwood Powerplant (station 11238250). Water is released for power development in Big Creek powerplants. Records, including extremes, represent contents at 2400 hours. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project nos. 67 and 120. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 135,897 acre-ft, July 5, 1946, Aug. 4, 1978, maximum elevation, 5,370.28 ft, Aug. 4, 1978; minimum contents, 652 acre-ft, Mar. 7, 1942, elevation, 5,249.38 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 134,304 acre-ft, July 31, elevation, 5,369.55 ft; minimum, 80,165 acre-ft, May 12, elevation, 5,342.02 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Southern California Edison Co., dated Oct. 1, 1967)

5,245	379	5,265	3,206	5,300	24,004	5,340	76,741
5,250	700	5,270	4,748	5,310	34,455	5,350	94,568
5,255	1,254	5,280	9,189	5,320	46,797	5,371	137,476
5,260	2,070	5,290	15,598	5,330	60,942		

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105923	108368	114423	113570	107830	92813	87163	83955	98157	132116	133781	126478
2	105154	108248	114609	113023	107113	91972	87109	83584	100022	132158	134066	126265
3	104975	108309	114669	113266	106597	91450	86680	83478	101921	132310	133847	126265
4	104857	108609	115098	113266	105982	90743	86249	83287	103639	132310	133609	126075
5	104738	108971	115281	113042	105626	90393	85979	83321	105389	132182	133348	126075
6	104996	109090	115160	112981	105034	89733	85711	82798	107014	132182	133522	126034
7	105154	109450	114996	112860	104522	89733	85123	82169	108389	132245	133282	126075
8	106160	111463	114669	112596	104206	89695	85335	81648	109871	132440	133150	126201
9	106536	112230	114485	112495	103404	89788	85568	81338	111404	132548	132483	126075
10	106577	112434	114364	112473	102740	89898	85818	80459	112921	132440	132310	126011
11	106597	112434	114139	112414	102213	89954	86051	80252	114423	133001	131771	125950
12	106775	112616	113996	112129	101999	89971	85944	80165	116079	133609	131405	126096
13	106995	112900	113875	111928	101651	90119	86482	80786	117806	133456	130931	126329
14	107014	113225	114180	111806	101514	90192	86428	80821	119419	133478	130674	126583
15	107591	113631	114423	111806	101166	91339	86249	81855	121184	133325	130609	126667
16	108129	113591	114629	111705	100759	91525	86088	82641	122813	133390	130417	126583
17	107849	113814	114996	111382	100081	91617	85997	83478	124176	133390	130290	126709
18	107591	113651	114792	111404	99831	91506	85818	84026	126011	133522	130225	126773
19	107292	113936	114669	110981	99195	91283	85513	85282	127941	133717	129989	126709
20	107651	114077	114547	110858	98522	91077	85405	85513	129454	133543	129732	126773
21	107731	114260	114505	110900	98099	90743	85496	86160	130545	133066	129584	126539
22	107473	114364	114364	110778	97525	90560	85496	86893	131384	133087	129026	126286
23	107610	114609	114139	110717	96721	90523	85513	87652	131857	132956	128622	126075
24	107731	114383	113996	110677	96034	90228	85496	87707	131836	132893	128176	126075
25	108009	114119	113814	110435	95520	89862	85335	88417	131965	132742	127624	125822
26	107731	114180	113712	110134	94797	89420	85069	88851	131988	132807	127601	125632
27	108129	114240	113631	110073	94114	88961	84803	89788	132030	132893	127410	125506
28	107849	114200	113510	109632	93642	88543	84751	91022	132051	133001	126900	125252
29	107591	114302	113449	109151	---	88252	84698	92232	132116	133325	126729	124935
30	108129	114383	113449	108869	---	88089	84539	94266	132158	134000	126773	124555
31	108428	---	113530	108389	---	87617	---	96339	---	134304	126667	---
MAX	108428	114609	115281	113570	107830	92813	87163	96339	132158	134304	134066	126773
MIN	104738	108248	113449	108389	93642	87617	84539	80165	98157	132116	126667	124555
a	5357.13	5360.08	5359.66	5357.11	5349.51	5346.25	5344.53	5350.93	5368.56	5369.55	5365.99	5364.99
b	+2467	+5955	-853	-5141	-14747	-6025	-3078	+11800	+35819	+2146	-7637	-2112

CAL YR 2002 b -7697
WTR YR 2003 b +18594

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11241500 STEVENSON CREEK AT SHAVER LAKE, CA

LOCATION.—Lat 37° 08'41", long 119° 18'27", in NE 1/4 SW 1/4 sec.13, T.9 S., R.24 E., Fresno County, Hydrologic Unit 18040006, Sierra National Forest, on right bank, 400 ft downstream from Highway 168, 1,600 ft downstream from Shaver Lake Dam, 2.6 mi north of town of Shaver Lake, and 5.1 mi southwest of town of Big Creek.

DRAINAGE AREA.—29.4 mi^2.

PERIOD OF RECORD.—October 1916 to August 1919, October 1919 to September 1920, May 1922 to September 1928, and October 1986 to current year. Prior to October 1986, published as "at Shaver."

GAGE.—Water-stage recorder, Parshall flume, and concrete control; auxiliary gage, accoustic-velocity meters on Shaver Lake Dam. Elevation of gage is 5,200 ft above NGVD of 1929, from topographic map. See WSP 1315-A for history of changes prior to October 1986.

REMARKS.—Flow regulated by Shaver Lake (station 11239500). Flow diverted into basin through Eastwood Powerplant (station 11238250). Diversion to Big Creek Powerplant No. 2A (station 11238400) bypasses station and returns to Big Creek. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 67.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,390 ft^3/s, Nov. 27, 1926, gage height, 3.65 ft, site and datum then in use; maximum gage height, 7.64 ft, Apr. 26, 1993; no flow at times in 1924, 1925, 1927.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	3.4	2.5	2.7	2.7	2.7	3.8	3.7	3.6	3.5	3.5	3.4
2	3.4	3.4	2.5	2.7	2.7	2.6	3.6	3.8	3.6	3.5	3.9	3.4
3	3.4	3.4	2.5	2.7	2.6	2.6	3.6	4.3	3.6	3.5	3.7	3.5
4	3.3	3.4	2.5	2.8	2.6	2.6	3.6	4.5	3.6	3.5	3.7	3.5
5	3.3	3.3	2.5	2.8	2.6	2.6	3.5	4.0	3.6	3.5	3.6	3.5
6	3.3	3.4	2.5	2.7	2.6	2.6	3.5	3.9	3.6	3.5	3.6	3.5
7	3.3	3.7	2.5	2.7	2.6	2.6	3.5	3.9	3.6	3.5	3.6	3.4
8	3.3	5.1	2.5	2.7	2.6	2.6	3.5	3.9	3.6	3.5	3.6	3.5
9	3.3	4.6	2.5	2.7	2.6	2.6	3.5	3.9	3.6	3.5	3.6	3.5
10	3.3	3.8	2.5	2.9	2.6	2.6	3.5	3.9	3.6	3.5	8.1	3.5
11	3.3	3.7	2.5	2.8	2.6	2.6	3.5	3.8	3.6	3.5	12	3.5
12	3.3	3.6	2.5	2.8	2.8	2.6	3.5	3.8	3.6	3.5	4.2	3.4
13	3.3	3.6	2.5	2.7	3.0	2.6	4.5	3.7	3.6	3.5	15	3.4
14	3.3	3.6	2.8	2.7	2.9	2.6	4.4	3.7	3.6	3.5	30	3.5
15	3.3	3.0	2.8	2.7	2.8	4.1	4.2	3.7	3.6	3.5	3.7	3.5
16	3.3	2.5	3.2	2.7	2.9	3.0	3.9	3.7	3.7	3.5	3.8	3.5
17	3.4	2.5	2.9	2.7	2.8	2.8	4.0	3.7	3.7	3.5	4.4	3.5
18	3.4	2.5	2.7	2.7	2.7	2.7	3.9	3.7	3.7	3.5	4.5	3.5
19	3.4	2.5	2.7	2.7	2.7	2.7	3.8	3.6	3.7	3.5	4.5	3.5
20	3.4	2.5	2.7	2.7	2.7	2.7	3.7	3.6	3.7	3.5	4.5	3.5
21	3.4	2.5	2.7	2.7	2.6	2.7	3.8	3.6	3.8	3.5	4.5	3.5
22	3.4	2.5	2.7	2.7	2.6	2.6	3.9	3.6	3.8	3.5	4.1	3.5
23	3.4	2.5	2.7	2.7	2.6	2.6	3.8	3.6	3.7	3.5	3.5	3.5
24	3.4	2.5	2.6	2.7	2.6	2.6	3.8	3.6	3.7	3.5	3.5	3.5
25	3.4	2.5	2.6	2.7	2.7	2.6	3.8	3.6	3.6	3.5	3.5	3.5
26	3.4	2.5	2.6	2.7	2.7	2.6	3.7	3.6	3.6	3.5	3.5	3.5
27	3.4	2.5	2.6	2.7	2.7	2.6	3.7	3.6	3.6	3.4	3.5	3.5
28	3.4	2.5	2.7	2.7	2.7	2.6	4.0	3.6	3.6	3.5	3.5	3.5
29	3.4	2.5	2.7	2.7	---	2.6	3.9	3.6	3.6	3.5	3.5	3.5
30	3.4	2.5	2.7	2.7	---	2.6	3.8	3.6	3.5	3.5	3.5	3.5
31	3.4	---	2.8	2.7	---	3.3	---	3.6	---	3.5	3.4	---
TOTAL	104.1	92.5	81.7	84.3	75.3	83.9	113.2	116.4	109.0	108.4	167.5	104.5
MEAN	3.36	3.08	2.64	2.72	2.69	2.71	3.77	3.75	3.63	3.50	5.40	3.48
MAX	3.4	5.1	3.2	2.9	3.0	4.1	4.5	4.5	3.8	3.5	30	3.5
MIN	3.3	2.5	2.5	2.7	2.6	2.6	3.5	3.6	3.5	3.4	3.4	3.4
AC-FT	206	183	162	167	149	166	225	231	216	215	332	207
a	10280	6800	11480	12160	24330	13300	12560	29710	34170	34640	29630	27120

a Diversion, in acre-feet, to Big Creek Powerplant No. 2A (station 11238400), provided by Southern California Edison Co.

11241500 STEVENSON CREEK AT SHAVER LAKE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 1928, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.54	8.14	7.53	5.13	12.9	38.7	66.8	59.8	20.3	5.73	4.76	3.51
MAX	9.76	45.5	33.5	15.1	40.7	147	245	203	61.3	16.5	12.7	10.9
(WY)	1917	1927	1927	1920	1927	1917	1917	1922	1922	1920	1927	1927
MIN	.48	.30	.13	.15	.25	.37	.46	.27	.070	.000	.000	.000
(WY)	1926	1928	1928	1928	1928	1924	1928	1928	1924	1924	1924	1924

SUMMARY STATISTICS	WATER YEARS 1917 - 1928	
ANNUAL TOTAL		
ANNUAL MEAN	19.6	
HIGHEST ANNUAL MEAN	61.9	1917
LOWEST ANNUAL MEAN	.76	1928
HIGHEST DAILY MEAN	854	Nov 27 1926
LOWEST DAILY MEAN	.00	Jun 11 1924
ANNUAL SEVEN-DAY MINIMUM	.00	Jun 20 1924
ANNUAL RUNOFF (AC-FT)	14170	
10 PERCENT EXCEEDS	46	
50 PERCENT EXCEEDS	4.5	
90 PERCENT EXCEEDS	.20	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.1	3.31	2.76	17.5	25.7	39.7	42.0	71.5	113	73.9	13.6	3.57
MAX	147	3.91	3.83	253	280	304	289	382	556	495	98.4	4.90
(WY)	1999	2001	2001	1997	1997	1997	1997	1996	1995	1995	1995	1997
MIN	3.26	2.92	2.18	2.21	2.39	2.38	3.20	3.22	3.23	3.03	3.16	3.11
(WY)	1997	1993	2000	1996	1990	2002	2002	2002	1994	1997	1996	1998

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	1101.1		1240.8			
ANNUAL MEAN	3.02		3.40		34.9	
HIGHEST ANNUAL MEAN					156	1995
LOWEST ANNUAL MEAN					3.04	2002
HIGHEST DAILY MEAN	5.1	Nov 8	30	Aug 14	688	Jun 25 1995
LOWEST DAILY MEAN	2.1	Mar 14	2.5	Nov 16	1.2	Dec 1 1991
ANNUAL SEVEN-DAY MINIMUM	2.1	Mar 14	2.5	Nov 16	1.9	Nov 26 1991
MAXIMUM PEAK FLOW			40	Aug 14	816	Jun 13 1995
MAXIMUM PEAK STAGE			4.29	Aug 14	7.64	Apr 26 1993
ANNUAL RUNOFF (AC-FT)	2180		2460		25290	
TOTAL DIVERSION (AC-FT) a	231100		246200		242000	
10 PERCENT EXCEEDS	3.4		3.8		130	
50 PERCENT EXCEEDS	3.2		3.5		3.4	
90 PERCENT EXCEEDS	2.5		2.6		2.5	

a Diversion, in acre-feet, to Big Creek Powerplant No. 2A (station 11238400), provided by Southern California Edison Co.

11241950 REDINGER LAKE NEAR AUBERRY, CA

LOCATION.—Lat 37° 08'42", long 119° 26'58", in NE 1/4 SW 1/4 sec.15, T.9 S., R.23 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, at intake structure on dam No. 7, on San Joaquin River, and 4.2 mi northeast of Auberry.

DRAINAGE AREA.—1,295 mi^2.

PERIOD OF RECORD.—November 1950 to current year. Prior to October 1965, monthend contents only, published in WSP 1930.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Lake is formed by a concrete dam; storage began Nov. 19, 1950. Usable capacity, 26,120 acre-ft, between elevations 1,320.00 ft, invert of tunnel, and 1,403.00 ft, top of radial gates. Additional storage of 8,914 acre-ft not available for release. Water is used for power development in Big Creek Powerplant No. 4 (station 11246530). Records, including extremes, represent contents at 2400 hours. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2017. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 26,586 acre-ft, Aug. 5, 1978, elevation, 1,404.00 ft; minimum since appreciable storage was attained, 5,985 acre-ft, Nov. 22, 1981, elevation, 1,346.85 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 25,874 acre-ft, May 14, elevation, 1,402.47 ft; minimum, 11,306 acre-ft, Oct. 8, elevation, 1,365.32 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Southern California Edison Co., dated Oct. 27, 1950)

1,340	4,282	1,360	9,651	1,380	16,455	1,400	24,748
1,350	6,809	1,370	12,858	1,390	20,427	1,405	27,058

RESERVOIR STORAGE, ACRE-FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24658	24291	24345	23627	23892	24003	23197	23289	24587	24309	24056	24238
2	24336	24122	24667	23905	23759	24216	23442	23193	24631	24069	24847	23706
3	22672	23513	24762	24065	23799	24385	24775	23878	24385	23958	25092	23368
4	21341	23368	24681	23971	23315	25168	23931	25378	24497	24242	24834	23777
5	19324	23878	24573	23272	23605	25387	21864	24390	23746	24318	25159	23923
6	16180	24118	24331	23495	24082	25101	20039	24479	24216	23998	24672	24242
7	12315	24003	24016	23329	23918	24924	18293	24484	24264	23830	24390	24336
8	11618	24739	24091	24309	23878	25019	17750	23363	24524	23526	24847	24766
9	11500	24122	24069	24470	23958	24672	15565	23508	23989	23843	24875	24470
10	12333	23790	24105	24897	23852	24466	12395	24011	23830	23989	24229	24056
11	13234	23588	24149	24631	24145	24573	12124	24065	23750	24216	24573	23944
12	14108	23508	24145	24331	24131	24524	12061	24185	24915	23394	24685	23562
13	15188	23442	23976	24546	24296	24403	12395	24578	25182	24416	24726	24117
14	16343	23825	23416	24109	23566	24118	13829	25874	24820	24176	24640	23995
15	17364	23931	22840	23812	23259	23114	14154	24875	24573	24484	24591	23834
16	18382	23949	22542	23640	23298	23407	18112	24216	24605	24497	24600	24338
17	19711	23759	22827	23869	23601	24158	21316	23539	24537	24069	24336	24399
18	21020	23838	23145	23985	23513	24605	22918	22949	24269	24202	24091	24787
19	22337	23830	23250	24225	23377	24685	24470	22284	24091	24457	24211	24762
20	23557	23579	23711	24349	23075	24834	24439	23315	24506	24372	24416	24828
21	23767	23746	23777	24158	23246	24122	23989	23945	24158	24251	24721	24637
22	23875	23856	23416	24564	22879	24479	24096	24229	24282	22884	24712	24581
23	23945	23931	22975	24390	23259	24484	24202	24875	24573	23482	24870	24364
24	24001	24082	22819	23298	23936	23896	24238	24681	23869	23918	24816	24175
25	24017	24171	22672	22594	24131	23350	24069	24304	25051	24078	25132	24468
26	24118	24216	22672	22723	24856	23605	24065	23963	25078	24185	24708	24775
27	24174	24264	22503	23184	24897	22793	24016	24162	24296	23976	24363	24298
28	24211	24390	22413	23601	24390	23456	23883	23394	24425	24868	24189	24221
29	24158	24403	23010	23680	---	24497	23522	24685	24466	24883	23654	24125
30	24105	24376	23329	23764	---	24789	23605	24979	24631	24884	24466	24592
31	24078	---	23812	23759	---	23737	---	24497	---	23852	24578	---
MAX	24658	24739	24762	24897	24897	25387	24775	25874	25182	24884	25159	24828
MIN	11500	23368	22413	22594	22879	22793	12061	22284	23746	22884	23654	23368
a	1398.50	1399.17	1397.90	1397.78	1399.20	1397.73	1397.43	1399.44	1399.74	1397.99	1399.62	1399.65
b	-1117	+298	-564	-53	+631	-653	-132	+892	+134	-779	+726	+14

CAL YR 2002 b +444
WTR YR 2003 b -6031

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11242000 SAN JOAQUIN RIVER ABOVE WILLOW CREEK, NEAR AUBERRY, CA

LOCATION.—Lat 37° 08'40", long 119° 27'13", in SW 1/4 SW 1/4 sec.15, T.9 S., R.23 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on right bank, 1,000 ft downstream from Redinger Lake Dam, 0.4 mi upstream from Willow Creek, and 4.2 mi northeast of Auberry.

DRAINAGE AREA.—1,295 mi^2.

PERIOD OF RECORD.—March 1951 to current year.

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 1,175.54 ft above NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Flow regulated by Redinger Lake (station 11241950). Most of the flow, since June 1951, is diverted at Redinger Lake to Big Creek Powerplant No. 4 (station 11246530). See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2017.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 99,200 ft^3/s, Jan. 2, 1997, gage height, 65.17 ft, from floodmarks, from rating curve extended above 7,000 ft^3/s, on basis of computed flow over dam; no flow, Sept. 25, 1951.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	23	23	23	23	23	23	23	4510	22	22	22
2	23	23	23	23	23	23	23	23	4820	22	22	22
3	23	23	23	23	23	23	34	23	5150	22	26	22
4	22	23	23	23	23	23	32	23	5350	22	36	22
5	22	23	23	23	29	27	23	23	4500	22	31	22
6	22	23	23	23	23	24	23	23	3790	22	23	22
7	23	23	23	23	23	23	23	23	3830	22	23	22
8	24	23	23	23	23	23	22	23	3280	22	22	22
9	24	23	23	23	23	23	22	23	2820	22	23	22
10	24	23	23	23	23	23	21	23	2060	22	22	22
11	24	23	31	23	23	23	25	23	1980	22	22	22
12	25	23	23	23	23	23	25	23	335	32	23	22
13	25	23	23	23	23	23	26	23	643	37	23	22
14	25	23	22	23	23	23	37	23	886	37	23	22
15	25	23	23	23	23	24	37	790	879	38	23	22
16	26	23	23	23	23	23	37	23	606	30	23	22
17	23	23	23	23	23	23	38	22	502	22	23	22
18	22	22	23	23	23	25	38	22	499	23	22	22
19	22	23	23	23	23	23	39	22	52	23	30	22
20	22	23	23	23	23	23	39	26	22	23	23	22
21	23	22	23	23	23	23	38	23	22	23	23	22
22	23	31	22	23	23	24	29	23	22	23	23	22
23	23	23	22	23	23	23	23	22	22	22	23	22
24	23	23	23	23	23	23	23	22	22	22	23	22
25	23	23	23	23	23	23	23	22	22	23	23	22
26	23	23	23	23	23	23	23	22	22	23	23	22
27	23	23	23	23	23	23	23	22	22	23	22	22
28	23	23	23	23	23	23	23	22	22	22	22	22
29	23	23	23	23	---	23	23	22	22	22	22	22
30	23	23	23	23	---	23	23	22	22	22	22	22
31	23	---	23	23	---	23	---	5060	---	22	22	---
TOTAL	722	696	718	713	650	722	838	6509	46734	754	733	660
MEAN	23.3	23.2	23.2	23.0	23.2	23.3	27.9	210	1558	24.3	23.6	22.0
MAX	26	31	31	23	29	27	39	5060	5350	38	36	22
MIN	22	22	22	23	23	23	21	22	22	22	22	22
AC-FT	1430	1380	1420	1410	1290	1430	1660	12910	92700	1500	1450	1310
a	46050	40170	52270	68050	74640	73900	127700	200900	198300	137900	105100	67060

a Diversion, in acre-feet, to Big Creek Powerplant No. 4 (station 11246530), provided by Southern California Edison Co.

11242000 SAN JOAQUIN RIVER ABOVE WILLOW CREEK, NEAR AUBERRY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	21.5	21.1	104	152	114	151	392	1570	2153	863	70.4	22.2
MAX	61.2	76.2	3501	4156	1255	1456	2739	10410	12700	7739	1343	46.9
(WY)	2001	1983	1956	1997	1986	1983	1951	1969	1983	1995	1983	1997
MIN	8.15	8.55	5.66	3.83	3.38	2.86	3.27	4.76	8.59	13.5	16.5	2.79
(WY)	1983	1985	1966	1965	1966	1968	1955	1971	1971	1979	1984	1951

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1951 - 2003	
ANNUAL TOTAL	9011		60449			
ANNUAL MEAN	24.7		166		464	
HIGHEST ANNUAL MEAN					2409	1983
LOWEST ANNUAL MEAN					11.4	1966
HIGHEST DAILY MEAN	136	Feb 11	5350	Jun 4	47700	Dec 23 1955
LOWEST DAILY MEAN	22	Oct 4	21	Apr 10	0.00	Sep 25 1951
ANNUAL SEVEN-DAY MINIMUM	23	Sep 30	22	May 23	0.38	Oct 17 1982
MAXIMUM PEAK FLOW			7430	Jun 4	99200	Jan 2 1997
MAXIMUM PEAK STAGE			16.31	Jun 4	65.17	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	17870		119900		336500	
TOTAL DIVERSION (AC-FT) a	1128000		1192000			
10 PERCENT EXCEEDS	26		31		967	
50 PERCENT EXCEEDS	23		23		21	
90 PERCENT EXCEEDS	23		22		5.4	

a Diversion, in acre-feet, to Big Creek Powerplant No. 4 (station 11246530), provided by Southern California Edison Co.

11242400 NORTH FORK WILLOW CREEK NEAR SUGAR PINE, CA

LOCATION.—Lat 37° 23'52", long 119° 33'55", in SW 1/4 NE 1/4 sec.21, T.6 S., R.22 E., Madera County, Hydrologic Unit 18040006, on right bank at road bridge, 0.6 mi downstream from Soquel Campground, 3.0 mi upstream from Chilkoot Creek, and 4.7 mi southeast of Sugar Pine.

DRAINAGE AREA.—16.9 mi^2.

PERIOD OF RECORD.—August 1965 to current year.

REVISED RECORDS.—WDR CA-72-2: 1970, 1971. WDR CA-85-3: 1983, 1984(P). WDR CA-93-3: 1992.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 5,200 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good except estimated daily discharges, which are fair. No storage upstream from station. Madera Irrigation District has water rights to divert up to 50 ft^3/s from North Fork Willow Creek through Soquel Ditch into Nelder Creek (Fresno River Basin) from October through July each year. See schematic diagram of lower San Joaquin River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,750 ft^3/s, Jan. 13, 1980, gage height, 7.41 ft, from rating curve extended above 1,100 ft^3/s, on basis of a step-backwater survey; minimum daily, 0.27 ft^3/s, Oct. 4, 1987.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 8	1445	422	4.55	Apr. 13	1345	133	3.83
Dec. 17	1345	113	3.75	May 27	1845	137	3.85
Mar.15	1145	228	4.14				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	1.7	5.8	15	19	16	39	39	81	12	8.1	3.0
2	2.0	1.8	5.9	16	18	16	37	44	77	12	12	2.9
3	1.9	1.8	5.9	15	16	16	34	60	71	11	7.1	2.9
4	1.9	1.7	5.8	13	15	16	32	63	66	11	5.9	2.9
5	1.8	1.7	5.7	13	15	15	32	54	61	10	5.4	2.9
6	1.7	1.7	5.7	13	15	15	29	52	54	9.7	5.3	2.9
7	1.6	4.0	5.7	13	13	16	32	51	48	9.2	5.2	3.0
8	1.6	188	5.6	13	14	16	34	51	45	8.8	5.0	3.2
9	1.6	121	5.5	13	14	16	35	49	40	8.4	4.6	3.3
10	1.6	26	5.5	19	13	17	37	47	36	8.1	4.3	3.2
11	1.6	17	5.5	17	13	18	37	49	33	7.7	4.2	3.1
12	1.6	14	5.4	15	16	20	40	54	32	7.2	4.0	2.9
13	1.6	12	6.5	15	51	21	97	60	30	6.9	3.9	2.8
14	1.6	9.9	13	14	35	23	61	63	27	6.6	3.8	2.8
15	1.6	8.8	18	13	27	110	51	64	25	e6.0	3.6	2.8
16	1.6	8.1	46	12	30	56	47	68	23	e5.5	3.5	2.8
17	1.6	7.6	104	13	24	41	46	72	22	e5.1	3.6	2.9
18	1.7	7.2	70	14	22	34	43	76	22	e5.2	3.6	2.8
19	1.7	6.9	40	14	20	31	41	83	22	e5.7	3.5	2.7
20	1.7	6.9	63	14	20	30	41	90	21	e5.5	3.5	2.7
21	1.6	6.9	32	14	19	28	43	101	21	e4.9	3.6	2.6
22	1.6	6.7	19	13	18	29	40	105	20	4.4	3.9	2.6
23	1.6	6.5	15	14	18	32	38	104	20	4.5	3.8	2.6
24	1.6	6.3	14	15	18	31	41	106	19	4.5	3.5	2.7
25	1.6	6.1	13	15	20	30	50	101	18	4.0	3.4	2.7
26	1.6	6.0	12	16	18	31	43	95	17	3.7	3.6	2.7
27	1.6	5.9	11	18	18	32	42	104	16	3.4	3.6	2.4
28	1.6	5.7	15	17	17	30	45	108	15	3.3	3.4	2.2
29	1.6	5.7	35	16	---	32	42	105	13	3.2	3.3	2.2
30	1.6	5.7	18	16	---	34	39	96	13	3.6	3.2	2.3
31	1.7	---	18	18	---	37	---	87	---	8.7	3.2	---
TOTAL	51.6	509.3	630.5	456	556	889	1268	2301	1008	209.8	138.6	83.5
MEAN	1.66	17.0	20.3	14.7	19.9	28.7	42.3	74.2	33.6	6.77	4.47	2.78
MAX	2.0	188	104	19	51	110	97	108	81	12	12	3.3
MIN	1.6	1.7	5.4	12	13	15	29	39	13	3.2	3.2	2.2
AC-FT	102	1010	1250	904	1100	1760	2520	4560	2000	416	275	166

e Estimated.

11242400 NORTH FORK WILLOW CREEK NEAR SUGAR PINE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.53	9.50	14.7	30.0	29.6	40.3	51.2	77.8	50.2	17.1	5.81	4.25
MAX	17.8	43.0	78.2	268	178	151	176	228	219	109	26.9	14.3
(WY)	1983	1984	1997	1997	1986	1986	1982	1995	1995	1983	1983	1978
MIN	0.41	1.63	1.20	1.84	2.07	2.04	1.78	2.40	1.84	0.99	0.66	0.38
(WY)	1978	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1965 - 2003	
ANNUAL TOTAL	6737.8		8101.3			
ANNUAL MEAN	18.5		22.2		27.9	
HIGHEST ANNUAL MEAN					82.7	1983
LOWEST ANNUAL MEAN					1.57	1977
HIGHEST DAILY MEAN	188	Nov 8	188	Nov 8	1600	Jan 2 1997
LOWEST DAILY MEAN	1.5	Sep 22	1.6	Oct 7	0.27	Oct 4 1987
ANNUAL SEVEN-DAY MINIMUM	1.5	Sep 20	1.6	Oct 7	0.29	Oct 11 1977
MAXIMUM PEAK FLOW			422	Nov 8	2750	Jan 13 1980
MAXIMUM PEAK STAGE			4.55	Nov 8	7.41	Jan 13 1980
ANNUAL RUNOFF (AC-FT)	13360		16070		20210	
10 PERCENT EXCEEDS	50		54		77	
50 PERCENT EXCEEDS	11		14		8.6	
90 PERCENT EXCEEDS	1.6		2.0		1.9	

11243300 BROWNS CREEK CANAL AT BASS LAKE, CA

LOCATION.—Lat 37° 17'19", long 119° 31'09", in SE 1/4 SW 1/4 sec.25, T.7 S., R.22 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on left bank, 900 ft upstream from Bass Lake, and 3.0 mi southeast of town of Bass Lake.

PERIOD OF RECORD.—October 1986 to September 1998, October 2000 to current year.

GAGE.—Water-stage recorder and concrete canal. Elevation of gage is 3,440 ft above NGVD of 1929, from topographic map.

REMARKS.—Canal diverts from South Fork Willow Creek at diversion dam 1.5 mi upstream from gage, in NW 1/4 NE 1/4 sec.30, T.7 S., R.23 E. Flow enters Bass Lake (station 11243400) for power development in San Joaquin River powerplants. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 1354.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 86 ft^3/s, Mar. 8, 1989; no flow at times in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	4.8	19	40	25	57	71	52	14	0.00	0.00
2	0.00	0.00	4.8	25	36	25	52	69	50	13	0.35	0.00
3	0.00	0.00	4.7	31	29	25	48	68	47	13	0.18	0.00
4	0.00	0.00	4.4	32	26	24	45	69	44	12	0.01	0.00
5	0.00	0.00	4.3	33	25	24	42	75	41	12	0.00	0.00
6	0.00	0.00	4.1	33	23	25	45	78	39	11	0.00	0.00
7	0.00	0.00	4.0	34	22	25	53	78	37	11	0.00	0.00
8	0.00	1.4	4.0	31	21	26	57	70	35	9.3	0.00	0.00
9	0.00	0.53	4.0	33	20	27	58	59	32	8.7	0.00	0.00
10	0.00	0.02	4.0	40	19	28	59	74	28	8.3	0.00	0.00
11	0.00	0.00	4.0	29	19	31	57	81	28	8.1	0.00	0.00
12	0.00	0.03	4.0	27	25	33	67	80	28	6.9	0.00	0.00
13	0.00	16	4.3	26	59	36	56	81	28	6.9	0.00	0.00
14	0.00	18	15	27	57	51	63	79	27	6.1	0.00	0.00
15	0.00	12	32	24	45	58	63	76	25	5.8	0.00	0.00
16	0.00	11	37	27	45	54	66	76	24	5.5	0.00	0.00
17	0.00	9.3	28	32	45	56	59	76	23	5.2	0.00	0.00
18	0.00	8.7	20	33	32	56	73	77	21	4.9	0.00	0.00
19	0.00	8.1	16	33	36	53	75	79	21	4.9	0.00	0.00
20	0.00	8.5	16	32	34	54	77	78	21	3.1	0.00	0.00
21	0.00	8.2	16	30	31	54	70	78	20	0.03	0.00	0.00
22	0.00	7.8	14	31	31	55	66	77	20	0.00	0.00	0.00
23	0.00	7.5	13	29	30	55	66	77	18	0.00	0.00	0.00
24	0.00	7.3	12	31	29	55	66	75	18	0.00	0.00	0.00
25	0.00	6.2	12	32	31	55	73	75	17	0.00	0.00	0.00
26	0.00	5.4	12	35	30	53	74	73	17	0.00	0.00	0.00
27	0.00	5.1	14	38	29	48	75	74	16	0.00	0.00	0.00
28	0.00	5.0	16	35	27	47	65	73	15	0.00	0.00	0.00
29	0.00	5.0	17	32	---	46	70	67	14	0.00	0.00	0.00
30	0.00	4.8	19	32	---	47	74	62	14	0.00	0.00	0.00
31	0.00	---	19	38	---	48	---	56	---	0.00	0.00	---
TOTAL	0.00	155.88	383.4	964	896	1299	1871	2281	820	169.73	0.54	0.00
MEAN	0.000	5.20	12.4	31.1	32.0	41.9	62.4	73.6	27.3	5.48	0.017	0.000
MAX	0.00	18	37	40	59	58	77	81	52	14	0.35	0.00
MIN	0.00	0.00	4.0	19	19	24	42	56	14	0.00	0.00	0.00
AC-FT	0.00	309	760	1910	1780	2580	3710	4520	1630	337	1.1	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	1.46	4.68	9.81	19.1	31.1	47.1	54.1	41.4	19.1	6.09	1.62	0.75
MAX	6.53	22.7	56.0	53.5	73.3	74.5	77.2	76.3	76.4	37.4	12.1	4.50
(WY)	1990	1997	1997	1993	1997	1997	1993	1993	1995	1995	1995	1995
MIN	0.000	0.000	0.88	3.01	0.64	0.45	0.54	0.27	0.000	0.000	0.000	0.000
(WY)	1989	1996	1998	1991	1998	1998	1998	1998	1998	1998	1987	1987

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	7068.41		8840.55			
ANNUAL MEAN	19.4		24.2		19.6	
HIGHEST ANNUAL MEAN					39.0	1995
LOWEST ANNUAL MEAN					1.58	1998
HIGHEST DAILY MEAN	78	Apr 9	81	May 11	86	Mar 8 1989
LOWEST DAILY MEAN	0.00	Jul 16	0.00	Oct 1	0.00	Jul 3 1987
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 16	0.00	Oct 1	0.00	Jul 3 1987
ANNUAL RUNOFF (AC-FT)	14020		17540		14210	
10 PERCENT EXCEEDS	51		67		70	
50 PERCENT EXCEEDS	12		17		6.4	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

11243400 BASS LAKE NEAR BASS LAKE, CA

LOCATION.—Lat 37° 17'33", long 119° 31'43", in SE 1/4 NE 1/4 sec.26, T.7 S., R.22 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, at outlet tower at dam, on North Fork Willow Creek, 2.2 mi southeast of town of Bass Lake, and 5 mi north of North Fork.

DRAINAGE AREA.—50.4 mi^2.

PERIOD OF RECORD.—January 1911 to September 1982 (monthend contents only), October 1982 to current year. Bass Lake was formerly called Crane Valley Reservoir.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.—Reservoir formed by earthfill and rockfill dam; completed in 1901 and raised in 1910. Since 1910, usable contents, 45,100 acre-ft between elevations 3,280.22 ft, invert of outlet conduit No. 3, and 3,376.40 ft, top of spillway gates. Additional storage of 300 acre-ft not available for release. Water is released through Crane Valley Powerplant below dam for use in three small powerplants before being discharged into Kerckhoff Reservoir (station 11246650) at Wishon Powerplant. Water is diverted from South Fork Willow Creek via Browns Creek Ditch into Bass Lake near left end of dam. Madera Irrigation District has water rights to divert up to 50 ft^3/s from North Fork Willow Creek through Soquel Ditch into Nelder Creek (Fresno River Basin) from October through July each year. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 1354. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 45,960 acre-ft, June 17, 1923, elevation, 3,376.8 ft; minimum, 35 acre-ft, Nov. 19, 1953, elevation, 3,270.2 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 45,184 acre-ft, May 22–24, elevation, 3,376.20 ft; minimum, 21,540 acre-ft, Nov. 3, elevation, 3,352.43 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated March 1937)

3,280	290	3,310	3,404	3,340	13,227	3,370	38,218
3,290	890	3,320	5,584	3,350	19,663	3,376.4	45,410
3,300	1,896	3,330	8,717	3,360	28,121		

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30034	21556	24726	22787	26788	28510	32291	41160	44875	42801	43313	40135
2	29806	21556	24744	22896	26924	28380	32450	41477	44815	42836	43629	39851
3	29493	21556	24588	23005	27060	28260	32680	42022	44792	42871	43641	39547
4	29211	21556	24346	23156	27169	28343	32960	42548	44792	42894	43653	39264
5	28948	21556	24097	23290	27251	28510	33112	42906	44756	42929	43641	38990
6	28677	21556	23850	23391	27352	28687	33285	43267	44708	42952	43641	38696
7	28417	21556	23595	23561	27435	28864	33448	43536	44672	42987	43641	38402
8	28149	21766	23341	23679	27527	29032	33693	43876	44636	42999	43629	38119
9	27879	23114	23088	23824	27592	29192	33908	43983	44577	43045	43618	37835
10	27610	23807	22829	23969	27675	29361	34093	44125	44636	43057	43618	37562
11	27334	23918	22571	24209	27740	29541	34310	44244	44792	43080	43618	37269
12	27060	23986	22314	24363	27814	29720	34632	44362	44768	43080	43594	36987
13	26779	24046	22042	24501	27963	29891	35473	44470	44708	43103	43594	36694
14	26580	24123	21814	24622	28389	30072	36059	44601	44624	43115	43571	36424
15	26401	24183	21782	24735	28631	30244	36413	44684	44541	43127	43500	36134
16	26113	24243	21661	24840	28817	30427	36835	44815	44446	43150	43489	35856
17	25809	24286	22075	24944	29107	30580	37084	44935	44351	43138	43477	35600
18	25524	24329	22067	25058	29389	30735	37388	45083	44220	43150	43465	35303
19	25233	24372	21912	25180	29427	30899	37660	45162	44113	43162	43454	34997
20	24944	24406	21798	25303	29314	31064	37911	45150	43995	43185	43419	34715
21	24648	24449	21636	25427	29239	31229	39373	45162	43888	43197	43302	34403
22	24355	24484	21628	25533	29145	31395	38446	45162	43758	43208	43057	34114
23	24054	24518	21717	25657	29023	31561	38620	45184	43629	43232	42778	33816
24	23756	24544	21782	25773	28920	31708	38783	45184	43500	43255	42766	33519
25	23451	24570	21847	25871	28854	31875	39362	45162	43360	43267	42189	33244
26	23164	24605	21920	25997	28789	32043	39666	45139	43232	43255	41899	32950
27	22871	24614	21977	26122	28714	32211	39938	45117	43092	43278	41610	32670
28	22571	24648	22058	26266	28603	32370	40332	45094	42952	43278	41302	32370
29	22264	24674	22231	26392	---	32360	40626	45083	42801	43278	41018	32092
30	21960	24700	22405	26508	---	32350	40909	45049	42755	43278	40724	31816
31	21661	---	22529	26634	---	32321	---	44970	---	43302	40430	---
MAX	30034	24700	24744	26634	29427	32370	40909	45184	44875	43302	43653	40135
MIN	21661	21556	21628	22787	26788	28260	32291	41160	42755	42801	40430	31816
a	3352.58	3356.20	3353.64	3358.38	3360.52	3364.39	3372.47	3376.01	3374.13	3374.60	3372.03	3363.88
b	-8536	+3039	-2171	+4105	+1969	+3718	+8588	+4061	-2215	+547	-2872	-8614

CAL YR 2002 b -5063
WTR YR 2003 b +1619

a Elevation, in feet, at end of month.
b change in contents, in acre-feet.

11243500 PACIFIC GAS & ELECTRIC CO. CONDUIT NO. 3 NEAR BASS LAKE, CA

LOCATION.—Lat 37° 17'21", long 119° 31'44", in NE 1/4 SE 1/4 sec.26, T.7 S., R.22 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on left bank, 1,000 ft downstream from Crane Valley Powerplant and Dam, and 2.5 mi southeast of town of Bass Lake.

PERIOD OF RECORD.—October 1940 to current year. Prior to October 1954, published as "near Crane Valley Reservoir."

GAGE.—Water-stage recorder and concrete flume. Elevation of gage is 3,300 ft above NGVD of 1929, from topographic map.

REMARKS.—Conduit diverts from Bass Lake in sec.26, T.7 S., R.22 E. Water passes through Crane Valley Powerplant, then to Powerplant No. 3 (station 11244100), and is stored temporarily at Manzanita Lake on North Fork Willow Creek; flow then diverts to Powerplants No. 2 and No. 1A (stations 11246570 and 11246590), before it enters San Joaquin River at Kerckhoff Reservoir through San Joaquin Powerplant No. 1 (station 11246610). See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 1354.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 167 ft^3/s, June 23, 24, 1965; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147	1.9	3.0	1.6	1.6	121	121	1.3	151	2.1	0.00	151
2	147	1.3	90	1.6	1.5	121	49	1.3	151	2.1	0.00	151
3	148	0.88	138	1.6	1.6	121	1.7	1.3	151	2.1	0.00	151
4	148	0.88	138	1.6	1.6	121	1.7	1.4	152	2.1	0.00	149
5	148	0.88	138	1.6	1.6	121	1.7	1.4	152	2.1	0.00	150
6	148	0.91	138	1.6	1.6	42	1.7	1.4	149	2.1	0.00	149
7	148	0.99	139	1.6	1.6	0.71	1.7	74	128	2.1	0.00	149
8	148	1.1	139	1.6	5.8	1.6	1.7	118	119	2.1	0.00	150
9	147	1.1	139	1.6	3.2	2.0	1.7	118	119	2.0	0.00	150
10	147	1.1	138	1.6	2.0	2.0	1.7	118	36	2.0	0.00	137
11	147	1.1	138	1.6	2.4	2.0	1.7	119	1.6	2.0	0.00	151
12	147	1.0	138	1.6	1.6	2.0	1.7	134	67	0.93	0.00	151
13	104	0.97	138	1.6	0.91	2.0	1.7	143	110	0.12	0.00	150
14	89	0.97	138	1.6	1.1	2.0	1.7	143	110	0.00	0.00	150
15	150	0.97	137	1.6	1.1	2.1	1.7	148	109	0.00	25	151
16	150	0.65	137	1.6	1.1	2.1	1.7	150	110	0.00	0.61	146
17	149	0.26	137	1.6	1.2	2.0	1.8	150	111	0.00	0.48	37
18	149	0.31	137	1.6	1.2	2.0	1.8	150	111	0.00	0.48	0.93
19	149	0.60	137	1.6	79	2.1	1.8	150	111	0.00	0.48	0.35
20	149	0.97	137	1.6	121	2.1	1.8	151	111	0.00	6.8	0.00
21	149	2.0	51	1.6	121	2.1	1.8	151	112	0.00	64	0.00
22	150	2.7	2.4	1.6	121	2.1	66	151	112	0.00	120	0.00
23	150	2.3	2.3	1.6	121	2.1	49	151	112	0.00	142	0.00
24	149	1.5	2.3	1.6	121	2.1	1.3	152	113	0.00	151	0.00
25	149	0.50	1.4	1.6	121	2.1	1.3	152	113	0.00	151	0.00
26	149	0.00	0.22	1.6	121	77	1.3	152	114	0.00	151	0.00
27	149	0.07	0.46	1.6	121	120	1.3	152	114	0.00	151	0.00
28	149	0.17	0.58	1.6	121	120	1.3	152	115	0.00	151	0.00
29	150	0.33	0.63	1.6	---	120	1.3	151	116	0.00	151	0.00
30	150	0.57	0.63	1.6	---	121	1.3	151	44	0.00	151	0.00
31	53	---	1.2	1.6	---	121	---	151	---	0.00	151	---
TOTAL	4406	28.98	2637.12	49.6	1200.71	1363.21	326.9	3540.1	3324.6	23.85	1567.85	2424.28
MEAN	142	0.97	85.1	1.60	42.9	44.0	10.9	114	111	0.77	50.6	80.8
MAX	150	2.7	139	1.6	121	121	121	152	152	2.1	151	151
MIN	53	0.00	0.22	1.6	0.91	0.71	1.3	1.3	1.6	0.00	0.00	0.00
AC-FT	8740	57	5230	98	2380	2700	648	7020	6590	47	3110	4810
a	7260	0.00	4440	0.00	1900	2150	466	5770	5100	0.00	2570	4000
b	7760	260	5100	42	2170	2480	391	6680	5780	0.00	2830	8110
c	9170	0.00	5880	0.00	2840	3100	486	7460	7100	0.00	2940	9030
d	8690	1060	6370	1550	3560	4430	3510	8140	6720	101	3060	8860

a Diversion, in acre-feet, to San Joaquin Powerplant No. 3 (station 11244100), provided by Pacific Gas & Electric Co.

b Diversion, in acre-feet, to San Joaquin Powerplant No. 2 (station 11246570), provided by Pacific Gas & Electric Co.

c Diversion, in acre-feet, to San Joaquin Powerplant No. 1A (station 11246590), provided by Pacific Gas & Electric Co.

d Diversion, in acre-feet, to San Joaquin Powerplant No. 1 (station 11246610), provided by Pacific Gas & Electric Co.

11243500 PACIFIC GAS & ELECTRIC CO. CONDUIT NO. 3 NEAR BASS LAKE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	70.6	43.7	55.7	59.1	69.3	75.8	60.5	62.6	60.9	80.5	98.3	87.9
MAX	152	148	157	157	161	162	158	157	160	153	155	154
(WY)	1951	1984	1983	1956	1956	1956	1956	1958	1952	1983	1958	1980
MIN	0.000	0.000	0.042	0.19	0.079	0.12	0.12	0.090	0.060	0.52	9.43	0.23
(WY)	1988	1968	1954	1954	1977	1947	1947	1977	1942	1977	1977	1996

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1941 - 2003	
ANNUAL TOTAL	22174.31		20893.20			
ANNUAL MEAN	60.8		57.2		68.8	
HIGHEST ANNUAL MEAN					128	1983
LOWEST ANNUAL MEAN					14.4	1977
HIGHEST DAILY MEAN	152	Sep 27	152	May 24	167	Jun 23 1965
LOWEST DAILY MEAN	0.00	Jul 16	0.00	Nov 26	0.00	Nov 6 1940
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 16	0.00	Jul 14	0.00	Feb 8 1941
ANNUAL RUNOFF (AC-FT)	43980		41440		49840	
TOTAL DIVERSION (AC-FT)a	36380		33650			
TOTAL DIVERSION (AC-FT)b	20350		41610			
TOTAL DIVERSION (AC-FT)c	47160		48020			
TOTAL DIVERSION (AC-FT)d	51590		56050			
10 PERCENT EXCEEDS	148		150		151	
50 PERCENT EXCEEDS	2.3		2.1		65	
90 PERCENT EXCEEDS	0.08		0.00		0.03	

a Diversion, in acre-feet, to San Joaquin Powerplant No. 3 (station 11244100), provided by Pacific Gas & Electric Co.

b Diversion, in acre-feet, to San Joaquin Powerplant No. 2 (station 11246570), provided by Pacific Gas & Electric Co.

c Diversion, in acre-feet, to San Joaquin Powerplant No. 1A (station 11246590), provided by Pacific Gas & Electric Co.

d Diversion, in acre-feet, to San Joaquin Powerplant No. 1 (station 11246610), provided by Pacific Gas & Electric Co.

11244000 NORTH FORK WILLOW CREEK NEAR BASS LAKE, CA

LOCATION.—Lat 37° 17'20", long 119° 31'45", in SE 1/4 SE 1/4 sec.26, T.7 S., R.22 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on right bank, 1,500 ft downstream from Bass Lake Spillway, and 2.5 mi southeast of town of Bass Lake.

DRAINAGE AREA.—50.8 mi^2.

PERIOD OF RECORD.—May 1940 to current year. Prior to October 1944, published as "Willow Creek below Crane Valley Reservoir." October 1944 to September 1954, published as "below Crane Valley Reservoir."

GAGE.—Water-stage recorder. Broad-crested weir with V-notch Dec. 21, 1961, to Jan. 16, 1969, and since Mar. 26, 1971. Elevation of gage is 3,200 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow regulated by Bass Lake (station 11243400), 1,500 ft upstream and by diversion into Pacific Gas & Electric Co. Conduit No. 3 near Bass Lake (station 11243500). Soquel ditch diverts up to 50 ft^3/s from North Fork Willow Creek into Nelder Creek in Fresno River Basin. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 1354.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,770 ft^3/s, Jan. 2, 1997, gage height, 9.10 ft; minimum daily, 0.01 ft^3/s, Dec. 4, 1989.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.4	1.4	2.2	0.98	1.2	1.2	2.4	92	1.5	1.4	1.2
2	1.0	1.2	1.1	1.8	0.98	1.2	1.2	2.5	92	1.4	1.4	1.2
3	1.1	0.91	1.0	1.7	0.98	1.2	1.2	2.7	81	1.4	1.3	1.2
4	1.1	1.0	1.1	1.7	0.98	1.2	1.2	2.7	67	1.4	1.3	1.2
5	1.1	1.1	1.3	1.6	0.98	1.2	1.2	2.7	65	1.4	1.3	1.2
6	1.1	1.1	1.3	1.6	0.98	1.2	1.2	2.7	65	1.4	1.3	1.2
7	1.1	1.3	1.3	1.5	0.98	1.2	1.2	2.7	65	1.4	1.3	1.2
8	1.1	4.9	1.3	1.2	0.98	1.2	1.2	2.7	65	1.4	1.3	1.2
9	1.2	2.8	1.3	0.98	0.98	1.2	1.2	2.7	30	1.4	1.3	1.2
10	1.3	1.5	1.3	1.1	0.98	1.2	1.2	2.7	2.2	1.4	1.3	1.2
11	1.3	1.3	1.3	1.1	0.98	1.2	1.2	2.7	2.3	1.4	1.3	1.2
12	1.4	1.3	1.3	1.0	1.2	1.2	1.3	2.8	2.3	1.4	1.3	1.2
13	1.4	1.3	1.3	1.0	1.9	1.2	1.5	2.8	2.3	1.4	1.3	1.2
14	1.4	1.3	1.5	0.98	1.9	1.3	1.5	2.8	2.3	1.4	1.3	1.2
15	1.3	1.2	1.8	0.98	1.8	1.5	1.5	2.8	2.3	1.4	1.3	1.2
16	1.3	1.2	3.0	0.98	1.7	1.3	1.5	2.8	2.3	1.4	1.3	1.2
17	1.3	1.2	3.5	0.98	1.5	1.3	1.5	2.8	2.3	1.4	1.3	95
18	1.3	1.2	2.1	0.98	1.3	1.3	1.4	2.7	2.3	1.4	1.3	154
19	1.3	1.2	1.7	0.98	1.2	1.3	1.4	54	2.3	1.4	1.3	154
20	1.3	1.2	1.8	0.98	1.2	1.3	1.4	89	2.3	1.4	1.3	154
21	1.3	1.2	1.8	0.98	1.2	1.3	2.3	89	2.3	1.4	1.3	155
22	1.3	1.2	1.7	0.98	1.2	1.3	2.4	89	2.3	1.4	1.3	158
23	1.3	1.2	1.7	0.98	1.2	1.2	2.4	89	2.3	1.4	1.3	160
24	1.3	1.3	1.6	0.98	1.2	1.2	2.4	89	2.2	1.4	1.3	159
25	1.3	1.4	1.5	0.98	1.2	1.2	2.4	89	2.0	1.4	1.3	157
26	1.3	1.5	1.5	0.98	1.2	1.2	2.3	89	1.8	1.4	1.2	157
27	1.3	1.5	1.5	0.98	1.2	1.2	2.3	89	1.7	1.4	1.2	154
28	1.3	1.3	1.7	0.98	1.2	1.2	2.5	89	1.7	1.4	1.2	154
29	1.3	1.4	2.6	0.98	---	1.2	2.5	89	1.7	1.4	1.2	154
30	1.3	1.7	2.2	0.98	---	1.1	2.4	91	1.6	1.4	1.2	154
31	1.3	---	3.1	0.98	---	1.1	---	92	---	1.4	1.2	---
TOTAL	38.7	43.31	52.6	36.12	34.08	38.1	50.1	1175.7	666.8	43.5	39.9	2138.2
MEAN	1.25	1.44	1.70	1.17	1.22	1.23	1.67	37.9	22.2	1.40	1.29	71.3
MAX	1.4	4.9	3.5	2.2	1.9	1.5	2.5	92	92	1.5	1.4	160
MIN	1.0	0.91	1.0	0.98	0.98	1.1	1.2	2.4	1.6	1.4	1.2	1.2
AC-FT	77	86	104	72	68	76	99	2330	1320	86	79	4240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2003, BY WATER YEAR (WY)

MEAN	3.31	3.99	7.05	23.2	26.8	34.1	19.2	29.5	23.8	4.91	3.94	5.20
MAX	77.8	54.6	106	524	380	387	272	317	244	73.6	66.4	103
(WY)	1949	1958	1947	1997	1986	1995	1982	1995	1998	1983	1963	1963
MIN	0.18	0.26	0.21	0.22	0.18	0.24	0.30	0.23	0.24	0.21	0.24	0.26
(WY)	1991	1992	1987	1991	1991	1977	1977	1977	1977	1977	1977	1976

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1941 - 2003	
ANNUAL TOTAL	528.37		4357.11			
ANNUAL MEAN	1.45		11.9		15.4	
HIGHEST ANNUAL MEAN					92.4	1995
LOWEST ANNUAL MEAN					0.26	1977
HIGHEST DAILY MEAN	4.9	Nov 8	160	Sep 23	2880	Jan 2 1997
LOWEST DAILY MEAN	0.91	Nov 3	0.91	Nov 3	0.01	Dec 4 1989
ANNUAL SEVEN-DAY MINIMUM	0.98	Sep 15	0.98	Jan 14	0.11	Oct 1 1990
MAXIMUM PEAK FLOW			160	Sep 22	3770	Jan 2 1997
MAXIMUM PEAK STAGE			2.87	Sep 22	9.10	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	1050		8640		11130	
10 PERCENT EXCEEDS	2.2		15		20	
50 PERCENT EXCEEDS	1.3		1.3		0.84	
90 PERCENT EXCEEDS	1.1		1.0		0.30	

11246500 WILLOW CREEK AT MOUTH, NEAR AUBERRY, CA

LOCATION.—Lat 37° 09'03", long 119° 27'34", in SE 1/4 NE 1/4 sec.16, T.9 S., R.23 E., Madera County, Hydrologic Unit 18040006, Sierra National Forest, on left bank, 40 ft upstream from bridge, 0.4 mi upstream from mouth, 1.3 mi downstream from Whiskey Creek, and 4.3 mi northeast of Auberry.

DRAINAGE AREA.—130 mi^2.

PERIOD OF RECORD.—January 1952 to September 1988, October 1989 to current year.
WATER TEMPERATURE: Water years 1961–72.

GAGE.—Water-stage recorder. Concrete control since Oct. 22, 1964. Datum of gage is 1,174.69 ft above NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Flow regulated by Bass Lake (station 11243400) 10 mi upstream. Soquel Ditch diverts up to 50 ft^3/s from North Fork Willow Creek into Nelder Creek in Fresno River Basin. Flow diverted out of basin by Pacific Gas & Electric Co. Conduit No. 3. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2017.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,700 ft^3/s, Dec. 23, 1955, gage height, 28.5 ft, from floodmarks, from rating curve extended above 4,700 ft^3/s, maximum gage height, 31.65 ft, Jan. 2, 1997 (backwater from San Joaquin River); no flow at times some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.37	2.2	30	18	19	22	49	106	6.1	11	0.43
2	1.6	0.74	2.4	21	18	18	28	52	98	6.0	21	0.38
3	5.2	0.62	2.5	20	15	17	24	113	56	5.8	33	0.35
4	1.1	0.52	2.5	19	13	18	24	238	31	5.5	17	0.32
5	0.56	0.50	2.5	18	13	17	24	158	21	5.3	14	0.29
6	0.37	0.46	2.4	16	12	16	23	179	28	5.1	13	0.27
7	0.31	0.52	2.4	16	11	16	23	160	17	4.9	12	0.26
8	0.26	769	2.4	15	11	16	25	141	16	4.7	11	0.23
9	0.22	708	2.4	14	10	16	27	162	15	4.5	10	0.24
10	0.18	55	2.4	17	10	17	27	134	29	4.3	10	0.31
11	0.16	15	2.4	21	10	18	27	116	23	4.0	9.5	0.35
12	0.14	9.5	2.4	16	12	18	26	125	23	3.8	8.7	0.36
13	0.12	7.4	2.4	14	56	19	213	142	15	3.5	27	0.36
14	4.7	6.2	4.0	13	56	20	199	158	14	7.4	15	0.34
15	1.5	5.4	60	12	32	410	90	129	13	9.6	8.1	0.29
16	0.60	4.7	125	12	42	204	59	131	12	9.1	10	0.24
17	0.38	4.2	292	12	36	71	51	120	11	8.7	8.0	0.24
18	0.30	3.9	77	12	27	58	48	118	17	8.3	6.1	0.24
19	0.28	3.6	31	13	24	40	43	108	34	8.5	4.9	0.24
20	0.28	3.4	61	13	23	36	41	181	12	8.7	1.6	0.24
21	0.28	3.2	41	12	21	34	45	208	11	10	1.0	0.24
22	0.28	2.9	23	12	20	33	49	200	10	11	1.4	0.23
23	0.28	2.8	14	12	20	32	46	187	9.7	11	1.1	0.19
24	0.28	2.8	11	13	19	32	44	177	9.4	12	0.88	0.10
25	0.28	2.8	9.9	13	20	30	77	166	8.8	11	0.73	0.02
26	0.31	2.4	9.6	14	20	29	55	160	8.1	10	0.58	0.00
27	0.34	2.2	9.1	15	22	29	48	151	7.6	9.4	0.54	0.00
28	0.38	2.2	11	15	20	26	76	140	7.1	8.8	0.54	0.04
29	0.40	2.2	44	14	---	24	78	131	6.7	8.2	0.52	0.05
30	0.40	2.2	27	14	---	23	52	109	6.3	8.1	0.43	0.00
31	0.40	---	47	16	---	22	---	108	---	8.8	0.43	---
TOTAL	21.89	1624.73	927.9	474	611	1378	1614	4451	675.7	232.1	259.05	6.85
MEAN	0.71	54.2	29.9	15.3	21.8	44.5	53.8	144	22.5	7.49	8.36	0.23
MAX	5.2	769	292	30	56	410	213	238	106	12	33	0.43
MIN	0.00	0.37	2.2	12	10	16	22	49	6.3	3.5	0.43	0.00
AC-FT	43	3220	1840	940	1210	2730	3200	8830	1340	460	514	14

11246500 WILLOW CREEK AT MOUTH, NEAR AUBERRY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.44	16.7	53.9	119	132	145	138	148	60.1	10.2	2.63	2.75
MAX	24.6	150	652	1108	1255	1033	995	747	614	102	12.6	28.3
(WY)	1983	1997	1956	1997	1986	1983	1982	1967	1998	1998	1983	1982
MIN	0.000	0.54	1.13	2.13	1.89	2.63	2.36	3.61	1.93	0.000	0.000	0.000
(WY)	1956	1978	1991	1991	1991	1977	1977	1977	1961	1961	1959	1960

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1952 - 2003	
ANNUAL TOTAL	6116.59		12276.22			
ANNUAL MEAN	16.8		33.6		67.5	
HIGHEST ANNUAL MEAN					344	1983
LOWEST ANNUAL MEAN					1.71	1977
HIGHEST DAILY MEAN	769	Nov 8	769	Nov 8	7500	Dec 23 1955
LOWEST DAILY MEAN	0.00	Sep 2	0.00	Oct 1	0.00	Sep 4 1955
ANNUAL SEVEN-DAY MINIMUM	0.00	Sep 9	0.03	Sep 24	0.00	Sep 4 1955
MAXIMUM PEAK FLOW			2250	Nov 8	15700	Dec 23 1955
MAXIMUM PEAK STAGE			11.99	Nov 8	31.65	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	12130		24350		48870	
10 PERCENT EXCEEDS	32		108		161	
50 PERCENT EXCEEDS	6.4		12		8.3	
90 PERCENT EXCEEDS	0.17		0.31		0.34	

11246650 KERCKHOFF RESERVOIR NEAR AUBERRY, CA

LOCATION.—Lat 37° 07'40", long 119° 31'25", in SE 1/4 SW 1/4 sec.24, R.9 S., T.22 E., Fresno County, Hydrologic Unit 18040006, near center of Kerckhoff Dam, on San Joaquin River, 2.0 mi downstream from A.G. Wishon Powerplant, and 7.9 mi northwest of Auberry.

DRAINAGE AREA.—1,460 mi^2.

PERIOD OF RECORD.—October 1986 to current year.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.—Reservoir is formed by concrete-arch dam with spillway completed in 1920. Usable contents, 4,247 acre-ft, between elevations 900.14 ft, invert of sluice gates, and 985.68 ft, top of spillway gates. Water is released for use in Kerckhoff Powerplants No. 1 and 2 (station 11246950 and 11247050) before being discharged into the San Joaquin River above Millerton Lake. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 96.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 5,700 acre-ft, Jan. 2, 1997, elevation unknown; minimum, 2,104 acre-ft, Nov. 14–17, 1988, elevation, 970.10 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 4,160 acre-ft, Nov. 8, elevation, 985.10 ft; minimum, 3,420 acre-ft, May 29, elevation, 980.20 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas and Electric Co., dated July 16, 1919)

960	1,090	970	2,092	980	3,387	990	4,964
965	1,549	975	2,703	985	4,140		

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3860	3740	3880	3620	3490	3830	3970	3770	3950	3770	3620	3880
2	3690	3800	4060	3580	3470	3600	3780	3490	4020	3650	3660	3600
3	3750	3770	3910	3530	3530	3600	3680	3770	3690	3720	3720	3720
4	3690	3830	3840	3560	3680	3710	3550	3600	3660	3560	3720	3650
5	3630	3830	3820	4080	3470	3660	3520	3560	3660	3840	3720	3580
6	3890	3860	3740	3490	3490	3690	3620	3780	3690	3720	3530	3740
7	4060	3780	3560	3590	3620	3750	3770	3630	3650	3830	3650	3590
8	3940	4160	3550	3550	3580	3580	3840	3560	3680	3840	3830	3720
9	4060	3820	3630	3560	3460	3620	3500	3880	3740	3770	3800	3830
10	3780	3750	3720	3580	3680	3740	3600	3560	3820	3910	3620	3550
11	3720	3550	3520	3580	3750	3560	3530	3470	3840	3620	3740	3690
12	3710	3770	3970	3680	3690	3550	3630	3550	3800	3750	3660	3740
13	3620	3680	3520	3580	3500	3590	3690	3560	3740	3770	3530	3660
14	3800	3840	3690	3490	3470	3590	3660	3750	3830	4000	3680	3650
15	3740	3780	3770	3720	3500	3840	3860	3820	3710	3560	3620	3710
16	3740	3840	3770	3500	3520	3630	3820	3650	3650	4110	3720	3590
17	3770	3780	3690	3530	3550	3580	3530	3500	3620	3950	3600	3580
18	3590	3940	3600	3550	3600	3660	3590	3630	3830	3620	3680	3590
19	3680	3880	3770	3490	3650	3560	3550	3630	3880	3710	3740	3680
20	3650	3970	3720	3520	3840	3740	3740	3490	3560	3560	3800	3770
21	3550	3920	3550	3520	3630	3500	3660	3680	3600	3630	3740	3770
22	3580	3800	3720	3580	3650	3590	3780	3660	3620	3530	3710	3820
23	3490	3780	3720	3620	3840	3520	3880	3660	3840	3860	3750	3690
24	3560	3720	3630	3590	3820	3630	3840	3720	3550	3720	3630	3560
25	3600	3660	3500	3630	3660	3470	3500	3770	3630	3530	3830	3630
26	3560	3800	3750	3490	3550	3580	3530	3820	3740	3620	3720	3650
27	3560	3820	3780	3690	3750	3750	3740	3500	3580	3680	3660	3650
28	3560	3770	3710	3500	3590	3620	3500	3620	3600	3660	3620	3630
29	3940	3840	3690	3620	---	3520	3600	3420	3940	3770	3550	3650
30	3560	3860	3440	3580	---	3560	3590	3860	3660	3690	3770	3740
31	3560	---	3580	3500	---	3590	---	4000	---	3860	3680	---
MAX	4060	4160	4060	4080	3840	3840	3970	4000	4020	4110	3830	3880
MIN	3490	3550	3440	3490	3460	3470	3500	3420	3550	3530	3530	3550
a	981.20	983.20	981.30	980.80	981.40	981.40	981.40	984.10	981.90	983.20	982.00	981.80
b	-440	300	-280	-80	90	0	0	410	-340	200	-200	60

CAL YR 2002 b -60
WTR YR 2003 b -260

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11246700 SAN JOAQUIN RIVER NEAR AUBERRY, CA

LOCATION.—Lat 37° 07'56", long 119° 31'50", in NW 1/4 SW 1/4 sec.24, T.9 S., R.22 E., Fresno County, Hydrologic Unit 18040006, on left bank, 2,300 ft downstream from Kerckhoff Dam, 2.8 mi northwest of Auberry, and 6.7 mi south of town of North Fork.

DRAINAGE AREA.—1,461 mi^2.

PERIOD OF RECORD.—October 1986 to current year.

GAGE.—Water-stage recorder. Datum of gage is 870.11 ft above NGVD of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.—Flow regulated by nine powerplants and eight reservoirs with combined capacity of about 609,300 acre-ft. Diversions to Kerckhoff Powerplants No. 1 and 2 (stations 11246950 and 11247050) bypass this station. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were provided by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 96.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 80,600 ft^3/s, Jan. 3, 1997, gage height, 35.62 ft; minimum daily, 16 ft^3/s, May 9–18, 1987, Sept. 29, 30, 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	43	35	34	34	34	34	45	1450	37	38	38
2	35	46	75	34	34	34	34	35	1690	37	39	39
3	35	44	36	34	34	34	33	35	2290	37	39	37
4	34	43	36	33	34	34	34	36	1800	37	39	39
5	35	44	36	34	34	34	35	35	1470	38	39	38
6	34	43	36	34	33	34	36	36	674	38	39	38
7	35	45	36	34	34	34	35	36	705	37	38	38
8	35	1070	35	34	34	34	34	36	299	38	39	38
9	35	1210	35	34	34	34	34	36	39	38	39	39
10	36	42	35	34	34	34	35	35	38	37	38	39
11	36	39	36	34	34	34	35	35	40	38	39	38
12	35	39	35	34	34	34	35	34	40	38	38	38
13	36	40	35	34	34	34	34	35	40	37	38	39
14	35	40	35	34	34	34	35	35	41	38	38	38
15	35	41	35	34	34	35	35	35	40	38	39	39
16	35	40	36	34	34	34	35	35	39	38	39	39
17	35	39	35	34	34	34	34	35	39	38	38	37
18	35	37	35	34	34	34	35	35	39	38	38	38
19	34	37	36	34	35	34	35	35	39	37	38	38
20	35	36	35	34	34	34	34	35	39	36	39	38
21	35	36	34	34	34	34	35	35	38	37	39	39
22	35	35	35	34	34	33	35	35	37	37	38	39
23	35	36	34	34	34	34	35	35	37	38	39	39
24	35	35	34	33	34	33	34	34	38	38	39	38
25	35	35	34	34	34	33	35	35	38	37	38	38
26	35	35	34	33	34	33	35	35	37	43	39	38
27	35	36	34	34	34	33	1150	35	37	39	39	39
28	34	35	35	34	34	33	1570	34	37	39	38	39
29	36	35	34	33	---	34	628	35	37	40	39	38
30	84	35	35	34	---	34	34	35	37	39	38	38
31	45	---	34	33	---	33	---	1900	---	39	39	---
TOTAL	1144	3371	1125	1049	952	1048	4282	2962	11224	1176	1196	1150
MEAN	36.9	112	36.3	33.8	34.0	33.8	143	95.5	374	37.9	38.6	38.3
MAX	84	1210	75	34	35	35	1570	1900	2290	43	39	39
MIN	34	35	34	33	33	33	33	34	37	36	38	37
AC-FT	2270	6690	2230	2080	1890	2080	8490	5880	22260	2330	2370	2280
a	0.00	32540	6850	0.00	40	522	365	15670	41930	123	0.00	0.00
b	50200	3450	52550	66080	74340	73930	118300	186100	197900	128000	102400	70550

a Discharge, in acre-feet, to Kerckhoff Powerplant No. 1 (station 11246950), provided by Pacific Gas & Electric Co.

b Discharge, in acre-feet, to Kerckhoff Powerplant No. 2 (station 11247050), provided by Pacific Gas & Electric Co.

11246700 SAN JOAQUIN RIVER NEAR AUBERRY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	38.1	66.2	33.5	215	39.4	86.8	79.4	397	812	559	36.5	32.6
MAX	167	265	51.1	2571	144	881	534	2683	5452	5217	89.3	45.6
(WY)	2000	2001	2000	1997	1996	1995	1995	1995	1995	1995	1995	1993
MIN	17.5	17.4	18.2	18.0	18.0	17.8	19.1	18.7	17.3	17.2	17.3	17.1
(WY)	1988	1988	1988	1989	1988	1988	1988	1988	1987	1987	1988	1988

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	15500		30679			
ANNUAL MEAN	42.5		84.1		200	
HIGHEST ANNUAL MEAN					1263	1995
LOWEST ANNUAL MEAN					18.2	1988
HIGHEST DAILY MEAN	1210	Nov 9	2290	Jun 3	35200	Jan 3 1997
LOWEST DAILY MEAN	33	Apr 13	33	Jan 4	16	May 9 1987
ANNUAL SEVEN-DAY MINIMUM	34	Aug 1	33	Mar 22	16	May 9 1987
MAXIMUM PEAK FLOW			7310	Jun 3	80600	Jan 3 1997
MAXIMUM PEAK STAGE			13.17	Jun 3	35.62	Jan 3 1997
ANNUAL RUNOFF (AC-FT)	30740		60850		145100	
10 PERCENT EXCEEDS	40		40		42	
50 PERCENT EXCEEDS	36		35		32	
90 PERCENT EXCEEDS	34		34		19	

11249500 MADERA CANAL AT FRIANT, CA

LOCATION.—Lat 37°00'10", long 119°42'21", in NW 1/4 SW 1/4 sec.5, T.11 S., R.21 E., Madera County, Hydrologic Unit 18040006, at Friant Dam, 0.9 mi northeast of Friant.

PERIOD OF RECORD.—October 1943 to current year. Monthly discharge only for October 1943 to September 1948 published in WSP 1315-A. October 1954 to September 1966 published as "Friant–Madera Canal at Friant."

REVISED RECORDS.—WSP 1151: 1944–48.

GAGE.—Discharge computed on basis of megawatt meter reading, efficiency of the generator coefficiant, and net head on the turbines. Prior to Oct. 1, 1948, water-stage recorder at several sites at various datums. Oct. 1, 1948, to Sept. 30, 1949, water-stage recorder at site 8.8 mi downstream.

REMARKS.—Canal diverts from Millerton Lake (station 11250100) at right end of Friant Dam for irrigation between San Joaquin and Chowchilla Rivers. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 1,330 ft^3/s, July 2, 3, 1973, May 21, 1983; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	528	979	837	855	534
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	477	901	883	799	506
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	428	949	946	692	518
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	418	1040	957	639	527
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	406	1060	938	658	545
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	420	1110	945	633	523
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	451	1120	959	694	431
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	463	1120	1050	765	464
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	502	1120	1080	782	463
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	499	1060	1130	778	446
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	472	1030	1170	779	441
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	514	1030	1150	812	439
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	669	962	1080	876	453
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	770	925	993	912	434
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	782	911	903	928	413
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	762	920	991	832	392
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	784	970	1000	729	299
18	0.00	0.00	0.00	0.00	0.00	0.00	106	795	956	995	700	271
19	0.00	0.00	0.00	0.00	0.00	0.00	255	784	1060	1010	700	310
20	0.00	0.00	0.00	0.00	0.00	0.00	255	854	1070	1010	691	301
21	0.00	0.00	0.00	0.00	0.00	0.00	517	940	955	1010	671	282
22	0.00	0.00	0.00	0.00	0.00	0.00	725	957	845	840	685	248
23	0.00	0.00	0.00	0.00	0.00	0.00	831	972	835	881	674	235
24	0.00	0.00	0.00	0.00	0.00	0.00	758	991	832	1000	609	234
25	0.00	0.00	0.00	0.00	0.00	0.00	667	950	820	1000	554	234
26	0.00	0.00	0.00	0.00	0.00	0.00	621	981	843	978	570	233
27	0.00	0.00	0.00	0.00	0.00	0.00	490	969	850	927	599	233
28	0.00	0.00	0.00	0.00	0.00	0.00	438	978	881	908	620	233
29	0.00	0.00	0.00	0.00	---	0.00	476	1050	830	875	648	233
30	0.00	0.00	0.00	0.00	---	0.00	526	1060	818	832	629	174
31	0.00	---	0.00	0.00	---	0.00	---	1040	---	885	593	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	6665.00	22666	28802	30163	22106	11049
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	222	731	960	973	713	368
MAX	0.00	0.00	0.00	0.00	0.00	0.00	831	1060	1120	1170	928	545
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	406	818	832	554	174
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	13220	44960	57130	59830	43850	21920

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)

MEAN	116	18.1	8.09	27.8	102	301	360	518	798	973	720	347
MAX	599	266	357	527	659	1094	1258	1261	1277	1293	1233	1153
(WY)	1984	1999	1999	1997	1986	1980	1980	1982	1978	1973	1967	1983
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	13.8	356	76.7	0.000
(WY)	1950	1949	1949	1949	1949	1952	1964	1961	1977	1981	1977	1959

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1949 - 2003	
ANNUAL TOTAL	97970.00		121451.00			
ANNUAL MEAN	268		333		359	
HIGHEST ANNUAL MEAN					736	1983
LOWEST ANNUAL MEAN					43.8	1977
HIGHEST DAILY MEAN	1190	Jul 26	1170	Jul 11	1330	Jul 2 1973
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 3 1948
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 3 1948
ANNUAL RUNOFF (AC-FT)	194300		240900		260100	
10 PERCENT EXCEEDS	906		969		1050	
50 PERCENT EXCEEDS	0.00		0.00		151	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

11250000 FRIANT–KERN CANAL AT FRIANT, CA

LOCATION.—Lat 36° 59'53", long 119° 42'11", in SE 1/4 SW 1/4 sec.5, T.11 S., R.21 E., Fresno County, Hydrologic Unit 18040006, at Friant Dam, 0.9 mi northeast of Friant.

PERIOD OF RECORD.—March 1949 to current year.

GAGE.—Discharge computed on basis of megawatt meter reading, efficiency of generator coefficient, and net head on turbines. Prior to January 1986, discharge computed on basis of valve openings and head on valves. Prior to July 8, 1949, nonrecording gages at various sites and datums. July 8 to Sept. 30, 1949, water-stage recorder at site 0.2 mi downstream.

REMARKS.—Canal diverts from Millerton Lake (station 11250100) at left end of Friant Dam for irrigation in upper San Joaquin Valley. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records were provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 5,330 ft^3/s, June 25, 1982; no flow for many days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1020	544	0.00	106	697	301	776	3250	2380	3630	2760	1790
2	993	416	0.00	0.00	454	331	770	3050	2510	3870	2500	1890
3	920	381	0.00	0.00	281	324	692	3000	3420	3650	2560	1880
4	723	430	0.00	0.00	407	305	592	3000	4100	3320	2740	1840
5	580	421	0.00	0.00	496	306	523	2940	4700	3080	2860	1530
6	656	400	0.00	0.00	496	307	503	2900	5240	3120	2930	1160
7	804	167	0.00	0.00	470	307	529	2900	5200	3200	2860	1220
8	872	0.00	0.00	0.00	452	308	547	2960	5200	3300	2630	1390
9	1020	0.00	0.00	0.00	487	308	547	2980	5200	3590	2390	1450
10	1110	0.00	0.00	0.00	504	308	547	2860	5200	3640	2390	1450
11	960	0.00	0.00	0.00	428	308	489	3000	5020	3460	2540	1390
12	829	0.00	0.00	0.00	387	309	421	3410	4590	3260	2750	1180
13	870	0.00	0.00	0.00	397	309	427	3800	3760	3320	3120	913
14	1020	0.00	0.00	0.00	397	309	377	4120	3290	3520	3160	998
15	1070	0.00	0.00	0.00	397	310	602	4250	3280	3600	2860	1220
16	1040	0.00	99	209	456	311	773	4070	3300	3630	2500	1360
17	998	0.00	90	503	498	312	809	3810	3450	3650	2080	1390
18	817	0.00	0.00	504	528	312	794	3850	3670	3420	2050	1290
19	617	0.00	0.00	505	581	313	755	3610	3660	3160	2280	1110
20	598	0.00	153	505	603	313	808	3170	3340	3180	2490	1020
21	671	0.00	81	169	544	314	1290	2920	3010	3270	2380	1060
22	698	0.00	0.00	272	501	315	1830	2750	3100	3420	2020	1220
23	755	0.00	103	359	432	315	2140	2500	3360	3530	1710	1340
24	738	0.00	247	114	397	396	2430	2180	3420	3460	1740	1360
25	586	0.00	248	0.00	397	454	2610	2130	3490	3170	1940	1300
26	414	0.00	83	184	397	479	2770	2260	3490	2880	2100	1130
27	381	0.00	0.00	333	339	497	2980	2420	3220	2980	2120	968
28	460	0.00	0.00	380	300	497	3260	2510	2940	3100	2100	986
29	502	0.00	0.00	438	---	497	3460	2530	3000	3010	1890	1030
30	590	0.00	168	625	---	497	3440	2440	3190	3040	1660	1030
31	623	---	253	697	---	643	---	2300	---	3040	1590	---
TOTAL	23935	2759.00	1525.00	5903.00	12723	11115	38491	93870	112730	103500	73700	38895
MEAN	772	92.0	49.2	190	454	359	1283	3028	3758	3339	2377	1296
MAX	1110	544	253	697	697	643	3460	4250	5240	3870	3160	1890
MIN	381	0.00	0.00	0.00	281	301	377	2130	2380	2880	1590	913
AC-FT	47480	5470	3020	11710	25240	22050	76350	186200	223600	205300	146200	77150

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)

MEAN	865	316	95.1	221	1185	1200	1376	1737	2714	2966	2560	1503
MAX	3085	1364	926	1349	4505	3551	4476	4238	4529	4905	4339	4033
(WY)	1979	1979	1999	1966	1965	1965	1962	1993	1993	1993	1967	1967
MIN	0.000	0.000	0.000	0.000	0.000	5.13	32.2	87.5	598	262	384	1.33
(WY)	1950	1950	1950	1950	1950	1991	1998	1977	1977	1949	1949	1950

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1949 - 2003	
ANNUAL TOTAL	398239.00		519146.00			
ANNUAL MEAN	1091		1422		1405	
HIGHEST ANNUAL MEAN					2356	1993
LOWEST ANNUAL MEAN					270	1950
HIGHEST DAILY MEAN	3950	Jul 11	5240	Jun 6	5330	Jun 25 1982
LOWEST DAILY MEAN	0.00	Jan 4	0.00	Nov 8	0.00	Jul 5 1949
ANNUAL SEVEN-DAY MINIMUM	0.00	Nov 8	0.00	Nov 8	0.00	Sep 11 1949
ANNUAL RUNOFF (AC-FT)	789900		1030000		1018000	
10 PERCENT EXCEEDS	2850		3430		3540	
50 PERCENT EXCEEDS	789		773		993	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

11250100 MILLERTON LAKE AT FRIANT, CA

LOCATION.—Lat 37° 00'00", long 119° 42'13", in SW 1/4 SW 1/4 sec.5, T.11 S., R.21 E., Fresno County, Hydrologic Unit 18040006, near center of Friant Dam, on San Joaquin River, just upstream from Cottonwood Creek, and 0.9 mi northeast of Friant.

DRAINAGE AREA.—1,638 mi^2.

PERIOD OF RECORD.—October 1941 to current year. Monthend contents only for some periods, published in WSP 1315-A.

GAGE.—Water-stage recorder. Elevation of gage is NGVD of 1929 (levels by U.S. Bureau of Reclamation). Prior to May 29, 1944, nonrecording gage on left bank at same datum.

REMARKS.—Reservoir is formed by gravity-type concrete dam with spillway near center, completed in December 1942. Control valves installed in February 1944, and spillway gates installed in November 1947. Usable capacity, 503,200 acre-ft, between elevations 375.4 ft, invert of river outlet, and 578.0 ft, top of drum-type spillway gates. 17,400 acre-ft not available for release. Millerton Lake is one of the storage units in the Central Valley Project. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of lower San Joaquin River Basin.

COOPERATION.—Records and capacity table were provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 528,800 acre-ft, July 21, 1998, elevation, 579.68 ft, (maximum instantaneous contents, 530,500 acre-ft, at 1300 hours, Jan. 3, 1997, elevation, 580.01 ft); minimum since lake first filled, 133,600 acre-ft, Apr. 11, 1969, elevation, 467.81 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 525,000 acre-ft, June 7, elevation, 578.91 ft; minimum, 215,000 acre-ft, Sept. 30, elevation, 499.79 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by U.S. Bureau of Reclamation, dated 1941)

400	36,400	460	117,500	520	279,400	560	436,500
420	57,000	480	161,700	540	353,000	580	530,400
440	83,300	500	215,000				

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	221200	218200	253600	308500	361600	414000	467100	497600	499000	479800	340900	250100
2	221700	218500	255100	309700	364200	417300	468100	499400	508200	475900	337200	248300
3	222100	219300	256700	311100	364300	419600	469400	498200	515900	471900	333400	245800
4	223900	219300	258300	312700	367800	422500	473300	497100	521500	467600	330400	243100
5	226800	219400	259900	314900	368800	425200	477000	496700	524500	463000	326500	241100
6	229800	219300	262100	317200	370000	427600	480800	496800	524900	459600	322900	239400
7	235300	220400	263900	319800	371600	428900	484900	497100	525000	456000	319000	238000
8	233600	223400	265800	321500	372700	430100	487500	497500	524200	451600	315500	235600
9	233000	229600	267300	323600	374100	430600	491800	497300	523200	446800	312600	233800
10	231600	231400	268700	325800	375900	431000	496800	498200	521200	441600	310900	232500
11	230300	232900	270400	327500	377200	431200	499400	499100	518800	437000	307200	231100
12	229300	233900	271900	329600	379100	432000	501600	499000	515400	430600	303500	229600
13	228200	235000	273800	331800	381600	432900	504100	497600	514000	426700	299100	227700
14	226100	235700	276000	334000	384100	434400	506800	495300	513700	422000	294000	226900
15	224200	236400	278300	336200	385800	438300	508600	494300	513700	417600	289400	225500
16	222300	237200	281500	338400	387700	440200	507400	492500	513400	412900	285800	223200
17	220400	238200	284500	339200	388900	441200	506900	491000	512500	408500	283300	221600
18	219000	239000	286300	340300	389600	442500	508300	489200	511100	404300	280900	220400
19	217800	239900	288200	341300	390800	443900	509600	488000	508800	399500	278400	219700
20	216500	241200	289900	341900	393200	445100	512600	486400	506700	395400	275200	219500
21	216700	242400	291800	343600	394700	448100	514400	484500	505200	390500	272100	219400
22	216500	243700	293800	345000	396800	449000	514000	484700	503600	386300	269900	218500
23	216300	244600	296000	346600	398400	450000	513200	484700	500800	380900	268600	217700
24	216000	245600	297200	349600	400200	451700	511500	484500	499100	375300	268200	217300
25	216300	246800	298600	352400	402900	453600	511000	484400	495200	371300	266700	216100
26	217000	247800	299600	354300	404900	454500	509700	484300	491800	366600	264700	215500
27	217400	249000	301200	355300	407100	456600	508300	484300	489800	361800	262500	215900
28	217500	250100	302900	356700	410500	458700	506700	483900	487700	355900	260000	215500
29	218100	251200	304200	358300	---	459900	504400	481500	485200	351900	257900	215600
30	218500	252300	305800	358900	---	461500	501600	482400	483300	347900	254400	215000
31	218600	---	306900	360800	---	464700	---	490400	---	344900	252500	---
MAX	235300	252300	306900	360800	410500	464700	514400	499400	525000	479800	340900	250100
MIN	216000	218200	253600	308500	361600	414000	467100	481500	483300	344900	252500	215000
a	500.99	511.88	527.79	541.99	554.03	566.25	574.09	571.74	570.24	537.94	511.93	499.79
b	-2500	33700	54600	53900	49700	54200	36900	-11200	-7100	-138400	-92400	-37500

CAL YR 2002 b +93554
WTR YR 2003 b -6070

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11251000 SAN JOAQUIN RIVER BELOW FRIANT, CA

LOCATION.—Lat 36° 59'04", long 119° 43'24", in SW 1/4 SW 1/4 sec.7, T.11 S., R.21 E., Fresno County, Hydrologic Unit 18040001, on left bank, 0.5 mi west of Friant, 1.5 mi downstream from Cottonwood Creek, and 2 mi downstream from Friant Dam at mile 268.1.

DRAINAGE AREA.—1,676 mi^2.

PERIOD OF RECORD.—October 1907 to current year. Published as "near Pollasky" October 1907 to December 1908, and as "near Friant" January 1909 to September 1938. Monthly discharge only for October 1907 to November 1908, published in WSP 1315-A.

REVISED RECORDS.—WSP 843: 1914(M).

GAGE.—Water-stage recorder. Datum of gage is 294.00 ft above NGVD of 1929 (levels by U.S. Bureau of Reclamation). Oct. 18, 1907, to Nov. 9, 1913, nonrecording gage at site 4.5 mi upstream at different datum. Nov. 10, 1913, to Sept. 30, 1938, water-stage recorder at site 2.5 mi upstream at different datum.

REMARKS.—Records good. Flow regulated by Millerton Lake (station 11250100) beginning in 1941, and by nine powerplants and eight reservoirs with combined capacity of about 609,300 acre-ft. Diversion for irrigation to Madera and Friant–Kern Canals (stations 11249500 and 11250000) began in 1943 and 1949, respectively. See schematic diagram of lower San Joaquin River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 77,200 ft^3/s, Dec. 11, 1937, gage height, 23.8 ft, site and datum then in use; minimum daily, 54 ft^3/s, Sept. 15, 1924. Maximum discharge since construction of Friant Dam in 1941, 60,300 ft^3/s, Jan. 3, 1997, gage height, 22.97 ft (provided by U.S. Bureau of Reclamation); minimum daily, 11 ft^3/s, Jan. 8, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161	149	124	115	106	99	135	149	189	241	233	215
2	154	151	124	113	108	100	134	151	191	238	235	215
3	154	151	119	e108	107	99	131	153	228	239	237	217
4	154	154	120	e108	105	101	133	153	273	241	237	219
5	154	159	120	e107	104	100	133	151	644	239	236	219
6	154	157	118	e107	104	100	133	149	811	237	234	219
7	156	161	118	e107	104	98	133	152	883	238	236	223
8	156	160	118	e106	103	96	134	152	921	238	237	220
9	157	129	115	e106	102	96	138	152	481	237	237	222
10	158	130	119	106	102	95	137	151	343	242	233	223
11	156	132	120	105	102	95	136	152	241	241	206	221
12	159	128	128	104	103	94	135	153	239	242	178	221
13	160	134	120	102	103	94	138	153	237	241	176	222
14	162	136	121	102	101	95	137	156	237	240	173	221
15	164	e132	121	106	100	98	137	155	237	240	172	221
16	164	128	125	105	101	e96	138	154	237	234	172	220
17	166	128	126	100	100	e96	137	154	236	237	170	219
18	167	130	113	104	100	94	137	157	236	239	173	196
19	167	128	111	104	101	99	137	175	234	239	175	194
20	169	132	109	106	104	98	138	198	234	238	173	194
21	169	129	109	105	101	98	184	190	233	240	173	194
22	170	127	e109	104	100	98	152	191	231	240	170	194
23	172	124	109	107	100	99	150	186	231	243	168	196
24	170	124	110	106	98	118	150	187	234	240	172	196
25	173	130	111	106	99	137	153	184	243	241	189	198
26	176	130	109	107	100	135	151	184	241	237	219	197
27	175	127	109	108	103	138	151	182	241	237	219	197
28	170	127	111	109	102	136	152	183	241	237	216	200
29	149	126	109	108	---	133	151	181	241	237	215	199
30	150	126	110	108	---	133	149	183	240	234	215	200
31	151	---	113	106	---	132	---	188	---	232	215	---
TOTAL	5017	4079	3598	3295	2863	3300	4254	5159	9708	7399	6294	6292
MEAN	162	136	116	106	102	106	142	166	324	239	203	210
MAX	176	161	128	115	108	138	184	198	921	243	237	223
MIN	149	124	109	100	98	94	131	149	189	232	168	194
AC-FT	9950	8090	7140	6540	5680	6550	8440	10230	19260	14680	12480	12480

e Estimated.

11251000 SAN JOAQUIN RIVER BELOW FRIANT, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908 - 1940, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	628	609	868	1276	1704	2246	3805	5876	6085	2765	1166	772
MAX	1678	1317	3589	4507	4391	6854	8010	11170	15870	9635	2312	1361
(WY)	1919	1928	1910	1909	1937	1938	1916	1938	1911	1911	1914	1938
MIN	164	196	301	333	393	419	1262	1703	635	335	264	156
(WY)	1932	1932	1909	1918	1924	1924	1912	1934	1924	1924	1924	1931

SUMMARY STATISTICS	WATER YEARS 1908 - 1940	
ANNUAL TOTAL		
ANNUAL MEAN	2343	
HIGHEST ANNUAL MEAN	4961	1938
LOWEST ANNUAL MEAN	698	1924
HIGHEST DAILY MEAN	38800	Jan 31 1911
LOWEST DAILY MEAN	54	Sep 15 1924
ANNUAL SEVEN-DAY MINIMUM	105	Sep 16 1931
MAXIMUM PEAK FLOW	77200	Dec 11 1937
MAXIMUM PEAK STAGE	23.80	Dec 11 1937
ANNUAL RUNOFF (AC-FT)	1698000	
10 PERCENT EXCEEDS	6100	
50 PERCENT EXCEEDS	1190	
90 PERCENT EXCEEDS	394	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	346	257	392	721	1043	1175	1668	1817	1638	1009	571	453
MAX	1663	1623	3798	9144	7100	7705	7701	9107	9438	5322	2807	2392
(WY)	1946	1983	1983	1997	1969	1969	1983	1941	1941	1995	1945	1948
MIN	47.2	37.3	32.5	30.0	33.9	33.0	43.2	43.9	78.6	101	91.1	67.2
(WY)	1970	1972	1971	1966	1966	1968	1971	1971	1970	1970	1970	1969

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1941 - 2003	
ANNUAL TOTAL	57312		61258			
ANNUAL MEAN	157		168		922	
HIGHEST ANNUAL MEAN					4385	1983
LOWEST ANNUAL MEAN					66.9	1971
HIGHEST DAILY MEAN	267	Jul 13	921	Jun 8	36800	Jan 3 1997
LOWEST DAILY MEAN	86	Feb 21	94	Mar 12	11	Jan 8 1977
ANNUAL SEVEN-DAY MINIMUM	88	Feb 17	95	Mar 8	20	Jan 22 1990
MAXIMUM PEAK FLOW			2940	Jun 8	60300	Jan 3 1997
MAXIMUM PEAK STAGE			6.34	Jun 8	22.97	Jan 3 1997
ANNUAL RUNOFF (AC-FT)	113700		121500		668200	
10 PERCENT EXCEEDS	201		237		2810	
50 PERCENT EXCEEDS	164		152		152	
90 PERCENT EXCEEDS	95		102		54	

11253310 CANTUA CREEK NEAR CANTUA CREEK, CA

LOCATION.—Lat 36° 24'08", long 120° 25'57", in SE 1/4 SE 1/4 sec.34, T.17 S., R.14 E., Fresno County, Hydrologic Unit 18030012, on left bank, 9.2 mi southwest of town of Cantua Creek, and 19 mi north of Coalinga.

DRAINAGE AREA.—46.4 mi^2.

PERIOD OF RECORD.—Water years 1958–65 (annual maximum), October 1966 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 680 ft above NGVD of 1929, from topographic map. Prior to October 1966, crest-stage gage at datum 2.00 ft lower.

REMARKS.—Records fair. Some small dams for stock use upstream from station. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,420 ft^3/s, Mar. 1, 1983, gage height, 5.72 ft, maximum gage height, 7.38 ft, from floodmarks, Mar. 10, 1995; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 16	1400	112	1.78	May 3	1615	117	1.80

DISCHARGE, CUBIC FEET PER SCEOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.05	0.03	0.03	0.18	0.79	0.49	0.00	0.00	0.00
2	0.00	0.00	0.00	0.07	0.01	0.02	0.22	0.86	0.42	0.00	0.00	0.00
3	0.00	0.00	0.00	0.06	0.02	0.04	0.30	59	0.22	0.00	0.00	0.00
4	0.00	0.00	0.00	0.07	0.03	0.03	0.33	37	0.10	0.00	0.00	0.00
5	0.00	0.00	0.00	0.09	0.05	0.01	0.27	9.5	0.12	0.00	0.00	0.00
6	0.00	0.00	0.00	0.05	0.07	0.02	0.28	6.3	0.14	0.00	0.00	0.00
7	0.00	0.00	0.00	0.02	0.04	0.01	0.30	4.6	0.22	0.00	0.00	0.00
8	0.00	0.00	0.00	0.03	0.01	0.01	0.30	4.6	0.27	0.00	0.00	0.00
9	0.00	0.00	0.00	0.03	0.01	0.02	0.30	3.1	0.22	0.00	0.00	0.00
10	0.00	0.00	0.00	0.04	0.01	0.01	e0.28	2.1	0.24	0.00	0.00	0.00
11	0.00	0.00	0.00	0.05	0.03	0.02	e0.28	1.9	0.35	0.00	0.00	0.00
12	0.00	0.00	0.00	0.04	0.05	0.04	0.26	1.5	0.34	0.00	0.00	0.00
13	0.00	0.00	0.00	0.05	0.04	0.04	0.36	1.2	0.38	0.00	0.00	0.00
14	0.00	0.00	0.00	0.03	0.04	0.04	0.73	0.99	0.39	0.00	0.00	0.00
15	0.00	0.00	0.00	0.02	0.05	8.7	0.59	1.1	0.32	0.00	0.00	0.00
16	0.00	0.00	15	0.03	0.05	4.7	0.50	1.2	0.22	0.00	0.00	0.00
17	0.00	0.00	3.0	0.05	0.06	1.5	0.57	1.3	0.15	0.00	0.00	0.00
18	0.00	0.00	0.19	0.04	0.05	0.79	0.71	1.1	0.07	0.00	0.00	0.00
19	0.00	0.00	0.67	0.03	0.07	0.50	0.56	1.2	0.15	0.00	0.00	0.00
20	0.00	0.00	7.2	0.04	0.06	0.36	0.41	1.2	0.24	0.00	0.00	0.00
21	0.00	0.00	1.2	0.04	0.06	0.27	1.0	0.91	0.31	0.00	0.00	0.00
22	0.00	0.00	0.48	0.04	0.05	0.23	0.70	0.70	0.32	0.00	0.00	0.00
23	0.00	0.00	0.16	0.03	0.07	0.37	0.64	0.43	0.32	0.00	0.00	0.00
24	0.00	0.00	0.06	0.04	0.15	0.43	0.58	0.35	0.28	0.00	0.00	0.00
25	0.00	0.00	0.03	0.03	0.15	0.63	0.51	0.46	0.23	0.00	0.00	0.00
26	0.00	0.00	0.02	0.02	0.10	0.46	0.57	0.66	0.13	0.00	0.00	0.00
27	0.00	0.00	0.01	0.03	0.08	0.16	0.82	0.58	0.00	0.00	0.00	0.00
28	0.00	0.00	0.03	0.02	0.04	0.29	0.87	0.47	0.00	0.00	0.00	0.00
29	0.00	0.00	0.03	0.02	---	0.25	0.81	0.36	0.00	0.00	0.00	0.00
30	0.00	0.00	0.04	0.04	---	0.13	0.78	0.45	0.00	0.00	0.00	0.00
31	0.00	---	0.07	0.04	---	0.14	---	0.42	---	0.00	0.00	---
TOTAL	0.00	0.00	28.19	1.24	1.48	20.25	15.01	146.33	6.64	0.00	0.00	0.00
MEAN	0.000	0.000	0.91	0.040	0.053	0.65	0.50	4.72	0.22	0.000	0.000	0.000
MAX	0.00	0.00	15	0.09	0.15	8.7	1.0	59	0.49	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.02	0.01	0.01	0.18	0.35	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	56	2.5	2.9	40	30	290	13	0.00	0.00	0.00

e Estimated.

11253310 CANTUA CREEK NEAR CANTUA CREEK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.095	0.33	1.32	6.46	10.2	12.8	4.67	2.59	1.07	0.39	0.11	0.13
MAX	1.40	2.82	11.2	44.0	65.4	101	23.2	17.4	7.64	3.83	1.83	1.41
(WY)	1984	1973	1984	1969	1998	1995	1983	1983	1983	1983	1983	1976
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1967	1967	1969	1975	1976	1989	1972	1972	1968	1968	1968	1968

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1967 - 2003	
ANNUAL TOTAL	70.95		219.14			
ANNUAL MEAN	0.19		0.60		3.32	
HIGHEST ANNUAL MEAN					18.9	1983
LOWEST ANNUAL MEAN					0.003	1989
HIGHEST DAILY MEAN	15	Dec 16	59	May 3	1070	Mar 10 1995
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1966
ANNUAL SEVEN-DAY MINIMUM	0.00	May 31	0.00	Oct 1	0.00	Oct 1 1966
MAXIMUM PEAK FLOW			117	May 3	3420	Mar 1 1983
MAXIMUM PEAK STAGE			1.80	May 3	7.38	Mar 10 1995
ANNUAL RUNOFF (AC-FT)	141		435		2410	
10 PERCENT EXCEEDS	0.47		0.70		6.0	
50 PERCENT EXCEEDS	0.00		0.02		0.08	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

11253500 JAMES BYPASS NEAR SAN JOAQUIN, CA

LOCATION.—Lat 36° 39'09", long 120° l0'49", in NE 1/4 SW 1/4 sec.1, T.15 S., R.16 E., Fresno County, Hydrologic Unit 18030012, on right bank, and 3.2 mi north of San Joaquin.

PERIOD OF RECORD.—October 1947 to current year. Published as "Fresno Slough bypass" in WSP 1315-A and 1735. Daily discharge data for period October 1954 to September 1972 are in files of U.S. Bureau of Reclamation. Monthly totals published in WDR CA-72-2.
WATER TEMPERATURE: Water years 1969–71.

GAGE.—Water-stage recorder. Elevation of gage is 160 ft above NGVD of 1929, from topographic map.

REMARKS.—Diversion upstream from station for irrigation. James Bypass carries overflow from Kings River to San Joaquin River.

COOPERATION.—Records were provided by San Luis & Delta Mendota Water Authority and rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 5,570 ft^3/s, June 7, 1969; no flow for all or most of each year.

EXTREMES FOR CURRENT YEAR.—No flow for 2003 water year.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	50.7	132	204	321	322	483	673	817	524	236	33.7	24.0
MAX	1723	2364	3648	3551	4688	5192	5066	4932	4913	2985	1077	811
(WY)	1984	1984	1983	1983	1983	1983	1983	1983	1983	1983	1983	1983
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1948	1948	1948	1948	1948	1948	1948	1954	1953	1948	1948	1949

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR			FOR 2003 WATER YEAR			WATER YEARS 1948 - 2003a		
ANNUAL TOTAL	0.00			0.00					
ANNUAL MEAN	0.000			0.000			296		
HIGHEST ANNUAL MEAN							3189		1983
LOWEST ANNUAL MEAN							0.000		1954
HIGHEST DAILY MEAN	0.00	Jan	1	0.00	Oct	1	5360	Mar 3	1983
LOWEST DAILY MEAN	0.00	Jan	1	0.00	Oct	1	0.00	Oct 1	1947
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan	1	0.00	Oct	1	0.00	Oct 1	1947
ANNUAL RUNOFF (AC-FT)	0.00			0.00			214100		
10 PERCENT EXCEEDS	0.00			0.00			520		
50 PERCENT EXCEEDS	0.00			0.00			0.00		
90 PERCENT EXCEEDS	0.00			0.00			0.00		

a Does not include water years 1955 to 1972 (see Period of Record).

11254000 SAN JOAQUIN RIVER NEAR MENDOTA, CA

LOCATION.—Lat 36° 48'38", long 120° 22'38", in SE 1/4 SW 1/4 sec.7, T.13 S., R.15 E., Fresno County, Hydrologic Unit 18040001, 2.5 mi below Mendota Dam, and 3.5 mi north of Mendota.

DRAINAGE AREA.—3,940 mi^2.

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 good. 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; no flow for several days in December 1999 and January 2000.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	236	190	174	114	37	375	187	142	361	545	573	188
2	235	215	175	131	39	383	187	147	396	504	581	223
3	234	237	176	132	42	419	192	142	426	493	613	271
4	232	238	177	134	46	444	206	142	444	555	616	279
5	229	237	178	135	51	442	211	139	434	589	549	262
6	225	238	178	124	56	442	213	162	426	580	523	259
7	224	212	180	125	57	445	215	211	473	571	491	265
8	222	171	183	140	60	403	216	215	522	600	402	253
9	252	148	196	148	96	357	217	216	546	635	336	231
10	275	148	207	142	146	323	219	216	555	629	288	258
11	277	156	208	132	213	302	222	219	545	623	244	297
12	280	162	193	135	272	300	222	228	558	630	240	320
13	281	169	166	138	331	257	214	254	563	638	304	309
14	282	168	143	142	389	209	216	331	571	646	420	313
15	254	166	97	146	425	183	213	411	589	648	541	330
16	217	166	95	149	468	168	198	433	613	640	593	336
17	226	166	86	150	514	169	177	420	605	627	627	395
18	226	166	82	152	577	168	143	379	633	617	625	429
19	216	166	94	152	665	168	124	320	623	602	550	397
20	212	166	90	153	658	169	125	244	612	573	495	333
21	234	167	88	128	633	173	126	206	596	561	503	318
22	258	167	90	107	567	177	128	202	520	576	511	315
23	263	168	93	109	512	180	133	240	451	598	429	320
24	255	169	96	110	502	165	165	272	439	548	368	305
25	231	169	97	113	491	152	199	278	443	502	331	269
26	215	169	95	114	454	153	169	280	482	524	290	254
27	211	170	96	117	405	129	136	280	547	551	247	258
28	204	172	93	77	370	112	136	277	520	495	209	257
29	190	174	87	25	---	118	135	301	517	518	198	253
30	182	174	92	30	---	e147	137	322	530	575	187	253
31	183	---	94	34	---	176	---	333	---	571	178	---
TOTAL	7261	5384	4099	3738	9076	7808	5381	7962	15540	17964	13062	8750
MEAN	234	179	132	121	324	252	179	257	518	579	421	292
MAX	282	238	208	153	665	445	222	433	633	648	627	429
MIN	182	148	82	25	37	112	124	139	361	493	178	188
AC-FT	14400	10680	8130	7410	18000	15490	10670	15790	30820	35630	25910	17360

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	199	275	623	1046	1513	1382	1526	2204	2220	753	328	227
MAX	637	1144	2548	3531	5188	6187	6158	8680	10340	3446	562	394
(WY)	1946	1946	1951	1942	1941	1943	1952	1941	1941	1941	1945	1945
MIN	29.9	45.6	49.9	14.3	52.7	73.8	162	200	244	327	12.1	9.87
(WY)	1941	1950	1949	2000	1950	1948	1948	1951	1948	1949	1940	1940

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	106555		106025			
ANNUAL MEAN	292		290		1060	
HIGHEST ANNUAL MEAN					3546	1941
LOWEST ANNUAL MEAN					188	1950
HIGHEST DAILY MEAN	642	Jul 11	665	Feb 19	11700	Jun 20 1941
LOWEST DAILY MEAN	14	Jan 13	25	Jan 29	0.00	Dec 20 1999
ANNUAL SEVEN-DAY MINIMUM	16	Jan 9	36	Jan 29	0.00	Dec 24 1999
MAXIMUM PEAK FLOW			673	Feb 20	11700	Jun 20 1941
MAXIMUM PEAK STAGE			5.85	Feb 20	13.75	Jun 20 1941
ANNUAL RUNOFF (AC-FT)	211400		210300		767600	
10 PERCENT EXCEEDS	578		572		3500	
50 PERCENT EXCEEDS	241		231		306	
90 PERCENT EXCEEDS	142		114		79	

e Estimated.

11255575 PANOCHE CREEK AT INTERSTATE 5, NEAR SILVER CREEK, CA

LOCATION.—Lat 36° 39'09", long 120° 37'52", in NE 1/4 SW 1/4 sec.2 T.15 S., R.12 E., Fresno County, Hydrologic Unit 18040001, on left bank, at downstream side of Interstate Highway 5 bridge over Panoche Creek, 7.3 mi southwest of Silver Creek Township, and 11.8 mi east of Panoche.

DRAINAGE AREA.— 305 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.— December 1997 to current year (seasonal records only). Record is published seasonally, Dec. 1 to June 30 of each water year. Peak discharges determined for entire year.

GAGE.—Water-stage recorder. Datum of gage is 450 ft above NGVD of 1929, from topographic map.

REMARKS.—Records poor. No known regulation or diversions upstream of station. A gravel operation located about 1 mile upstream of gage excavates the dry stream bed each season. This creates a large depression which traps an unknown volume of water and sediment before it reaches the gage location.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9,940 ft^3/s, Feb. 3, 1998, gage height, 13.46 ft, from rating curve extended above 1,500 ft^3/s, on the basis of slope-area measurement of peak flow; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 150 ft^3/s, or maximum. No peak greater than 150 ft^3/s occurred outside of period of published record during this water year:

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 29e	unknown	290	5.92

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	e0.00	e0.50	0.00	0.00	0.00	0.01	0.00	---	---	---
2	---	---	e0.00	e5.0	0.00	0.00	0.00	0.00	0.00	---	---	---
3	---	---	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
4	---	---	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
5	---	---	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
6	---	---	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
7	---	---	e0.00	e0.00	0.00	0.00	0.00	0.00	0.05	---	---	---
8	---	---	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
9	---	---	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
10	---	---	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
11	---	---	e0.00	e0.00	0.00	0.00	0.00	0.00	0.12	---	---	---
12	---	---	e0.00	e0.00	0.00	0.03	0.00	0.00	0.28	---	---	---
13	---	---	e0.00	e0.00	6.6	0.07	0.00	0.00	0.78	---	---	---
14	---	---	e0.00	e0.00	12	0.00	0.00	0.00	0.00	---	---	---
15	---	---	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
16	---	---	e0.00	e0.00	0.00	0.31	0.00	0.00	0.00	---	---	---
17	---	---	e0.00	e0.00	0.00	0.04	0.00	0.00	0.00	---	---	---
18	---	---	e0.00	e0.00	0.00	0.00	0.01	0.03	0.00	---	---	---
19	---	---	e0.00	e0.00	0.00	0.00	0.06	0.00	0.00	---	---	---
20	---	---	e0.00	e0.00	0.00	0.00	0.00	0.00	0.09	---	---	---
21	---	---	e0.00	e0.00	0.00	0.00	0.00	0.00	0.35	---	---	---
22	---	---	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
23	---	---	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
24	---	---	e0.00	0.00	0.00	0.00	0.00	0.00	0.10	---	---	---
25	---	---	e0.00	0.00	5.8	0.00	0.00	0.00	0.13	---	---	---
26	---	---	e0.00	0.00	0.17	0.00	0.00	0.00	0.19	---	---	---
27	---	---	e0.00	0.00	0.00	0.00	0.00	0.00	0.24	---	---	---
28	---	---	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
29	---	---	e52	0.00	---	0.00	0.00	0.00	0.00	---	---	---
30	---	---	e8.5	0.00	---	0.00	0.00	0.00	0.00	---	---	---
31	---	---	e0.20	0.00	---	0.00	---	0.00	---	---	---	---
TOTAL	---	---	60.70	5.50	24.57	0.45	0.07	0.04	2.33	---	---	---
MEAN	---	---	1.96	0.18	0.88	0.015	0.002	0.001	0.078	---	---	---
MAX	---	---	52	5.0	12	0.31	0.06	0.03	0.78	---	---	---
MIN	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
AC-FT	---	---	120	11	49	0.9	0.1	0.08	4.6	---	---	---

e Estimated.

11255575 PANOCHE CREEK AT INTERSTATE 5, NEAR SILVER CREEK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	---	---	0.33	0.47	52.9	4.52	1.86	0.75	0.73	---	---	---
MAX	---	---	1.96	2.59	316	23.2	10.9	4.26	1.81	---	---	---
(WY)	---	---	2003	1998	1998	2001	1998	1998	1999	---	---	---
MIN	---	---	0.000	0.000	0.000	0.000	0.000	0.000	0.078	---	---	---
(WY)	---	---	1998	2000	2001	2002	2000	2000	2003	---	---	---

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1998 - 2003	
ANNUAL TOTAL	83.07		93.66			
ANNUAL MEAN	0.39		0.44		8.27	
HIGHEST ANNUAL MEAN					44.8	1998
LOWEST ANNUAL MEAN					0.11	2002
HIGHEST DAILY MEAN	e52	Dec 29	e52	Dec 29	3250	Feb 3 1998
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Dec 1	0.00	Dec 1 1997
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Dec 1	0.00	Dec 1 1997
MAXIMUM PEAK FLOW			290	Dec 29e	9940	Feb 3 1998
MAXIMUM PEAK STAGE			5.92	Dec 29e	13.46	Feb 3 1998
ANNUAL RUNOFF (AC-FT)	165		186		5990	
10 PERCENT EXCEEDS	0.00		0.06		1.4	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated.

11255575 PANOCHE CREEK AT INTERSTATE 5, NEAR SILVER CREEK, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—January 1998 to current year.
CHEMICAL DATA: January 1998 to current year.
SEDIMENT DATA: January 1998 to current year.

REMARKS.—Zero bed-load discharge observed for flows less than 0.68 ft^3/s during current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
FEB									
25...	1245	4.2	500	746	9.9	102	8.2	5640	15.0
JUN									
13...	1130	.32	600	750	8.9	94	8.1	448	17.0

Date	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)
FEB										
25...	2000	1800	416	222	14.9	8	778	46	160	192
JUN										
13...	93	35	25.5	7.19	8.65	2	43.2	47	59	71

Date	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)
FEB										
25...	2	273	.77	6.7	2930	4740	7.06	5190	24	18
JUN										
13...	--	52.7	.2	35.5	51.8	260	.40	294	<3	<3

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)	Suspnd. sediment, falldia dst wat percent <.002mm (70337)
FEB						
25...	1610	3.4	15.5	1140	10	46
JUN						
13...	1107	.68	17.5	1400	2.6	--

Date	Suspnd. sediment, falldia dst wat percent <.004mm (70338)	Suspnd. sediment, falldia dst wat percent <.008mm (70339)	Suspnd. sediment, falldia dst wat percent <.016mm (70340)	Suspnd. sediment, falldia dst wat percent <.031mm (70341)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspnd. sediment, sieve diametr percent <.125mm (70332)
FEB						
25...	53	63	80	93	98	100
JUN						
13...	--	--	--	--	85	--

< Actual value is known to be less than value shown.

11255575 PANOCHE CREEK AT INTERSTATE 5, NEAR SILVER CREEK, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sampling method, code (82398)	Sampler type, code (84164)	Bag mesh size, bedload sampler mm (30333)	Tether line used in samplng (yes=1) code (04117)	Startng time, 24 hour clock, hr:min (82073)	Ending time, 24 hour clock, hr:min (82074)	Rest time on bed for bed load sample, seconds (04120)
FEB								
25...	1420	1000	1150	.250	0	1415	1425	30
25...	1435	1000	1150	.250	0	1430	1440	30

Date	Horizontal width of vertical, feet (04121)	Compstd samples in x-sec bedload measmnt number (04118)	Verticals in composite sample, number (04119)	Number of sampling points, count (00063)	Location in X-sect. looking dwnstrm ft from l bank (00009)	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Bedload sedimnt dschrge average unit cmposit t/d/ft (04122)
FEB								
25...	.5	2	23	23	.25	3.9	15.5	<.01
25...	.5	2	23	23	.25	3.9	15.5	<.01

Date	Bedload sediment discharge, tons/d (80225)	Bedload sediment, sieve diametr percent <.063mm (80226)	Bedload sediment, sieve diametr percent <.125mm (80227)	Bedload sediment, sieve diametr percent <.25mm (80228)	Bedload sediment, sieve diametr percent <.5 mm (80229)	Bedload sediment, sieve diametr percent <1 mm (80230)	Bedload sediment, sieve diametr percent <2 mm (80231)
FEB							
25...	<.01	18	36	46	64	82	100
25...	<.01	--	--	20	60	80	100

< Actual value is known to be less than value shown.

11260815 SAN JOAQUIN RIVER NEAR STEVINSON, CA

LOCATION.—Lat 37° 14'52", long 120° 51'00", in NE 1/4 SE 1/4 sec.27, T.7 S., R.10 E., Merced County, Hydrologic Unit 18040001, on left bank, at bridge on Highway 165, and 2.0 mi south of Stevinson.

DRAINAGE AREA.—7,388 mi^2.

PERIOD OF RECORD.—Water year 1989 to September 1995, October 1999 to September 2000, January 2001 to August 2001. Data for the period October 1985 to March 1987 are available in USGS OFR 88-479. Data for June 1985 to September 1988 are available in USGS OFR 81-74.
CHEMICAL DATA: Water year 1993, October 1999 to August 2001.
SPECIFIC CONDUCTANCE: Water year 1989 to September 1995.
WATER TEMPERATURE: Water year 1989 to September 1995.

PERIOD OF DAILY RECORD.—May 1992 to September 1995.
SPECIFIC CONDUCTANCE: May 1992 to September 1995.
WATER TEMPERATURE: May 1992 to September 1995.

INSTRUMENTATION.—Water-quality monitor October 1985 to September 1995.

REMARKS.—Flows consist of return water from irrigation areas. Discharge data furnished by Department of Water Resources, not reviewed by U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)
JAN									
06...	0930	e2.9	1580	--	--	--	--	--	--
12...	1020	e2.6	1610	--	--	--	--	--	--
19...	1020	e5.1	1600	--	--	--	--	--	--
25...	1520	e31	1120	--	--	--	--	--	--
26...	1200	e308	366	--	--	--	--	--	--
27...	1040	--	189	--	--	--	--	--	--
FEB									
04...	0940	e25	656	--	--	--	--	--	--
09...	0950	e13	849	--	--	--	--	--	--
12...	0520	e127	1070	--	--	--	--	--	--
12...	1205	e320	292	.82	1.4	.18	.92	.037	.15
12...	2015	e533	212	--	--	--	--	--	--
13...	0600	e686	205	--	--	--	--	--	--
13...	1700	e1170	151	.70	1.6	.07	.29	<.010	.10
14...	0250	e1390	135	--	--	--	--	--	--
14...	1300	e1400	156	--	--	--	--	--	--
14...	2300	e2240	133	.74	1.6	.06	.32	.011	.12
15...	0700	e2790	107	--	--	--	--	--	--
15...	1500	e3170	116	--	--	--	--	--	--
16...	0030	e3390	114	--	--	--	--	--	--
16...	1430	e3190	119	--	--	--	--	--	--

Date	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)
JAN									
06...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
12...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
19...	--	--	--	<.003	<.002	<.002	<.002	<.002	e.003
25...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
26...	--	--	--	--	--	--	--	--	--
27...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.005
FEB									
04...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
09...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
12...	--	--	--	<.003	<.002	<.002	<.002	<.002	.005
12...	.183	.36	11.3	<.003	<.002	<.002	<.002	<.002	<.001
12...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
13...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
13...	.135	.33	15.0	<.003	<.002	<.002	<.002	<.002	<.001
14...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
14...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
14...	.154	.36	17.0	<.003	<.002	<.002	<.002	<.002	<.001
15...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
15...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
16...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
16...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.005

e Estimated.
< Actual value is known to be less than value shown.

11260815 SAN JOAQUIN RIVER NEAR STEVINSON, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Azinphos-methyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)
JAN									
06...	<.001	<.002	<.002	<.003	<.003	<.004	<.005	.028	<.002
12...	<.001	<.002	<.002	<.003	<.003	<.004	<.005	.017	<.002
19...	<.001	<.002	<.002	<.003	<.003	<.004	<.005	.019	e.002
25...	<.013	<.002	<.002	<.003	<.003	.006	<.005	.031	<.002
26...	--	--	--	--	--	--	--	--	--
27...	<.001	<.002	<.002	e.012	<.003	.013	<.005	.018	e.002
FEB									
04...	<.001	<.002	<.002	e.005	<.003	.007	<.005	.069	<.002
09...	<.001	<.002	<.002	<.003	<.003	<.030	<.005	.826	<.002
12...	<.001	<.002	<.002	<.003	<.003	.073	<.005	2.18	<.002
12...	<.001	<.002	<.002	e.007	<.003	.011	<.005	.167	<.002
12...	<.001	<.002	<.002	e.005	<.003	.004	<.005	.066	e.002
13...	<.001	<.002	<.002	e.006	<.003	.005	<.005	.014	e.002
13...	<.001	<.002	<.002	e.005	<.003	.006	<.005	.022	e.002
14...	<.001	<.002	<.002	<.003	<.003	.006	<.005	.013	<.002
14...	<.001	<.002	<.002	<.003	<.003	.008	<.005	.020	<.002
14...	<.001	<.002	<.002	<.003	<.003	.006	<.005	.015	<.002
15...	<.001	<.002	<.002	e.004	<.003	.004	<.005	.008	e.001
15...	<.001	<.002	<.002	<.003	<.003	e.004	<.005	.007	<.002
16...	<.001	<.002	<.002	e.004	<.003	.004	<.005	.007	<.002
16...	<.001	<.002	<.002	e.009	<.003	.004	<.005	<.004	e.002

Date	Diazinon, water, fltrd, ug/L (39572)	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)
JAN									
06...	<.002	<.001	<.02	.053	<.004	<.003	<.003	<.004	<.002
12...	.006	<.001	<.02	.051	<.004	<.003	<.003	<.004	<.002
19...	.009	<.001	<.02	.064	<.004	<.003	<.003	<.004	<.002
25...	.016	<.001	<.02	.052	<.004	<.003	<.003	<.004	<.002
26...	--	--	--	--	--	--	--	--	--
27...	.026	<.001	<.02	.004	<.004	<.003	<.003	<.004	<.002
FEB									
04...	.047	<.001	<.02	.019	<.004	<.003	<.003	<.004	<.002
09...	.027	<.001	<.02	.026	<.004	<.003	<.003	<.004	<.002
12...	.064	<.001	<.02	.032	<.004	<.003	<.003	<.004	<.002
12...	.088	<.001	<.02	.006	<.004	<.003	<.003	<.004	<.002
12...	.054	<.001	<.02	.005	<.004	<.003	<.003	<.004	<.002
13...	.065	<.001	<.02	e.003	<.004	<.003	<.003	<.004	<.002
13...	.043	<.001	<.02	<.005	<.004	<.003	<.003	<.004	<.002
14...	.033	<.001	<.02	e.002	<.004	<.003	<.003	<.004	<.002
14...	.042	<.001	<.02	e.003	<.004	<.003	<.003	<.004	<.002
14...	.032	<.001	<.02	e.004	<.004	<.003	<.003	<.004	<.002
15...	.019	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
15...	.018	<.001	<.02	e.003	<.004	<.003	<.003	<.004	<.002
16...	.016	<.001	<.02	e.003	<.004	<.003	<.003	<.004	<.002
16...	.015	<.001	<.02	.004	<.004	<.003	<.003	<.004	<.002

< Actual value is known to be less than value shown.
e Estimated.

11260815 SAN JOAQUIN RIVER NEAR STEVINSON, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Malathion, water, fltrd, ug/L (39532)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF ug/L (82669)
JAN									
06...	<.005	<.006	.008	<.004	<.004	<.003	<.006	<.004	<.004
12...	<.005	<.006	<.006	<.004	<.004	<.003	<.006	<.004	<.004
19...	<.005	<.006	e.003	<.004	<.004	<.003	<.006	<.004	<.004
25...	<.005	<.006	.004	<.004	e.003	<.003	<.006	<.004	<.004
26...	--	--	--	--	--	--	--	--	--
27...	<.005	<.006	.004	<.004	<.004	<.003	<.006	<.004	<.004
FEB									
04...	<.005	<.006	<.006	<.004	<.004	<.003	<.006	<.004	<.004
09...	<.005	<.006	<.010	<.004	<.004	<.003	<.006	<.004	<.004
12...	.008	<.006	.024	<.004	<.004	<.003	<.006	<.004	<.004
12...	.009	<.006	<.007	<.004	<.004	<.003	<.006	<.004	<.004
12...	<.005	<.006	.004	<.004	<.004	<.003	<.006	<.004	<.004
13...	.006	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004
13...	e.004	<.006	.004	<.004	<.004	<.003	<.006	<.004	<.004
14...	<.005	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004
14...	<.005	<.006	<.006	<.004	<.004	<.008	<.006	<.004	<.004
14...	<.005	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004
15...	<.005	<.006	.004	<.004	<.004	<.003	<.006	<.004	<.004
15...	<.005	<.006	.004	<.004	<.004	<.003	<.006	<.004	<.004
16...	<.005	<.006	.004	<.004	<.004	<.003	<.006	<.004	<.004
16...	<.005	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004

Date	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	Pronamide, water, fltrd 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)
JAN									
06...	<.004	<.002	<.02	<.003	<.007	<.004	--	.009	<.01
12...	<.004	<.002	<.02	<.003	<.007	<.004	--	.014	M
19...	e.002	<.002	<.02	<.003	<.007	<.004	<.01	.009	M
25...	.005	<.002	<.02	<.003	<.007	<.004	<.01	.022	<.01
26...	--	--	--	--	--	--	--	--	--
27...	<.004	<.002	<.02	<.003	<.007	<.004	<.01	.119	<.01
FEB									
04...	<.004	<.002	<.02	<.003	<.007	<.004	<.01	.082	<.01
09...	<.004	<.002	<.02	<.003	<.007	<.004	<.01	.076	e.01
12...	<.004	<.002	<.02	<.003	<.007	<.004	<.01	.062	<.01
12...	<.008	<.002	<.02	<.003	<.007	<.004	<.01	.340	<.01
12...	<.004	<.002	<.02	<.003	<.007	<.004	<.01	.158	<.01
13...	<.004	<.002	<.02	<.003	<.007	<.004	<.01	.165	<.01
13...	<.010	<.002	<.02	<.003	<.007	<.004	<.01	.145	<.01
14...	<.008	<.002	<.02	<.003	<.007	<.004	<.01	.091	<.01
14...	<.004	<.002	<.02	<.003	<.007	<.004	<.01	.203	<.01
14...	<.004	<.002	<.02	<.003	<.007	<.004	<.01	.174	<.01
15...	<.010	<.002	<.02	<.003	<.007	<.004	<.01	.098	<.01
15...	<.004	<.002	<.02	<.003	<.007	<.004	<.01	.122	<.01
16...	<.004	<.002	<.02	<.003	<.007	<.004	<.01	.194	<.01
16...	<.004	<.002	<.02	<.003	<.007	<.004	<.01	.177	<.01

< Actual value is known to be less than value shown.
e Estimated.
M Presence of material verified, not quantified

11260815 SAN JOAQUIN RIVER NEAR STEVINSON, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)
JAN					
06...	<.007	<.01	<.002	<.001	<.002
12...	<.007	<.01	<.002	<.001	<.002
19...	<.007	<.01	<.002	<.001	e.002
25...	<.007	<.01	<.002	<.001	e.003
26...	--	--	--	--	--
27...	<.007	<.01	<.002	<.001	e.001
FEB					
04...	<.007	<.01	<.002	<.001	.006
09...	<.007	<.01	<.002	<.001	.006
12...	<.007	<.01	<.002	<.001	.005
12...	<.007	<.01	<.002	<.001	.006
12...	<.007	<.01	<.002	<.001	e.002
13...	<.007	<.01	<.002	<.001	e.002
13...	<.007	<.01	<.002	<.001	e.002
14...	<.007	<.01	<.002	<.001	.006
14...	<.007	<.01	<.002	<.001	.006
14...	<.007	<.01	<.002	<.001	.006
15...	<.007	<.01	<.002	<.001	e.002
15...	<.007	<.01	<.002	<.001	e.002
16...	<.007	<.01	<.002	<.001	e.002
16...	<.007	<.01	<.002	<.001	e.004

< Actual value is known to be less than value shown.
e Estimated.

11261100 SALT SLOUGH AT HIGHWAY 165, NEAR STEVINSON, CA

LOCATION.—Lat 37° 14'52", long 120° 51'04", in SE 1/4 SE 1/4, sec.10, T.8 S., R.10 E., Merced County, Hydrologic Unit 18040001, on right bank, at bridge on Highway 165, and 5.5 mi south of Stevinson.

DRAINAGE AREA.—Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—Water years 1986–94. October 1995 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is NGVD of 1929.

REMARKS.—Records good except for estimated daily discharges, which are fair. During major storm events record can be affected by backwater from the San Joaquin River. Discharge is affected by irrigation return and drainage from Kesterson Wildlife Refuge.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 810 ft^3/s, Feb. 20, 1986; minimum daily, 24 ft^3/s, Sept. 6, 1992.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	126	125	333	123	379	226	130	111	e134	161	127
2	77	119	127	322	114	379	222	132	113	e138	169	96
3	86	119	134	298	127	374	212	132	121	e147	215	78
4	82	126	139	273	128	370	207	159	122	e132	240	74
5	71	132	136	237	102	379	207	174	123	e122	206	64
6	66	140	133	209	98	394	212	161	112	e121	186	71
7	69	148	134	195	112	408	221	130	90	e132	199	79
8	66	192	132	182	103	414	211	116	87	e151	226	79
9	50	239	130	166	102	427	169	136	102	e144	237	76
10	52	262	124	163	104	444	157	146	97	e134	207	75
11	60	265	121	176	117	444	155	132	102	e137	184	65
12	64	268	126	179	109	436	147	130	108	e139	166	76
13	75	266	137	177	113	429	147	121	115	e136	126	87
14	77	239	152	177	146	424	157	101	126	e133	96	88
15	76	214	172	179	168	446	169	101	126	e135	64	80
16	82	212	233	181	186	483	162	110	127	e138	73	64
17	84	216	304	188	205	492	176	124	128	e135	78	49
18	82	219	340	187	223	447	194	142	109	e131	94	56
19	79	214	350	176	241	363	193	168	100	e138	116	66
20	81	202	374	163	241	323	198	175	113	e143	125	69
21	94	195	406	158	253	324	189	157	133	e143	112	68
22	98	198	415	162	288	320	157	119	158	e133	112	73
23	104	191	405	170	307	310	122	87	172	e120	119	76
24	129	166	388	160	331	309	116	97	183	e127	118	67
25	148	148	374	155	351	314	114	106	175	e149	120	57
26	146	140	373	144	367	307	109	118	152	e169	127	57
27	152	147	369	134	380	282	121	136	122	e174	150	73
28	167	140	363	136	381	274	134	141	e116	e186	137	82
29	173	132	356	132	---	268	134	119	e122	e220	113	82
30	159	126	343	131	---	251	133	100	e134	204	121	70
31	138	---	334	123	---	235	---	101	---	169	118	---
TOTAL	2974	5501	7749	5766	5520	11449	5071	4001	3699	4514	4515	2224
MEAN	95.9	183	250	186	197	369	169	129	123	146	146	74.1
MAX	173	268	415	333	381	492	226	175	183	220	240	127
MIN	50	119	121	123	98	235	109	87	87	120	64	49
AC-FT	5900	10910	15370	11440	10950	22710	10060	7940	7340	8950	8960	4410

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2003, BY WATER YEAR (WY)

MEAN	151	172	147	167	281	358	245	201	205	224	232	153
MAX	255	273	250	426	631	512	419	355	339	376	411	289
(WY)	1990	1990	2003	1997	1998	1996	1986	1987	1987	1986	1986	1986
MIN	41.3	65.2	63.4	60.6	83.4	231	147	75.2	72.0	61.7	57.1	39.4
(WY)	1993	1993	1991	1991	1991	1992	2002	1992	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1986 - 2003	
ANNUAL TOTAL	57500		62983			
ANNUAL MEAN	158		173		211	
HIGHEST ANNUAL MEAN					289	1996
LOWEST ANNUAL MEAN					96.6	1992
HIGHEST DAILY MEAN	415	Dec 22	492	Mar 17	810	Feb 20 1986
LOWEST DAILY MEAN	50	Sep 28	49	Sep 17	24	Sep 6 1992
ANNUAL SEVEN-DAY MINIMUM	61	Oct 6	61	Oct 6	31	Dec 25 1992
MAXIMUM PEAK FLOW			499	Mar 17	unknown	Feb 20 1986
MAXIMUM PEAK STAGE			68.40	Mar 17	unknown	Feb 20 1986
ANNUAL RUNOFF (AC-FT)	114100		124900		152700	
10 PERCENT EXCEEDS	266		336		363	
50 PERCENT EXCEEDS	140		138		187	
90 PERCENT EXCEEDS	82		79		84	

e Estimated.

11261100 SALT SLOUGH AT HIGHWAY 165, NEAR STEVINSON, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1985–94, October 1995 to current year. Data for the period October 1985 to March 1987 are available in U.S. Geological Survey Open-File Report 88-479. Data for the period April 1987 to September 1988 are available in U.S. Geological Survey Open File Report 91–74.
CHEMICAL DATA: Water years 1985–88, 1993–94, April to August 2001.
SPECIFIC CONDUCTANCE: Water years 1985–94, October 1995 to current year.
WATER TEMPERATURE: Water years 1985–94, October 1995 to current year.
SEDIMENT DATA: Water years 1983–88, 1993–94.

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Water years 1985–94, October 1995 to current year.
WATER TEMPERATURE: Water years 1985–94, October 1995 to current year.

INSTRUMENTATION.—Water-quality monitor.

REMARKS.—Specific conductance records rated excellent except for Oct. 1–9, 16–26, Dec. 26 to Jan. 9, Feb. 20–25, Mar. 17 to Apr. 9, May 1–15, June 3–26, July 24 to Aug. 6, Aug. 13–24, Sept. 26–30, which are rated good; Oct. 27 to Nov. 3, Aug. 25 to Sept. 1, which are rated fair; and Nov. 4–20, Sept. 2–4, which are rated poor. Water-temperature records rated excellent except for Nov. 14–20, which are good. Interruption in record was due to malfunction of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum recorded, 4,330 microsiemens, Jan. 16, 1991; minimum recorded, 450 microsiemens, July 24, 1986.
WATER TEMPERATURE: Maximum recorded, 32.5° C, July 15, 1992, July 12, 1999; minimum recorded, 0.5° C, Dec. 26, 1985, Dec. 23, 1990.

EXTREMES FOR CURRENT YEAR.—
SPECIFIC CONDUCTANCE: Maximum recorded, 2,190 microsiemens Feb. 8, 9; minimum recorded, 719 microsiemens, Aug. 9.
WATER TEMPERATURE: Maximum recorded, 31.0° C, July 21, 22, 24, but may have been higher during period of missing record; minimum recorded, 7.0° C, Dec. 25.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1310	1230	1410	1360	1550	1530	1580	1560	1960	1860	1510	1430
2	1380	1310	1460	1410	1560	1520	1640	1580	2030	1920	1520	1500
3	1340	1200	1460	1450	1520	1460	1670	1640	2030	1670	1510	1490
4	1310	1190	1450	1400	1470	1450	1760	1670	2110	1760	1560	1510
5	1360	1270	1400	1330	1490	1470	1780	1760	2110	2050	1590	1550
6	1350	1320	1330	1330	1500	1480	1830	1780	2140	2050	1600	1550
7	1350	1250	1330	1320	1490	1480	1800	1780	2120	1910	1620	1590
8	1330	1220	1320	1270	1520	1480	1850	1780	2190	2090	1610	1570
9	1380	1330	1270	1230	1530	1500	1860	1820	2190	2100	1570	1500
10	1420	1380	1240	1230	1580	1530	1830	1730	2140	1990	1560	1500
11	1390	1310	1290	1240	1590	1570	1740	1670	1990	1900	1590	1550
12	1320	1290	1300	1280	1570	1450	1690	1650	2030	1880	1620	1590
13	1320	1260	1300	1290	1510	1450	1660	1630	2010	1900	1630	1600
14	1340	1270	1390	1300	1510	1420	1650	1640	1900	1620	1670	1620
15	1420	1340	1420	1390	1450	1400	1660	1650	1620	1500	1640	1570
16	1420	1330	1420	1400	1410	1230	1680	1650	1540	1440	1600	1570
17	1340	1190	1400	1390	1320	1280	1670	1630	1450	1370	1670	1570
18	1330	1290	1390	1380	1330	1290	1690	1640	1400	1300	1840	1670
19	1410	1330	1420	1380	1360	1330	1690	1670	1320	1280	1930	1840
20	1410	1380	1450	1410	1370	1340	1750	1680	1400	1280	1880	1770
21	1390	1310	1410	1380	1360	1340	1740	1730	1390	1280	1770	1690
22	1360	1320	1380	1340	1400	1350	1730	1630	1330	1270	1760	1690
23	1370	1200	1440	1350	1440	1400	1690	1630	1330	1310	1710	1690
24	1230	1210	1500	1440	1460	1440	1760	1690	1310	1270	1700	1620
25	1240	1210	1520	1500	1480	1440	1760	1730	1380	1270	1660	1620
26	1280	1230	1560	1480	1500	1460	1850	1760	1370	1350	1680	1620
27	1240	1220	1490	1450	1510	1470	1850	1820	1410	1370	1730	1680
28	1250	1200	1510	1460	1520	1470	1820	1810	1430	1390	1700	1630
29	1250	1200	1550	1500	1520	1470	1850	1810	---	---	1680	1620
30	1330	1250	1550	1540	1560	1520	1850	1830	---	---	1670	1640
31	1380	1330	---	---	1570	1550	1960	1830	---	---	1680	1650
MONTH	1420	1190	1560	1230	1590	1230	1960	1560	2190	1270	1930	1430

11261100 SALT SLOUGH AT HIGHWAY 165, NEAR STEVINSON, CA—Continued

SPECIFIC CONDUCTANCE, WATER. UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1680	1640	1730	1630	1280	1150	---	---	895	846	963	915
2	1730	1650	1640	1560	1280	1150	---	---	849	808	1030	954
3	1790	1720	1570	1490	1290	1130	---	---	809	767	1130	1030
4	1790	1700	1530	1370	1210	1110	---	---	776	764	1120	1060
5	1760	1720	1390	1310	1190	1110	---	---	834	776	1270	1120
6	1750	1580	1470	1380	1270	1150	---	---	864	825	1260	1170
7	1620	1550	1670	1470	1480	1270	---	---	834	753	1220	1150
8	1770	1530	1820	1670	1520	1330	---	---	766	738	1150	1110
9	1870	1770	1710	1390	1360	1210	---	---	771	719	1170	1110
10	1820	1650	1470	1400	1330	1180	---	---	833	771	1190	1160
11	1740	1570	1530	1470	1360	1120	1020	905	830	804	1270	1180
12	1790	1720	1530	1470	1220	1130	950	844	867	811	1270	1110
13	1790	1580	1610	1450	1140	1100	887	841	955	866	1110	1010
14	1620	1500	1910	1600	1130	1070	902	863	1020	943	1020	980
15	1530	1480	1910	1630	1120	1070	885	860	1130	1020	1020	995
16	1570	1510	1650	1530	1130	1040	876	852	1160	1040	1100	965
17	1550	1450	1530	1310	1170	992	867	851	1050	994	1230	1100
18	1450	1380	1340	1170	1220	1130	904	842	1030	890	1220	1140
19	1430	1370	1170	1110	1280	1180	908	848	897	839	1140	979
20	1420	1320	1140	1070	1250	1140	851	813	866	820	1000	959
21	1420	1300	1230	1070	1150	1040	846	822	874	836	1070	1000
22	1500	1420	1470	1230	1040	911	889	811	917	863	1100	1060
23	1630	1500	1740	1470	1000	913	906	855	945	887	1060	999
24	1780	1630	1720	1430	974	903	987	895	902	885	1130	1030
25	1900	1780	1500	1380	1020	928	895	832	899	870	1210	1130
26	1970	1900	1420	1280	1090	1020	912	833	906	857	1220	1180
27	2000	1960	1300	1180	1140	1090	909	887	857	813	1180	1050
28	1970	1820	1200	1080	---	---	896	844	886	821	1050	978
29	1830	1780	1200	1100	---	---	892	805	957	886	1090	1010
30	1780	1730	1290	1200	---	---	917	871	987	936	1220	1090
31	---	---	1300	1250	---	---	926	876	956	926	---	---
MONTH	2000	1300	1910	1070	---	---	---	---	1160	719	1270	915

11261100 SALT SLOUGH AT HIGHWAY 165, NEAR STEVINSON, CA—Continued

TEMPERATURE , WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.0	16.5	14.5	12.5	13.0	11.0	10.5	9.0	14.5	12.5	14.5	12.5
2	18.0	13.5	14.0	11.5	13.0	11.0	10.5	9.5	13.0	10.5	15.0	12.5
3	19.0	14.0	14.0	12.0	12.5	10.5	10.5	9.5	13.0	10.5	15.0	13.0
4	20.5	16.0	14.5	11.5	12.5	10.5	10.5	10.0	13.0	10.5	15.0	13.0
5	22.0	17.0	14.5	12.0	12.0	10.5	11.5	10.0	12.5	10.0	15.0	13.0
6	23.0	18.0	14.0	12.0	11.5	10.5	12.0	11.0	12.5	9.5	15.5	13.5
7	23.5	19.0	15.0	13.5	12.5	10.5	11.0	10.5	12.0	9.5	16.0	13.5
8	24.5	19.5	15.5	14.5	12.5	10.5	10.5	10.0	12.0	9.0	16.5	13.5
9	24.5	19.0	16.5	15.0	12.0	10.5	10.5	10.0	12.5	9.0	16.5	14.0
10	22.5	20.0	16.0	15.0	12.5	10.5	11.5	10.5	12.5	9.5	17.5	15.0
11	21.0	17.5	16.0	14.5	12.0	10.5	12.5	11.5	12.5	10.5	17.5	15.5
12	21.0	17.0	15.5	14.5	12.0	11.5	12.5	11.5	12.0	11.0	19.0	16.0
13	21.0	17.0	16.0	14.5	11.5	11.0	12.5	11.0	15.5	12.0	19.0	17.5
14	21.5	18.0	15.5	14.0	12.5	11.5	12.5	12.0	15.0	13.5	18.5	17.0
15	21.0	17.5	14.5	14.0	12.0	11.5	13.5	12.5	15.0	14.0	18.5	16.5
16	20.0	16.5	14.5	13.5	12.5	11.5	12.5	11.5	15.5	13.5	17.0	15.
17	19.5	15.5	14.5	13.0	12.0	11.0	11.5	11.0	14.0	12.5	16.0	14.5
18	19.0	16.0	14.0	12.5	11.5	10.5	11.5	11.0	13.5	11.5	15.5	13.5
19	19.5	15.5	14.0	12.0	10.5	9.0	11.0	10.5	12.5	11.5	16.0	13.5
20	20.0	16.0	14.0	12.5	9.5	8.5	11.0	10.5	13.0	10.5	17.0	14.5
21	19.5	16.5	13.5	12.5	10.0	9.0	11.0	10.0	13.5	11.0	17.5	15.0
22	19.5	16.5	14.5	12.5	10.0	9.0	11.5	10.5	14.0	11.5	18.5	16.0
23	18.5	15.5	14.5	12.5	9.5	8.5	13.0	11.0	14.0	12.0	17.5	17.0
24	17.0	15.0	14.0	13.0	8.5	8.0	13.0	12.5	14.0	13.0	18.0	15.5
25	17.5	15.0	14.5	13.0	8.0	7.0	12.5	12.0	14.5	13.0	18.5	16.0
26	17.5	14.5	13.5	11.5	8.5	7.5	13.5	12.5	14.5	12.5	19.5	17.0
27	17.5	15.0	12.5	10.5	10.0	8.5	13.5	12.0	13.5	12.5	17.5	15.5
28	17.5	15.0	12.0	10.0	10.5	10.0	14.5	12.5	14.0	12.0	16.5	14.0
29	17.0	14.5	12.5	10.5	11.0	9.5	15.0	12.5	---	---	18.5	15.0
30	16.5	14.5	12.0	11.0	10.0	9.5	14.0	13.0	---	---	20.5	17.0
31	15.5	13.5	---	---	10.5	9.5	13.5	12.5	---	---	21.5	18.5
MONTH	24.5	13.5	16.5	10.0	13.0	7.0	15.0	9.0	15.5	9.0	21.5	12.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	20.0	17.0	21.5	17.5	27.0	22.5	---	---	27.5	24.0	28.0	23.5
2	17.0	15.5	20.0	17.0	28.0	23.5	---	---	26.5	24.5	28.5	24.0
3	17.5	14.0	18.5	16.0	29.5	24.0	---	---	27.5	24.0	29.0	24.5
4	16.5	14.5	19.0	16.5	28.0	24.0	---	---	27.5	24.5	29.5	24.5
5	17.0	14.0	20.5	16.5	28.0	23.5	---	---	27.0	23.5	28.5	23.0
6	17.5	14.5	21.5	17.5	27.5	22.5	---	---	27.5	23.5	27.0	22.0
7	19.0	15.0	20.5	18.0	27.5	22.5	---	---	26.5	23.0	26.0	21.0
8	20.5	16.5	19.0	16.0	28.5	22.0	---	---	26.5	23.0	26.0	21.5
9	21.5	18.0	19.5	15.5	28.0	23.0	---	---	26.5	23.0	25.0	20.5
10	22.0	18.5	21.0	16.0	26.5	21.5	28.0	---	27.0	23.0	25.5	20.5
11	20.5	18.0	23.0	17.5	24.5	20.0	28.5	24.0	26.5	23.0	27.0	20.5
12	19.0	17.0	24.0	19.0	25.0	20.0	28.5	24.5	26.5	22.5	27.0	22.0
13	18.5	15.5	25.0	20.0	25.0	20.5	28.0	24.5	27.5	23.0	26.0	22.5
14	19.0	15.5	23.5	20.0	25.5	21.5	28.5	24.0	27.5	23.0	26.5	22.0
15	18.5	15.0	23.0	17.0	26.5	21.5	29.5	25.0	28.0	22.0	27.0	22.0
16	18.0	16.0	22.0	18.0	27.5	22.5	29.0	25.0	28.5	22.5	26.5	21.5
17	18.0	16.0	22.5	18.5	29.0	24.0	29.5	25.5	29.0	23.0	24.0	19.5
18	18.5	15.5	21.0	17.0	27.0	24.0	30.0	26.5	28.5	23.5	24.5	18.0
19	19.5	15.5	22.0	17.5	25.5	21.0	30.0	27.0	28.5	23.5	25.0	19.0
20	18.5	17.0	23.5	19.0	24.5	19.0	30.5	26.0	28.0	23.5	25.5	20.0
21	18.5	16.5	26.0	21.0	24.5	20.0	31.0	27.5	26.5	24.0	26.5	21.0
22	18.5	16.0	28.0	22.5	24.5	21.0	31.0	27.0	26.5	23.5	26.5	21.5
23	20.0	15.5	29.5	23.0	24.0	21.0	30.5	27.5	27.0	22.5	26.5	22.0
24	18.5	16.5	27.0	22.5	24.0	20.0	31.0	26.5	28.5	23.5	26.0	21.5
25	19.0	15.5	25.5	21.5	26.0	21.5	30.0	26.5	28.5	24.0	25.0	20.0
26	20.0	15.0	25.5	21.0	28.5	23.5	29.0	26.0	30.0	25.5	25.0	20.0
27	21.5	16.5	26.5	21.0	29.5	25.0	29.5	26.0	28.5	25.0	25.0	20.0
28	21.0	17.5	28.5	23.5	---	---	29.5	26.5	27.0	23.5	25.0	20.5
29	19.0	16.5	27.5	24.5	---	---	29.0	26.5	26.0	22.0	24.0	20.5
30	20.5	16.0	26.0	21.5	---	---	29.0	26.5	26.5	22.0	24.5	20.0
31	---	---	27.5	21.5	---	---	28.0	25.5	27.0	22.5	---	---
MONTH	22.0	14.0	29.5	15.5	---	---	---	---	30.0	22.0	29.5	18.0

11261100 SALT SLOUGH AT HIGHWAY 165, NEAR STEVINSON, CA—Continued

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	Depth at sample location, feet (81903)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR					
09...*	1316	1.58	1920	19.8	3.70
09...*	1317	2.33	1920	19.8	11.1
09...*	1318	2.12	1920	19.8	18.5
09...*	1319	1.98	1920	19.8	25.9
09...*	1320	1.82	1920	19.8	33.3
09...*	1321	1.77	1920	19.8	40.7
09...*	1322	2.10	1920	19.8	48.1
09...*	1323	2.40	1920	19.8	55.5
09...*	1324	2.40	1920	19.8	62.9
09...*	1325	1.24	1920	20.0	70.3
AUG					
06...*	1106	1.68	867	24.0	3.65
06...*	1107	2.64	868	24.0	11.0
06...*	1108	2.53	867	24.0	18.2
06...*	1109	2.18	866	24.0	25.6
06...*	1110	2.12	866	24.0	32.9
06...*	1111	2.13	866	24.0	40.2
06...*	1112	2.31	867	24.0	47.5
06...*	1113	2.72	867	24.0	54.8
06...*	1114	2.60	867	24.0	62.1
06...*	1115	1.05	867	24.1	69.4

* Instantaneous discharge at time of cross-sectional measurement: Apr. 9, 166 ft^3/s; Aug. 6, 185 ft^3/s.

11261500 SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE, CA

LOCATION.—Lat 37° 18'34", long 120° 55'50", in NW 1/4 SE 1/4, sec.24, T.7 S., R.9 E., Merced County, Hydrologic Unit 18040001, on left bank, 20 ft upstream from Fremont Ford Bridge, 2.1 mi downstream of Salt Slough, 4.5 mi west of Stevinson, and 6.7 mi upstream from Merced River.

DRAINAGE AREA.—7,615 mi ^{2}.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—March 1937 to September 1970, October 1985 to September 1989, October 2001 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Prior to September 1970, records did not include flow bypassing station.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is NAVD of 1988. Oct. 1, 1985, to Sept. 30, 1989, at datum 3.23 ft higher. Prior to Oct. 1, 1959, at site 170 ft downstream at datum 0.54 ft lower. Oct. 1, 1959, to Sept. 30, 1970, at site 120 ft downstream at datum 3.23 higher.

REMARKS.—Records good. Natural flow of stream affected by storage reservoirs, ground withdrawals, diversions for irrigation, and imported water from Delta–Mendota Canal (station 11313000). Low flows consist mainly of return water from irrigated areas. Stage affected at times by backwater from the Merced River.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 18,100 ft^3/s, Mar. 18, 1986, maximum gage height, 67.65 ft, Mar. 18, 1986, datum then in use; minimum daily, 10 ft^3/s, Nov. 8, 1959, Oct. 30 to Nov. 1, 1960.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	147	156	536	189	431	275	162	115	162	189	122
2	93	138	153	529	180	432	270	170	126	159	185	118
3	90	134	153	511	174	434	267	163	129	164	204	96
4	92	137	165	480	194	433	262	171	137	159	231	89
5	86	143	172	421	174	438	259	194	138	147	228	84
6	82	150	170	358	157	451	260	196	134	143	206	79
7	82	163	167	317	160	466	267	178	121	146	203	89
8	79	192	164	293	156	477	270	146	109	161	215	92
9	67	231	162	267	150	485	248	151	116	165	230	85
10	59	282	160	256	150	500	220	171	125	162	226	85
11	62	304	157	267	155	e509	213	168	127	156	204	77
12	72	306	157	394	163	e509	202	157	131	154	194	76
13	82	300	164	473	156	e503	197	147	133	158	170	89
14	86	286	177	433	167	492	199	140	139	153	136	92
15	80	260	191	395	194	507	209	121	151	150	108	90
16	79	242	221	362	212	533	210	122	153	149	92	76
17	83	237	270	330	228	564	212	125	160	148	101	63
18	86	236	451	322	242	567	269	139	148	146	109	61
19	94	234	687	302	259	510	288	161	137	142	131	69
20	93	227	674	276	273	437	260	174	135	148	131	73
21	95	218	699	254	273	399	244	172	141	151	125	75
22	108	215	834	245	293	389	220	150	162	150	122	74
23	110	215	807	246	315	377	176	120	178	136	123	78
24	121	203	715	242	335	367	154	111	186	132	126	77
25	138	185	617	233	363	365	150	118	188	140	130	72
26	151	171	543	226	381	367	148	127	180	156	130	69
27	157	166	495	214	408	360	144	136	158	164	141	77
28	165	168	464	214	427	339	156	147	147	172	148	83
29	173	163	437	207	---	330	163	142	149	198	129	84
30	173	158	409	199	---	317	159	120	160	219	122	85
31	161	---	476	194	---	295	---	112	---	205	122	---
TOTAL	3191	6211	11267	9996	6528	13583	6571	4611	4313	4895	4911	2479
MEAN	103	207	363	322	233	438	219	149	144	158	158	82.6
MAX	173	306	834	536	427	567	288	196	188	219	231	122
MIN	59	134	153	194	150	295	144	111	109	132	92	61
AC-FT	6330	12320	22350	19830	12950	26940	13030	9150	8550	9710	9740	4920

e Estimated.

11261500 SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	232	216	225	300	952	2095	1526	428	388	288	301	267
MAX	437	280	363	539	4346	10440	7774	1354	1064	486	513	602
(WY)	1987	1988	2003	2002	1986	1986	1986	1986	1986	1986	1986	1986
MIN	103	174	166	201	233	329	190	149	144	158	152	82.6
(WY)	2003	2002	1988	1989	2003	2002	2002	2003	2003	2003	2002	2003

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1986 - 2003	
ANNUAL TOTAL	82137		78556			
ANNUAL MEAN	225		215		599	
HIGHEST ANNUAL MEAN					2273	1986
LOWEST ANNUAL MEAN					209	2002
HIGHEST DAILY MEAN	2090	Jan 5	834	Dec 22	18100	Mar 18 1986
LOWEST DAILY MEAN	59	Oct 10	59	Oct 10	59	Oct 10 2002
ANNUAL SEVEN-DAY MINIMUM	72	Oct 6	70	Sep 16	70	Sep 16 2003
MAXIMUM PEAK FLOW			855	Dec 22	unknown	
MAXIMUM PEAK STAGE			62.43	Dec 22	a67.65	Mar 18 1986
ANNUAL RUNOFF (AC-FT)	162900		155800		433800	
10 PERCENT EXCEEDS	350		433		546	
50 PERCENT EXCEEDS	172		164		265	
90 PERCENT EXCEEDS	95		89		139	

a Datum then in use.

11261500 SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—October 1988 to September 1989, December 2001 to current year. Data for the period October 1985 to March 1987 are available in U.S. Geological Survey Open-File Report 88-479. Data for the period April 1987 to September 1988 are available in the files of the U.S. Geological Survey.
SPECIFIC CONDUCTANCE: October 1988 to September 1989, December 2001 to current year.
WATER TEMPERATURE: October 1988 to September 1989, December 2001 to current year.

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: October 1988 to September 1989, December 2001 to current year.
WATER TEMPERATURE: October 1988 to September 1989, December 2001 to current year.

INSTRUMENTATION.—Water-quality monitor from October 1985 to September 1989, and since December 2001.

REMARKS.—Specific conductance records rated excellent except for Oct. 1–11, Dec. 29 to Jan. 9, Mar. 9–11, 13-27, Apr. 28 to May 16, June 10–24, which are rated good; and Mar. 28 to Apr. 7, which are rated fair. Water-temperature records rated excellent. Interruption in record was due to malfunction of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum recorded, 2,930 microsiemens, Feb. 27, 1989; minimum recorded, 184 microsiemens, Jan. 5, 2002.
WATER TEMPERATURE: Maximum recorded, 32.5° C, July 21, 2003; minimum recorded, 4.0° C, Feb. 5, 6, 1989.

EXTREMES FOR CURRENT YEAR.—
SPECIFIC CONDUCTANCE: Maximum recorded, 2,540 microsiemens Feb. 9; minimum recorded, 749 microsiemens, Dec. 19.
WATER TEMPERATURE: Maximum recorded, 32.5° C, July 21; minimum recorded, 7.0° C, Dec. 25, 26.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1410	1330	1520	1460	1850	1830	1210	1170	2160	2070	1590	1550
2	1460	1320	1620	1520	1850	1830	1240	1190	2250	2090	1670	1590
3	1560	1460	1700	1620	1840	1780	1310	1240	2300	2250	1670	1620
4	1550	1460	1670	1600	1780	1680	1390	1310	2290	1960	1700	1650
5	1620	1480	1600	1530	1740	1690	1500	1390	2430	2180	1760	1690
6	1700	1620	1530	1440	1780	1740	1600	1500	2480	2410	1760	1730
7	1730	1700	1450	1380	1770	1750	1660	1600	2510	2250	1780	1740
8	1750	1680	1390	1190	1790	1760	1710	1660	2480	2250	1780	1560
9	1700	1570	1250	1180	1820	1790	1800	1710	2540	2450	1560	1420
10	1720	1540	1320	1220	1880	1810	1830	1770	2520	2420	1440	1410
11	1850	1710	1370	1310	1910	1870	1780	1570	2490	2250	---	1440
12	1750	1530	1370	1240	1890	1860	1570	1020	2290	2240	---	---
13	1560	1490	1240	1210	1860	1710	1030	975	2470	2280	1580	---
14	1500	1410	1330	1230	1760	1640	1160	1020	2390	2100	1610	1560
15	1570	1500	1430	1330	1710	1610	1280	1160	2100	1870	1610	1550
16	1620	1570	1430	1380	1610	1440	1400	1280	1870	1770	1550	1540
17	1590	1380	1400	1380	1440	1360	1480	1400	1800	1680	1560	1540
18	1450	1380	1410	1360	1400	930	1530	1470	1690	1550	1660	1560
19	1510	1380	1440	1380	930	749	1630	1530	1560	1500	1790	1660
20	1520	1490	1510	1440	909	827	1750	1630	1560	1420	1850	1790
21	1510	1430	1560	1510	918	844	1800	1750	1630	1500	1830	1790
22	1430	1340	1570	1460	876	808	1840	1800	1500	1480	1790	1750
23	1400	1370	1530	1460	996	874	1820	1750	1530	1490	1790	1760
24	1390	1180	1640	1530	1100	988	1850	1790	1510	1440	1770	1760
25	1180	1160	1740	1640	1190	1100	1930	1850	1480	1410	1760	1710
26	1240	1170	1800	1740	1270	1190	1950	1900	1520	1470	1740	1700
27	1290	1230	1800	1720	1350	1270	2040	1950	1540	1500	1800	1740
28	1300	1280	1750	1690	1420	1340	2000	1950	1550	1520	1810	1790
29	1290	1240	1780	1750	1420	1390	2040	1980	---	---	1790	1760
30	1350	1270	1850	1780	1440	1410	2070	2040	---	---	1810	1770
31	1460	1350	---	---	1410	1210	2080	2030	---	---	1840	1810
MONTH	1850	1160	1850	1180	1910	749	2080	975	2540	1410	---	---

11261500 SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1870	1840	1990	1950	1890	1730	1200	1060	982	915	1040	951
2	1900	1870	1970	1910	1740	1580	1160	1040	953	885	1170	999
3	1970	1900	1990	1940	1640	1450	1110	1020	901	806	1510	1170
4	1990	1960	1960	1700	1500	1440	1290	1090	823	769	1520	1420
5	2000	1980	1700	1550	1490	1440	1300	1240	869	787	1690	1420
6	1990	1940	1660	1570	1560	1460	1320	1240	963	855	1840	1690
7	1940	1850	2040	1660	1900	1560	1280	1150	934	904	1700	1450
8	1920	1820	2190	2040	2130	1900	1190	993	905	844	1450	1380
9	2180	1920	2190	1900	2070	1760	1180	1050	853	812	1460	1360
10	2210	2180	1900	1680	1780	1660	1220	1150	972	812	1470	1420
11	2200	2010	1850	1720	1800	1730	1200	1130	995	964	1670	1470
12	2150	2060	1880	1830	1750	1510	1130	1070	1040	967	1630	1470
13	2220	2150	1960	1860	1620	1470	1100	975	1220	1040	1470	1250
14	2170	2010	2220	1960	1500	1420	1060	995	1320	1220	1330	1250
15	2010	1860	2440	2220	1430	1370	1030	944	1750	1320	1380	1240
16	1990	1860	2370	2110	1480	1410	1000	873	1840	1680	1560	1380
17	2010	1830	2110	1850	1440	1330	913	847	1680	1540	2200	1560
18	1830	1700	1860	1650	1580	1350	888	822	1570	1330	2240	1980
19	1700	1560	1650	1360	1600	1530	902	861	1330	1040	1980	1490
20	1620	1580	1380	1310	1600	1490	867	810	1040	966	1500	1320
21	1640	1550	1450	1310	1490	1320	856	808	1040	964	1370	1270
22	1800	1640	1750	1450	1320	1040	851	804	1050	1010	1390	1350
23	2120	1800	2230	1740	1090	1020	1010	846	1080	1040	1360	1300
24	2240	2120	2310	2130	1100	1010	1020	899	1050	1020	1440	1320
25	2290	2240	2130	1920	1070	1010	1010	846	1040	1010	1730	1440
26	2320	2260	1980	1720	1240	1050	846	779	1040	990	1870	1730
27	2360	2280	1720	1500	1410	1240	889	800	1020	858	1860	1480
28	2280	1980	1500	1410	1410	1330	875	838	911	860	1480	1280
29	1990	1900	1590	1410	1370	1240	855	795	1020	875	1280	1250
30	1980	1950	1800	1590	1240	1130	891	798	1060	1020	1330	1260
31	---	---	1880	1800	---	---	976	889	1060	998	---	---
MONTH	2360	1550	2440	1310	2130	1010	1320	779	1840	769	2240	951

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.5	17.0	14.5	12.0	12.5	10.5	10.0	9.0	14.5	12.5	15.0	12.5
2	18.0	13.5	14.0	11.0	12.5	10.5	10.0	9.0	13.0	11.0	15.0	12.5
3	19.0	13.5	14.0	11.5	12.5	10.5	10.0	9.0	13.0	10.0	15.5	13.0
4	20.5	15.5	14.5	11.0	12.0	10.0	10.0	9.5	13.0	10.0	15.0	13.0
5	21.5	16.5	14.5	11.5	11.5	10.0	11.0	9.5	12.5	9.5	15.5	12.5
6	23.0	17.5	14.0	11.5	11.0	10.0	11.5	10.5	12.0	9.0	16.0	13.0
7	23.5	18.5	15.0	13.0	12.0	10.0	10.5	10.0	12.0	9.5	16.5	13.5
8	24.0	19.0	15.5	14.5	12.0	10.0	10.0	9.5	12.0	8.5	16.5	13.5
9	23.5	19.0	17.0	15.0	11.0	10.5	10.5	9.5	12.0	8.5	16.5	14.0
10	22.0	19.5	15.5	15.0	12.0	10.0	11.0	10.0	12.5	9.0	17.5	14.5
11	21.0	17.5	16.0	14.5	11.5	10.0	11.5	11.0	12.0	10.5	18.0	15.5
12	20.5	16.0	16.0	14.5	11.5	11.0	11.5	11.0	12.0	10.5	---	---
13	21.0	16.5	16.0	14.5	11.5	10.5	12.0	11.0	14.5	11.5	19.0	---
14	21.0	17.5	16.0	14.0	12.5	11.0	12.0	11.5	15.5	13.5	19.0	17.0
15	20.5	16.5	14.5	14.0	12.0	11.0	12.5	11.5	15.0	13.5	19.0	16.5
16	20.0	16.0	14.5	13.5	12.0	11.5	12.0	11.0	16.0	13.5	17.5	16.0
17	19.5	15.5	15.0	13.0	12.0	11.0	11.5	11.0	14.5	13.0	17.0	14.5
18	19.0	15.5	14.0	12.5	11.5	10.0	11.0	10.5	14.5	11.5	16.0	13.5
19	19.5	15.0	14.0	12.0	10.5	9.0	11.0	10.5	13.0	12.0	16.5	13.5
20	20.0	15.5	14.0	12.5	9.5	9.0	10.5	10.0	13.5	10.5	17.5	15.0
21	20.0	16.0	14.0	12.5	9.5	9.0	10.5	10.0	14.5	11.5	18.5	15.0
22	19.5	16.0	14.5	12.5	9.5	8.5	11.5	10.0	14.5	11.5	19.0	16.0
23	18.5	15.5	14.5	12.5	9.0	8.5	13.0	11.0	14.5	12.0	18.0	17.0
24	17.0	14.5	14.0	13.0	8.5	8.0	12.5	12.0	14.0	13.0	19.0	15.5
25	17.0	14.5	14.5	12.5	8.0	7.0	12.5	11.5	15.0	13.0	19.0	15.5
26	17.5	14.5	13.0	11.5	8.0	7.0	12.5	12.0	15.0	12.5	19.5	17.0
27	17.5	14.5	12.5	10.5	9.5	8.0	13.5	12.0	14.5	13.0	18.0	15.5
28	17.5	14.5	12.0	10.0	10.0	9.0	14.0	12.0	14.0	12.0	17.5	14.0
29	17.5	14.5	12.5	10.0	10.5	9.0	14.5	12.5	---	---	19.0	15.0
30	16.5	14.0	11.5	10.5	10.0	9.0	13.5	12.5	---	---	21.0	16.5
31	15.5	13.0	---	---	10.0	9.0	13.0	12.5	---	---	21.5	18.5
MONTH	24.0	13.0	17.0	10.0	12.5	7.0	14.5	9.0	16.0	8.5	---	---

11261500 SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	20.0	17.0	22.0	17.5	28.0	22.0	29.0	23.5	28.5	24.5	29.0	23.0
2	18.0	16.0	20.0	17.5	28.5	23.0	28.5	23.0	27.5	25.0	29.0	24.0
3	18.0	14.5	19.0	16.5	30.0	24.0	28.5	23.0	28.5	24.0	29.5	25.0
4	17.0	15.0	19.5	17.0	29.5	24.5	28.5	23.0	28.5	24.5	29.5	24.5
5	18.0	14.0	21.0	16.0	29.0	24.0	29.0	23.0	28.0	24.0	29.0	23.5
6	18.0	14.5	22.0	17.5	28.5	23.5	29.0	23.0	28.0	23.5	27.5	22.5
7	19.5	15.0	21.5	18.5	28.5	23.0	28.5	23.5	27.5	23.5	26.5	21.0
8	21.0	16.5	19.5	16.5	29.0	23.0	27.5	22.5	27.0	23.0	26.0	21.5
9	21.5	18.0	20.5	15.5	29.0	23.5	28.5	22.5	27.5	23.0	25.5	20.5
10	22.0	18.5	22.0	16.5	28.0	22.0	29.0	23.5	27.5	23.0	26.0	21.0
11	21.0	18.5	23.5	17.5	26.5	21.0	29.5	23.5	27.0	23.0	27.0	20.5
12	19.5	17.0	24.5	19.0	26.0	20.5	29.5	24.5	27.5	22.5	27.5	22.0
13	19.5	16.0	25.5	20.0	26.5	21.0	29.0	24.0	27.5	23.0	26.5	22.0
14	19.5	16.0	24.5	21.0	26.5	21.0	29.5	23.5	28.0	23.0	27.0	21.5
15	19.0	15.5	25.0	18.5	27.5	21.5	30.0	25.0	28.0	22.5	27.5	21.5
16	18.5	16.5	23.0	18.5	28.5	23.0	30.0	24.5	28.5	22.5	26.5	21.0
17	19.0	16.5	23.0	18.5	29.5	24.0	30.5	25.0	29.5	23.0	23.5	19.5
18	19.0	15.5	21.5	17.0	29.0	24.0	31.0	26.0	29.5	23.5	24.0	18.0
19	20.0	16.0	22.5	17.0	28.0	22.5	32.0	26.5	29.5	23.5	25.5	19.0
20	18.5	17.0	24.0	19.0	27.0	21.0	32.0	27.0	29.0	24.0	26.0	19.5
21	18.5	16.5	26.0	20.5	26.5	20.5	32.5	27.5	27.0	24.0	27.0	20.5
22	19.5	16.0	28.0	22.0	26.5	21.0	32.0	27.5	27.5	23.5	27.0	21.5
23	20.5	16.0	29.5	23.5	26.0	21.0	32.0	27.0	28.0	22.0	27.0	22.0
24	19.0	17.0	28.0	23.5	25.0	20.5	31.5	26.5	29.0	23.5	26.5	21.5
25	19.0	16.0	27.0	22.0	27.0	21.0	31.0	26.5	29.0	24.0	25.5	20.5
26	20.0	15.5	26.0	21.5	29.0	23.0	30.5	26.0	30.5	25.5	25.5	20.0
27	21.5	16.5	27.5	21.0	30.0	24.5	30.5	25.5	29.0	25.0	25.5	20.0
28	21.5	17.5	29.0	23.5	30.0	24.5	30.5	26.0	27.5	23.5	25.5	20.0
29	20.0	17.5	28.0	24.5	29.0	24.0	30.5	26.5	26.5	22.0	24.5	20.0
30	21.0	15.5	27.0	22.0	29.0	23.0	29.5	27.0	27.5	21.5	24.5	19.5
31	---	---	28.0	22.0	---	---	28.0	26.0	27.5	22.5	---	---
MONTH	22.0	14.0	29.5	15.5	30.0	20.5	32.5	22.5	30.5	21.5	29.5	18.0

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	Depth at sample location, feet (81903)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR					
09...*	0752	.63	2020	17.6	7.20
09...*	0754	1.48	2030	17.7	21.6
09...*	0755	1.55	2040	17.7	36.0
09...*	0756	1.63	2030	17.7	50.4
09...*	0757	1.60	2030	17.7	64.8
09...*	0758	1.52	2020	17.7	79.2
09...*	0759	1.90	2020	17.7	93.6
09...*	0800	2.10	2030	17.7	108
09...*	0801	2.50	2030	17.7	122
09...*	0802	2.90	2030	17.7	137
AUG					
07...*	1549	1.33	925	27.0	4.75
07...*	1550	1.70	926	27.0	14.2
07...*	1551	1.52	925	27.0	23.8
07...*	1552	1.34	925	27.0	33.2
07...*	1553	1.16	925	27.0	42.8
07...*	1554	1.00	925	27.0	52.2
07...*	1555	3.60	925	27.0	61.8
07...*	1556	2.90	925	27.0	71.2
07...*	1557	2.23	926	27.1	80.8
07...*	1558	1.42	927	27.1	90.2

* Instantaneous discharge at time of cross-sectional measurement: Apr. 9, 254 ft^3/s; Aug. 7, 205 ft^3/s.

11262895 SAN LUIS DRAIN, SITE B, NEAR STEVINSON, CA

LOCATION.—Lat 37° 14'27", long 120° 52'37", in SE 1/4 NW 1/4 sec.16, T.8 S., R.10 E., Merced County, Hydrologic Unit 18040001, Kesterson National Wildlife Refuge, on left bank, 1.8 mi upstream of terminus of drain, and 6.2 mi southwest of Stevinson.

DRAINAGE AREA.—Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1998 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 75 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair. Drain intercepts subsurface drainage water from irrigated farmland and conveys it into Mud Slough and the San Joaquin River.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily, 82 ft^3/s, Aug. 29, 1999, Mar. 8, 2001, and Feb. 27, 2003; minimum daily, 9.2 ft^3/s, Sept. 28, 2001.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	20	20	26	32	73	28	47	42	53	58	43
2	17	19	20	27	40	70	40	48	41	54	60	37
3	16	20	20	23	e37	69	45	46	41	56	64	35
4	13	21	21	20	e36	67	45	39	42	58	69	34
5	13	22	22	28	e36	68	46	42	41	58	66	30
6	14	21	23	e26	e36	69	46	45	43	56	63	31
7	16	17	24	e28	42	71	45	48	44	55	66	31
8	17	24	23	e28	e48	68	44	e44	48	55	66	36
9	18	27	23	23	e49	66	46	e39	47	57	59	29
10	21	29	22	24	e51	64	47	34	42	54	53	24
11	17	27	22	27	53	63	44	33	44	47	55	21
12	22	20	22	28	55	63	34	32	42	38	54	22
13	19	22	21	25	59	63	32	28	39	33	50	22
14	19	21	19	24	61	61	31	27	41	34	47	22
15	17	21	21	22	65	60	33	29	50	36	45	22
16	19	18	26	20	66	65	44	36	51	41	42	19
17	22	21	31	19	62	70	43	38	51	48	39	16
18	27	20	34	15	57	61	44	43	50	46	38	14
19	27	20	27	15	56	48	46	39	46	45	42	16
20	22	19	34	20	58	46	45	35	47	48	47	17
21	22	15	30	20	60	44	43	36	46	48	52	18
22	22	14	26	21	60	41	45	39	49	49	55	17
23	23	14	20	22	63	40	44	43	51	57	58	16
24	22	13	20	23	62	39	40	43	56	58	58	17
25	22	13	18	20	65	36	33	40	58	57	55	19
26	21	12	16	19	75	37	38	40	56	57	54	21
27	21	12	14	18	82	46	40	41	50	57	50	20
28	21	15	11	21	77	41	43	48	47	54	50	20
29	20	19	15	19	---	35	43	48	51	55	51	17
30	20	19	16	24	---	30	45	46	52	55	48	15
31	21	---	18	26	---	25	---	43	---	59	48	---
TOTAL	610	575	679	701	1543	1699	1242	1239	1408	1578	1662	701
MEAN	19.7	19.2	21.9	22.6	55.1	54.8	41.4	40.0	46.9	50.9	53.6	23.4
MAX	27	29	34	28	82	73	47	48	58	59	69	43
MIN	13	12	11	15	32	25	28	27	39	33	38	14
AC-FT	1210	1140	1350	1390	3060	3370	2460	2460	2790	3130	3300	1390

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

MEAN	24.3	23.1	22.4	26.6	55.0	55.3	39.5	43.5	55.6	57.0	57.1	29.7
MAX	33.2	28.8	23.7	27.9	59.6	56.8	44.8	48.2	61.0	63.0	63.6	40.3
(WY)	1999	2000	2001	2001	1999	2001	2000	1999	2000	1999	1999	1999
MIN	17.9	19.2	19.8	22.6	49.1	54.2	34.9	39.9	46.9	50.9	53.6	22.8
(WY)	2002	2003	2002	2003	2002	2000	1999	2001	2003	2003	2003	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1999 - 2003	
ANNUAL TOTAL	14324		13637			
ANNUAL MEAN	39.2		37.4		40.7	
HIGHEST ANNUAL MEAN					44.6	1999
LOWEST ANNUAL MEAN					37.4	2003
HIGHEST DAILY MEAN	69	Mar 19	82	Feb 27	82	Aug 29 1999
LOWEST DAILY MEAN	11	Dec 28	11	Dec 28	9.2	Sep 28 2001
ANNUAL SEVEN-DAY MINIMUM	13	Nov 21	13	Nov 21	10	Sep 27 2001
ANNUAL RUNOFF (AC-FT)	28410		27050		29480	
10 PERCENT EXCEEDS	58		60		62	
50 PERCENT EXCEEDS	40		38		40	
90 PERCENT EXCEEDS	19		18		20	

e Estimated.

11262895 SAN LUIS DRAIN, SITE B, NEAR STEVINSON, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water year 1999 to current year.
SPECIFIC CONDUCTANCE: Water year 1999 to current year.
WATER TEMPERATURE: Water year 1999 to current year.

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: October 1998 to current year.
WATER TEMPERATURE: October 1998 to current year.

INSTRUMENTATION.—Water-quality monitor since October 1998.

REMARKS.—Specific conductance records rated excellent except for Oct. 20 to Nov. 6, Nov. 15 to Dec. 2, Dec. 7–11, Dec. 22 to Jan. 3, Jan. 24 to Feb. 6, Mar. 19 to Apr. 7, Apr. 14–22, Apr. 26 to May 1, May 8–22, June 9–26, July 8–18, July 24 to Aug. 4, Aug. 10–12, Aug. 23 to Sept. 10, Sept. 22–30, which are rated good; and Oct. 1–10, May 23–30, which are rated fair. Water-temperature records rated excellent except for Feb. 19 to Mar. 4, Mar. 15–30, July 27 to Aug. 4, Aug. 19–31, Sept. 11–30, which are rated good; and Mar. 5, 6, Mar. 31 to Apr. 7, Sept. 1–10, which are rated fair. Water quality is influenced by subsurface drainage from irrigated farmland. Interruptions in record were due to malfunction of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum recorded, 6,030 microsiemens, Apr. 6, 1999; minimum recorded, 2,770 microsiemens, Aug. 20, 21, 2000.
WATER TEMPERATURE: Maximum recorded, 31.5° C, July 13, 1999; minimum recorded, 4.0° C, Dec. 24, 1998.

EXTREMES FOR CURRENT YEAR.—
SPECIFIC CONDUCTANCE: Maximum recorded, 5,550 microsiemens, Mar. 23, 25, 27; minimum recorded, 2,810 microsiemens, Sept. 12.
WATER TEMPERATURE: Maximum recorded, 31.0° C, July 21–24; minimum recorded, 8.0° C, Dec. 25, 26.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	4670	4580	4640	4520	4450	4480	4310	4120	4240	4520	4390	4460
2	4630	4420	4500	4570	4440	4510	---	4050	---	4510	4460	4480
3	4730	4520	4630	4570	4440	4510	4090	4010	4040	4490	4290	4390
4	4790	4580	4720	4550	4370	4500	4570	4090	4340	4350	4290	4330
5	4620	4530	4580	4590	4300	4510	4630	4490	4570	4620	4290	4440
6	4610	4280	4460	4580	4280	4460	4500	4450	4460	4610	4360	4510
7	4340	3960	4230	4460	4280	4390	4500	4410	4450	4500	4350	4440
8	4560	4080	4330	4480	4360	4420	4580	4480	4540	4570	4460	4500
9	4680	4380	4580	4480	4240	4350	4490	4430	4460	4710	4570	4660
10	---	4500	---	4570	4130	4350	4680	4490	4600	4740	4500	4600
11	4760	4580	4670	4280	4030	4150	---	4450	---	4550	4380	4460
12	4860	4750	4820	4260	4040	4130	4850	4730	4800	4640	4520	4590
13	4860	4800	4840	4310	3980	4130	5090	4790	4900	4620	4540	4570
14	4910	4280	4690	4330	4070	4200	5190	5070	5130	4600	4550	4570
15	4280	4050	4150	4310	3780	3970	5190	5050	5130	4670	4560	4610
16	4050	3530	3820	3900	3570	3720	5130	4660	4850	4720	4630	4690
17	3560	3480	3510	3810	3510	3670	4880	4660	4770	4690	4440	4540
18	3600	3460	3530	3770	3430	3550	4910	4670	4770	4570	4440	4520
19	3740	3560	3670	4090	3690	3810	4860	4660	4780	4570	4540	4550
20	3920	3710	3840	4270	4020	4190	4860	4540	4720	4580	4460	4550
21	3950	3670	3880	4280	4100	4180	4780	4430	4600	4500	4330	4420
22	4150	3790	4000	4380	4180	4310	4540	4050	4290	4470	4230	4370
23	4070	3690	3910	4380	4030	4210	4580	4130	4340	4360	4090	4220
24	3990	3360	3680	4410	4040	4270	4580	4220	4430	4490	4030	4280
25	3730	3360	3570	4360	3960	4150	4560	4200	4380	4650	4360	4570
26	4130	3730	3950	4060	3920	4020	4490	3920	4170	4550	4370	4490
27	4200	4090	4140	4060	3930	4030	4170	3800	4030	4580	4440	4510
28	4300	4200	4240	4060	3830	3990	4450	4000	4280	4460	4090	4390
29	4340	4300	4320	3940	3750	3850	4660	4450	4560	4440	4150	4350
30	4350	4300	4330	4220	3840	4080	4820	4660	4780	4580	4240	4450
31	4500	4340	4460	---	---	---	4770	4460	4570	4710	4560	4640
MONTH	---	3360	---	4590	3430	4170	---	3800	---	4740	4030	4490

11262895 SAN LUIS DRAIN, SITE B, NEAR STEVINSON, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4700	4430	4620	4230	4000	4140	5240	5000	5130	4960	4620	4780
2	4720	4240	4460	4400	4180	4300	5160	5030	5090	4730	4570	4640
3	4600	4220	4410	4440	4310	4400	5290	5100	5190	4760	4630	4710
4	4630	4380	4590	4680	4430	4570	5370	5210	5300	4800	4650	4720
5	4620	4490	4530	4660	4570	4620	5310	5210	5270	4740	4610	4680
6	4580	4410	4490	---	4630	---	5440	5190	5320	4790	4550	4690
7	4580	4380	4480	5010	4680	4830	---	5050	---	4550	4090	4350
8	4650	4300	4510	5000	4720	4910	5260	5020	5130	4090	3420	3760
9	4770	4640	4700	4930	4750	4830	5110	4990	5050	3960	3750	3860
10	4750	4420	4560	5080	4840	4990	5030	4860	4960	4180	3890	4080
11	4570	4220	4390	5180	5010	5120	4960	4750	4870	4270	4140	4200
12	4390	4190	4310	5290	5110	5220	4990	4730	4840	4470	4110	4230
13	4370	4260	4300	5370	5160	5250	4970	4770	4870	4680	4460	4530
14	4500	4300	4410	5420	5170	5320	4850	4690	4780	4930	4680	4770
15	4360	4120	4260	5300	5100	5210	4870	4580	4750	4940	4680	4860
16	4300	4050	4190	5350	5150	5260	4900	4730	4830	5260	4760	5120
17	4250	3900	4070	5400	5110	5300	4850	4720	4780	5300	5100	5200
18	3900	3750	3820	5250	5070	5160	5010	4430	4790	5260	5060	5160
19	4090	3750	3940	5150	4960	5080	4770	4450	4630	5230	4800	4970
20	4170	3920	4060	5270	5150	5220	4890	4570	4760	5010	4710	4910
21	4300	4070	4200	5470	5220	5370	4920	4620	4780	4930	4520	4750
22	4180	4070	4130	5490	5420	5450	5100	4520	4860	5020	4480	4700
23	4370	4090	4220	5550	5420	5480	5080	4770	4920	5150	4780	5010
24	4440	4350	4400	5520	5330	5440	5020	4730	4900	5220	4640	4940
25	4610	4360	4470	5550	5330	5440	5140	4950	5040	5100	4590	4790
26	4640	4390	4520	5520	5160	5330	5360	5040	5200	4790	4520	4690
27	4640	4150	4500	5550	5150	5360	5300	4880	5140	4640	4210	4440
28	4210	3690	3880	5440	5090	5230	5260	5090	5190	4620	4140	4410
29	---	---	---	5530	5140	5330	5170	4860	5020	4520	4090	4310
30	---	---	---	5470	5040	5290	5040	4790	4890	4450	3980	4210
31	---	---	---	5360	5180	5280	---	---	---	4220	3690	3900
MONTH	4770	3690	4340	---	4000	---	---	4430	---	5300	3420	4590
		JUNE			JULY			AUGUST			SEPTEMBER	
1	3960	3710	3860	4240	4050	4110	3840	3500	3650	3410	3170	3320
2	4000	3870	3940	4270	4090	4170	3650	3300	3470	3430	3180	3370
3	4220	4000	4130	4330	4100	4250	3800	3500	3640	3570	3170	3340
4	4310	4220	4260	4200	4040	4150	3660	3340	3490	3780	3440	3590
5	4470	4300	4370	4450	4160	4250	3640	3360	3500	3790	3650	3730
6	4480	4310	4390	4500	4320	4390	3760	3420	3650	4040	3680	3910
7	4490	4090	4340	4390	4250	4340	3530	3260	3440	3980	3720	3860
8	4450	4090	4310	4400	4240	4360	3540	3260	3390	3870	3630	3720
9	4460	4320	4380	4550	4340	4480	3450	3150	3320	3980	3500	3860
10	4400	4150	4310	4480	4130	4300	3160	3080	3120	3530	3330	3410
11	4190	4040	4130	4350	4090	4230	3430	3140	3340	3970	3530	3770
12	4140	4030	4100	4310	3860	3980	---	3370	---	3800	2810	3140
13	4360	4100	4270	4270	3890	4100	3520	3310	3400	3220	2870	3030
14	4580	4290	4460	4170	3840	4000	3720	3220	3450	3610	3220	3380
15	4480	4280	4390	4180	3900	4110	3420	3300	3380	3940	3610	3800
16	4530	4350	4470	4190	3970	4130	3560	3330	3500	4130	3930	4020
17	4560	4300	4420	4110	3750	3980	3530	3370	3430	4230	4120	4190
18	4640	4180	4420	---	3650	---	3940	3160	3420	4220	3870	4090
19	4430	4140	4290	4420	3590	3910	4220	3940	4110	3920	3680	3820
20	4510	4080	4260	4130	3540	3870	4100	3990	4060	3840	3660	3730
21	4360	4020	4210	3810	3560	3650	4080	3970	4020	3920	3790	3830
22	4340	4040	4160	4000	3800	3890	4060	3790	3920	4040	3850	3950
23	4410	4120	4230	4000	3700	3890	3850	3400	3570	3920	3800	3840
24	4540	4080	4340	4020	3800	3900	3460	3250	3390	4230	3920	4110
25	4520	4220	4350	4060	3630	3850	3370	3140	3230	4370	4220	4320
26	4300	4140	4240	3840	3710	3790	3340	3110	3230	4410	4360	4390
27	4270	3990	4120	3760	3560	3660	3400	3240	3300	4400	4310	4350
28	4310	4110	4190	3700	3450	3630	3520	3320	3380	4370	4260	4320
29	4230	3950	4090	3780	3430	3630	3670	3440	3490	4260	4020	4130
30	4290	3830	4070	3770	3400	3610	3970	3360	3630	4150	3930	4050
31	---	---	---	3850	3510	3680	3600	3020	3250	---	---	---
MONTH	4640	3710	4250	---	3400	---	---	3020	---	4410	2810	3810

11262895 SAN LUIS DRAIN, SITE B, NEAR STEVINSON, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.5	18.0	19.5	15.5	14.0	15.0	12.5	11.5	12.0	10.5	9.0	10.0
2	18.0	15.5	16.5	15.0	13.5	14.0	13.0	11.0	12.0	11.0	10.0	10.5
3	18.0	15.5	16.5	14.5	13.0	14.0	12.5	11.0	12.0	10.5	10.0	10.5
4	19.5	16.5	18.0	15.0	13.0	14.0	12.0	11.0	11.5	10.5	10.0	10.5
5	20.5	18.0	19.0	15.0	13.0	14.0	12.0	11.0	11.5	11.5	10.0	11.0
6	21.5	19.0	20.0	15.0	13.5	14.0	11.5	10.5	11.0	12.0	11.0	11.0
7	23.0	19.5	21.0	15.0	14.0	14.5	12.0	10.5	11.5	11.0	10.0	10.5
8	23.5	20.5	21.5	15.5	15.0	15.0	12.0	10.5	11.5	10.5	10.0	10.0
9	23.5	20.5	22.0	17.0	15.0	16.0	11.5	11.0	11.5	10.0	10.0	10.0
10	22.5	21.5	21.5	16.0	15.5	16.0	11.5	10.5	11.5	11.0	10.0	10.5
11	21.5	20.0	20.5	16.5	15.0	15.5	11.5	10.5	11.0	11.5	11.0	11.0
12	21.5	19.5	20.5	16.5	15.0	16.0	11.5	11.0	11.5	11.5	11.0	11.0
13	22.0	19.5	20.5	16.5	15.0	16.0	11.5	10.5	11.0	12.0	10.5	11.0
14	22.0	20.0	20.5	16.5	15.0	15.5	12.0	11.0	11.5	12.0	11.0	11.5
15	21.5	19.5	20.5	15.5	15.0	15.0	11.5	11.0	11.5	12.5	11.5	12.0
16	21.0	19.0	20.0	15.5	14.5	15.0	12.0	11.0	11.5	12.0	11.0	11.5
17	20.0	18.0	19.0	15.0	14.0	14.5	12.0	11.0	11.5	11.5	11.0	11.5
18	19.5	17.5	18.5	15.0	13.5	14.0	11.5	10.5	11.0	11.5	11.0	11.0
19	19.5	17.0	18.0	14.5	13.0	14.0	11.0	9.0	10.0	11.0	10.5	11.0
20	20.0	17.0	18.5	14.5	13.5	14.0	10.0	9.0	9.5	10.5	10.0	10.5
21	20.0	18.0	19.0	14.5	13.5	14.0	10.5	9.5	10.0	10.5	10.0	10.5
22	20.0	18.0	18.5	15.0	13.5	14.0	10.5	9.5	10.0	11.0	10.0	10.5
23	19.5	17.5	18.5	15.0	13.5	14.0	9.5	8.5	9.0	12.0	10.5	11.5
24	18.0	16.5	17.0	14.5	13.5	14.0	9.0	8.5	8.5	12.0	12.0	12.0
25	18.5	16.0	17.0	14.5	13.5	14.0	8.5	8.0	8.0	12.0	11.5	12.0
26	18.5	16.0	17.0	13.5	12.5	13.0	9.0	8.0	8.5	12.5	12.0	12.0
27	18.5	16.0	17.0	13.0	11.5	12.5	10.5	9.0	9.5	13.0	11.5	12.0
28	18.5	16.0	17.0	12.5	11.0	12.0	10.5	10.0	10.0	13.5	12.0	13.0
29	18.0	16.0	17.0	12.5	11.0	12.0	11.0	9.5	10.0	14.0	12.5	13.0
30	17.5	16.0	16.5	12.0	11.5	11.5	10.5	9.5	10.0	13.5	12.5	13.0
31	16.5	15.0	15.5	---	---	---	10.5	9.0	10.0	13.5	13.0	13.0
MONTH	23.5	15.0	19.0	17.0	11.0	14.0	13.0	8.0	10.5	14.0	9.0	11.5
		FEBRUARY			MARCH			APRIL			MAY	
1	14.0	13.0	13.5	15.0	13.0	14.0	22.0	18.0	20.0	21.5	18.5	20.0
2	13.0	11.0	12.0	15.5	13.0	14.5	18.5	16.5	17.5	20.5	17.5	19.0
3	12.5	11.0	12.0	15.5	13.5	14.5	18.5	15.5	17.0	18.5	16.5	17.5
4	12.5	11.0	12.0	16.5	14.0	15.0	17.5	15.5	17.0	19.0	17.0	18.0
5	12.0	10.5	11.0	16.5	14.0	15.0	17.5	15.0	16.5	20.5	17.0	18.5
6	11.5	10.0	11.0	17.0	14.0	15.5	17.5	15.0	16.0	21.0	18.0	19.5
7	11.0	10.0	10.5	17.5	14.5	16.0	19.5	15.5	17.0	20.5	18.0	19.5
8	11.5	9.5	10.5	17.5	15.0	16.0	21.0	16.5	19.0	19.0	17.5	18.0
9	11.5	9.5	10.5	18.0	15.5	17.0	22.0	18.5	20.0	20.0	16.5	18.0
10	11.5	9.5	10.5	18.5	16.0	17.0	22.5	19.0	21.0	21.0	17.0	19.0
11	11.5	10.0	11.0	19.0	17.0	17.5	22.0	19.5	21.0	22.0	18.0	20.0
12	11.5	10.5	11.0	21.0	17.5	19.0	21.0	18.0	19.5	22.5	19.0	21.0
13	13.5	11.0	12.0	20.5	18.5	19.5	20.5	16.5	18.0	23.5	20.5	22.0
14	14.0	12.5	13.0	20.5	18.0	19.0	20.0	16.5	18.0	22.5	21.0	22.0
15	14.5	13.5	13.5	20.5	17.5	18.5	20.0	16.5	18.0	23.0	19.5	21.0
16	15.5	13.5	14.5	18.5	16.5	17.5	18.5	17.0	18.0	22.0	20.0	21.0
17	14.5	13.0	14.0	17.5	15.0	16.0	18.0	16.5	17.0	22.0	19.5	21.0
18	14.5	12.5	13.5	16.0	14.0	15.0	18.5	16.0	17.0	21.0	17.5	19.5
19	13.5	12.5	13.0	16.5	13.5	15.5	20.5	16.0	18.0	21.5	18.0	19.5
20	13.5	11.5	12.5	17.0	15.0	16.0	19.0	17.5	18.5	22.5	19.5	21.0
21	14.0	11.5	13.0	18.5	15.5	17.0	19.0	17.5	18.0	24.5	21.0	22.5
22	14.5	12.0	13.5	20.5	16.5	18.5	19.5	17.0	18.0	26.0	22.5	24.0
23	14.5	12.5	13.5	19.0	17.5	18.0	20.0	16.5	18.0	27.5	24.0	25.5
24	14.5	13.5	14.0	20.0	17.0	18.5	18.5	17.0	17.5	27.0	24.5	26.0
25	15.0	13.5	14.0	20.5	17.0	19.0	19.0	16.5	17.5	26.0	24.0	25.0
26	15.0	13.0	14.0	21.5	18.5	19.5	20.0	16.0	17.5	25.0	23.0	24.0
27	14.0	13.0	13.5	19.5	16.0	17.5	21.0	17.0	19.0	26.0	22.5	24.0
28	14.5	12.5	13.5	17.0	14.0	15.5	20.5	17.5	19.0	27.0	24.0	25.5
29	---	---	---	21.0	15.5	18.0	19.5	17.5	18.5	27.0	25.0	26.0
30	---	---	---	23.0	18.0	20.0	21.0	17.0	19.0	26.0	24.0	25.0
31	---	---	---	23.5	19.5	21.5	---	---	---	26.5	23.5	25.0
MONTH	15.5	9.5	12.5	23.5	13.0	17.0	22.5	15.0	18.0	27.5	16.5	21.5

11262895 SAN LUIS DRAIN, SITE B, NEAR STEVINSON, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.5	23.5	25.0	28.5	25.0	26.5	28.0	25.5	26.5	26.5	24.0	25.5
2	27.0	24.0	25.5	28.0	24.5	26.0	27.0	25.5	26.5	27.0	24.5	26.0
3	28.5	24.5	26.5	27.5	24.5	26.0	27.5	25.0	26.0	27.5	25.0	26.0
4	28.0	25.0	26.5	27.5	24.5	26.0	28.0	25.5	26.5	27.5	25.0	26.5
5	27.5	25.0	26.0	28.0	24.5	26.0	27.5	25.0	26.5	27.0	25.0	26.0
6	27.0	24.0	25.5	28.0	24.5	26.0	27.5	25.0	26.0	26.5	24.0	25.5
7	26.5	24.0	25.0	27.5	24.5	26.0	27.0	24.5	25.5	25.5	23.0	24.5
8	26.5	23.5	25.0	26.5	23.5	25.0	26.5	24.5	25.5	25.0	23.0	24.0
9	26.5	23.5	25.0	27.5	24.0	25.5	27.0	24.5	25.5	24.5	22.5	23.5
10	26.0	23.0	24.5	28.0	24.5	26.0	27.5	24.0	25.5	25.0	23.0	24.0
11	24.0	22.0	23.0	28.0	25.0	26.5	27.0	24.5	25.5	25.5	22.5	23.5
12	24.0	21.0	22.5	28.5	25.5	27.0	27.0	24.0	25.5	26.0	23.5	24.5
13	24.0	21.0	22.5	28.0	25.5	27.0	27.0	24.5	25.5	25.5	23.5	24.5
14	24.5	21.5	23.0	28.5	25.0	27.0	27.0	24.5	25.5	25.5	23.5	24.5
15	25.0	21.5	23.5	29.0	26.0	27.5	26.5	24.0	25.5	26.0	23.5	25.0
16	26.5	23.0	24.5	29.0	26.5	27.5	27.0	24.0	25.5	26.0	24.0	24.5
17	27.5	24.5	26.0	29.5	26.5	28.0	27.5	24.5	26.0	24.5	22.5	23.5
18	27.0	24.5	26.0	30.0	27.0	28.5	27.5	25.0	26.5	23.5	21.5	22.0
19	25.5	23.0	24.5	30.0	27.5	28.5	28.0	25.0	26.0	24.0	21.5	22.5
20	24.0	21.0	22.5	30.5	27.5	29.0	28.0	25.0	26.5	24.5	22.0	23.0
21	24.0	21.0	22.5	31.0	28.0	29.5	27.0	25.5	26.0	25.5	23.0	24.0
22	24.5	21.5	23.0	31.0	28.5	29.5	26.5	24.5	25.5	25.5	23.5	24.5
23	24.5	21.5	23.0	31.0	28.5	29.5	26.5	23.5	25.0	26.0	24.0	25.0
24	24.0	21.5	23.0	31.0	28.0	29.5	27.0	24.0	25.5	25.0	24.0	24.5
25	26.0	23.0	24.0	30.5	28.0	29.0	27.5	24.5	26.0	25.0	23.0	23.5
26	27.5	24.0	25.5	29.5	27.0	28.0	28.5	26.0	27.0	24.5	22.5	23.5
27	28.5	25.0	27.0	29.5	26.5	28.0	28.0	25.5	27.0	24.5	22.5	23.5
28	29.0	26.0	27.5	29.5	27.0	28.5	27.0	24.5	26.0	24.5	22.5	23.5
29	28.5	26.0	27.5	30.0	27.5	28.5	26.0	23.5	25.0	24.0	22.5	23.5
30	28.5	25.5	27.0	29.5	27.5	28.5	26.0	23.5	24.5	24.0	22.5	23.0
31	---	---	---	28.5	26.5	27.5	26.0	23.5	25.0	---	---	---
MONTH	29.0	21.0	25.0	31.0	23.5	27.5	28.5	23.5	26.0	27.5	21.5	24.0

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	Depth at sample location, feet (81903)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR					
22...*	1317	1.50	5260	18.0	1.40
22...*	1318	3.50	5270	17.8	4.20
22...*	1319	5.30	5260	17.8	7.00
22...*	1320	5.40	5260	17.8	9.80
22...*	1321	5.60	5260	17.8	12.6
22...*	1322	5.40	5260	17.8	15.4
22...*	1323	5.60	5270	17.9	18.2
22...*	1324	4.40	5260	17.9	21.0
22...*	1325	2.80	5260	18.2	23.8
22...*	1326	.90	5270	18.5	26.6
AUG					
12...*	1045	1.10	3590	24.3	1.40
12...*	1046	3.00	3600	24.3	4.30
12...*	1047	4.70	3600	24.2	7.20
12...*	1048	5.60	3600	24.2	10.1
12...*	1049	5.50	3590	24.2	13.0
12...*	1050	5.40	3640	24.3	15.9
12...*	1051	5.70	3640	24.4	18.8
12...*	1052	4.70	3640	24.3	21.7
12...*	1053	3.00	3640	24.4	24.6
12...*	1054	1.00	3650	24.6	27.5

* Instantaneous discharge at time of cross-sectional measurement: Apr. 22, 47 ft^3/s; Aug. 12, 55 ft^3/s.

11262900 MUD SLOUGH NEAR GUSTINE, CA

LOCATION.—Lat 37° 15'45", long 120° 54'20", in SE 1/4 SE 1/4 sec.6, T.8 S., R.10 E., Merced County, Hydrologic Unit 18040001, Kesterson National Wildlife Refuge, on right bank at footbridge, 400 ft northwest of terminus of San Luis Drain, and 5.2 mi east of Gustine.

DRAINAGE AREA.—Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1985 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 70 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair except for estimated daily discharges, which are poor. During major storm events record can be affected by backwater from the San Joaquin River. Discharge is affected by irrigation return and drainage from Kesterson Wildlife Refuge.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,060 ft^3/s, Feb. 8, 1998, gage height, 11.11 ft, maximum gage height, 12.03 ft, Jan. 28, 1997; minimum daily, 0.01 ft^3/s, Sept. 24, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	e127	99	332	138	234	141	e81	80	57	52	74
2	38	127	100	360	157	244	116	e81	91	58	92	65
3	41	126	98	357	157	251	e91	e80	118	68	112	63
4	40	127	98	303	146	249	e87	e78	120	64	106	58
5	39	135	104	198	146	232	e82	e80	123	66	109	52
6	40	141	107	148	139	221	e77	e81	122	63	108	51
7	39	148	115	130	131	219	e71	e82	107	62	94	51
8	39	222	119	128	144	224	e66	e81	87	69	87	59
9	40	283	125	134	152	228	e62	e79	90	63	73	47
10	41	291	134	145	154	224	e55	e79	85	52	63	39
11	45	287	144	156	156	226	55	e79	88	42	60	39
12	52	278	146	164	163	221	46	e78	89	31	61	39
13	54	258	151	173	186	214	44	65	70	29	52	40
14	67	237	164	177	195	208	42	48	65	63	44	57
15	90	211	173	188	204	225	37	49	76	94	41	46
16	128	191	217	189	212	240	47	54	91	47	39	40
17	131	178	275	181	207	249	49	52	64	64	38	39
18	113	164	298	162	206	222	56	65	59	47	42	48
19	112	150	305	128	204	187	62	66	59	43	46	45
20	104	151	366	128	205	184	61	61	53	49	48	47
21	119	146	418	140	209	165	58	61	54	53	52	49
22	145	135	467	141	209	153	60	54	63	48	60	48
23	181	117	511	141	211	139	61	72	70	51	62	56
24	191	110	496	130	203	135	70	78	97	54	68	69
25	160	102	478	118	200	148	70	70	90	65	62	78
26	161	96	461	117	214	165	82	71	83	77	62	79
27	162	90	441	125	223	178	79	81	73	72	64	70
28	e155	91	395	133	231	189	79	86	76	70	68	76
29	e146	95	307	138	---	195	e78	77	78	69	68	82
30	e140	97	259	141	---	178	e79	74	71	63	68	85
31	e133	---	253	138	---	167	---	74	---	56	74	---
TOTAL	2984	4911	7824	5343	5102	6314	2063	2217	2492	1809	2075	1691
MEAN	96.3	164	252	172	182	204	68.8	71.5	83.1	58.4	66.9	56.4
MAX	191	291	511	360	231	251	141	86	123	94	112	85
MIN	38	90	98	117	131	135	37	48	53	29	38	39
AC-FT	5920	9740	15520	10600	10120	12520	4090	4400	4940	3590	4120	3350

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2003, BY WATER YEAR (WY)

MEAN	72.8	91.3	107	153	204	178	81.0	53.5	52.4	49.3	44.5	31.6
MAX	189	195	305	545	958	563	229	123	130	114	100	105
(WY)	1999	2002	1997	1997	1998	1998	1986	1998	1986	1998	1987	1998
MIN	3.35	7.53	5.86	6.17	6.96	28.0	19.2	1.76	3.79	7.42	3.36	2.67
(WY)	1993	1991	1991	1991	1991	1990	1992	1992	1994	1994	1994	1990

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1986 - 2003	
ANNUAL TOTAL	40809		44825			
ANNUAL MEAN	112		123		92.7	
HIGHEST ANNUAL MEAN					252	1998
LOWEST ANNUAL MEAN					17.6	1991
HIGHEST DAILY MEAN	511	Dec 23	511	Dec 23	1060	Feb 9 1998
LOWEST DAILY MEAN	34	Sep 14	29	Jul 13	0.01	Sep 24 1991
ANNUAL SEVEN-DAY MINIMUM	39	Oct 1	39	Oct 1	0.12	Sep 23 1992
MAXIMUM PEAK FLOW			523	Dec 23	1060	Feb 8 1998
MAXIMUM PEAK STAGE			8.63	Dec 23	12.03	Jan 28 1997
ANNUAL RUNOFF (AC-FT)	80940		88910		67160	
10 PERCENT EXCEEDS	187		224		198	
50 PERCENT EXCEEDS	95		91		63	
90 PERCENT EXCEEDS	47		47		6.0	

e Estimated.

11262900 MUD SLOUGH NEAR GUSTINE, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water year 1985 to current year. Data for the period October 1985 to March 1987 are available in U.S. Geological Survey Open-File Report 88-479. Data for the period April 1987 to September 1988 are available in U.S. Geological Survey Open-File Report 91-74.
CHEMICAL DATA: Water years 1985–88, 1993–94, 1999, April 2001 to October 2001.
SPECIFIC CONDUCTANCE: October 1985 to current year.
WATER TEMPERATURE: October 1985 to current year.
SEDIMENT DATA: Water years 1985–94, 1999, April 2001 to October 2001.

PERIOD OF DAILY RECORD.—October 1985 to current year.
SPECIFIC CONDUCTANCE: October 1985 to current year.
WATER TEMPERATURE: October 1985 to current year.

INSTRUMENTATION.—Water-quality monitor since October 1985.

REMARKS.—Specific conductance records rated excellent except for Oct. 1–9, Nov. 16–20, Feb. 12–26, Mar. 4–14, Apr. 26 to May 15, Aug. 26 to Sept. 9, which are rated good; Mar. 15–21, which are rated fair; and Mar. 22 to Apr. 9, which are rated poor. Water-temperature records are rated excellent except for July 17 to Aug. 5, which are rated good. Maximum and minimum values are affected by the drainage of holding ponds located immediately upstream and the terminus of San Luis Drain 400 ft upstream from the station. Interruption in record was due to malfunction of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum recorded, 15,900 microsiemens, Feb. 25, 1991; minimum recorded, 470 microsiemens, Oct. 15, 1986.
WATER TEMPERATURE: Maximum recorded, 34.5° C, July 22, 1988, Aug. 6, 1990, July 2, 25, Aug. 13, 1996; minimum recorded, 2.5° C, Jan. 17, 1987, Dec. 24, 1990.

EXTREMES FOR CURRENT YEAR.—
SPECIFIC CONDUCTANCE: Maximum recorded, 5,490 microsiemens, Apr. 8; minimum recorded, 1,350 microsiemens, Oct. 17, but may have been lower during periods of missing record.
WATER TEMPERATURE: Maximum recorded, 31.5° C, July 20–22, 24; minimum recorded, 7.5° C, Dec. 25.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2960	2450	---	---	2370	2260	2020	1530	2750	2380	2750	2540
2	2900	2610	1950	1880	2370	2270	1640	1490	2710	2470	2740	2540
3	3050	2550	1970	1940	2350	2290	1660	1490	2670	2470	2770	2480
4	2630	2450	2000	1950	2380	2340	2010	1450	2780	2400	2960	2610
5	2650	2470	1960	1940	2460	2370	2490	1950	2820	2650	3170	2960
6	2680	2570	1940	1900	2460	2390	2620	2270	2980	2720	3260	2970
7	2860	2680	1980	1780	2400	2340	2940	2320	3140	2800	3330	2990
8	2860	2710	1810	1530	2360	2270	2850	2470	3110	2810	3250	2850
9	3070	2740	1620	1530	2350	2180	2500	2340	3070	2590	3070	2750
10	3080	2880	1660	1590	2250	2080	2460	2340	3070	2540	3190	2800
11	2950	1780	1650	1550	2170	2090	2390	2240	3010	2540	3190	2880
12	2830	2630	1580	1490	2190	2140	2240	2160	2890	2510	3300	3010
13	2680	2270	1670	1550	2190	2130	2180	2090	2770	2510	3410	3110
14	2460	2060	1740	1640	2200	2050	2120	1970	2840	2490	3550	3260
15	2060	1470	1870	1740	2250	2030	2040	1770	2840	2510	3540	3290
16	1610	1370	1830	1760	2340	1930	1780	1630	2770	2540	3590	3350
17	1660	1350	1880	1810	1990	1870	1700	1670	2760	2490	3660	3560
18	1820	1600	1920	1880	2010	1940	1700	1680	2670	2490	3640	3500
19	1830	1660	1980	1920	1990	1830	1800	1700	2670	2450	3650	3530
20	1860	1670	1960	1910	1940	1680	1890	1800	2720	2520	3610	3350
21	1820	1590	1910	1870	1740	1580	1970	1880	2730	2600	3710	3350
22	1660	1470	2040	1840	1660	1500	2410	1950	2700	2460	3780	3430
23	1520	1440	2110	1970	1500	1450	2400	2180	2750	2510	3840	3440
24	1550	1420	2110	2000	1520	1470	2560	2230	2860	2430	3810	3370
25	1570	1490	2180	2070	1540	1500	2650	2340	2880	2640	3660	3250
26	1570	1540	2160	2070	1520	1480	2640	2420	2930	2700	3490	3050
27	1650	1560	2170	2050	1510	1470	2500	2270	3030	2610	3460	3020
28	---	---	2270	2090	1770	1510	2480	2330	2930	2190	3200	2840
29	---	---	2270	2180	1860	1730	2420	2230	---	---	3170	2910
30	---	---	2300	2210	1880	1840	2530	2250	---	---	3180	2910
31	---	---	---	---	2040	1780	2670	2390	---	---	3120	2800
MONTH	---	---	---	---	2460	1450	2940	1450	3140	2190	3840	2480

11262900 MUD SLOUGH NEAR GUSTINE, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	4280	3020	3880	2980	2830	2620	4020	3210	3670	3360	2520	2120
2	4210	3560	3900	2950	2670	2430	4090	3490	3380	2040	2510	2330
3	4790	3970	3680	2850	2530	2020	3890	3470	2700	2310	2500	2230
4	5200	4480	3250	2270	2500	2200	3930	3630	2800	2420	2700	2460
5	5230	4420	3470	2350	2500	2320	3930	3490	2680	2390	2800	2580
6	4950	3970	3690	2650	2530	2290	4140	3200	2860	2430	3020	2550
7	4930	3520	4150	3270	3210	2450	3750	2870	2890	2590	3020	2630
8	5490	3620	4320	3250	3400	3020	3920	3090	3020	2780	3040	2510
9	4740	3830	3950	3140	3420	2690	4380	3220	3070	2470	2970	2610
10	4720	3690	3970	3080	2940	2770	4380	3900	2810	2460	2880	2330
11	4710	2630	4090	3270	2970	2490	4370	3880	3200	2610	2490	2320
12	4320	2710	3740	2860	2880	2470	4340	3740	3190	2980	2660	2200
13	4390	2760	3930	3040	3020	2860	3920	3440	3480	3100	2200	1630
14	3770	2740	4410	3640	3670	3020	3850	1470	3830	3320	2110	1430
15	4350	3090	4470	3710	3610	3150	3360	1610	3590	3230	2260	1790
16	4240	3020	4680	3390	3690	3040	3900	2800	3750	3350	2350	2080
17	4660	3000	4820	4150	4070	3690	3890	2570	3570	3200	2260	1820
18	4430	2530	4380	3410	4230	3930	3640	3110	3280	2780	1990	1660
19	3580	2140	4010	3180	3950	3550	3940	3240	3850	2920	2040	1820
20	4200	3000	4190	2770	4270	3910	4100	2930	3990	3760	2010	1720
21	3920	2870	3770	2690	4120	3610	3310	2490	4070	3440	1990	1700
22	4040	2730	4150	3560	3740	3390	3540	3040	3550	3400	1970	1820
23	4050	3000	4110	3180	3700	3280	3740	3320	3590	3080	1910	1410
24	3510	2690	3640	2980	3280	2790	3690	3300	3260	2290	1540	1420
25	3430	2560	3750	3090	3710	2930	3410	2820	3120	2730	1680	1460
26	3330	2630	3580	3190	3710	3160	2980	2720	3120	2780	1810	1630
27	3360	2170	3380	2890	3390	3090	2940	2640	2980	2760	1840	1790
28	3480	2230	3540	2980	3320	2810	2940	2580	2890	2680	1820	1610
29	3770	2760	3390	3190	3250	2890	2920	2530	3050	2750	1610	1400
30	3780	1980	3320	3010	3730	3110	3210	2780	3300	2690	1490	1420
31	---	---	3260	2660	---	---	3680	3140	2910	2190	---	---
MONTH	5490	1980	4820	2270	4270	2020	4380	1470	4070	2040	3040	1400

11262900 MUD SLOUGH NEAR GUSTINE, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.5	16.5	14.5	---	13.0	11.0	10.5	9.0	14.0	12.5	16.0	13.0
2	18.5	14.0	14.5	12.0	13.0	11.0	11.0	9.5	13.0	10.5	16.0	13.0
3	19.0	14.0	14.5	12.5	13.0	11.0	11.0	10.0	12.5	10.0	16.5	13.5
4	20.5	15.5	14.5	12.0	12.5	11.0	11.0	10.0	13.0	10.5	16.5	13.5
5	22.0	17.0	15.0	12.5	12.0	11.0	12.0	10.0	12.0	9.5	17.0	13.5
6	23.5	18.0	15.0	13.0	11.5	10.5	12.5	11.0	12.0	9.0	17.5	14.0
7	23.5	19.0	15.0	14.0	12.5	10.5	11.0	10.0	12.0	9.5	17.5	14.5
8	24.5	19.5	15.5	15.0	12.5	10.5	10.5	10.0	11.5	9.0	18.0	14.0
9	24.0	19.5	17.0	15.0	11.5	11.0	10.0	9.5	12.0	9.0	18.5	15.0
10	22.5	20.0	16.0	15.0	12.0	10.5	11.5	10.0	12.0	9.5	18.5	15.0
11	21.5	18.0	16.5	14.5	11.5	10.5	12.0	11.0	12.0	10.5	19.0	16.0
12	21.5	17.5	16.0	14.5	11.5	11.0	12.0	11.0	11.5	11.0	21.0	16.5
13	21.5	17.5	16.0	14.5	11.5	10.5	12.5	10.5	14.5	11.5	20.5	18.0
14	21.5	18.5	16.0	14.0	12.0	11.0	12.5	11.5	15.5	13.0	20.0	17.0
15	21.0	18.0	15.0	14.0	12.0	11.0	13.5	12.0	15.0	14.0	19.5	16.0
16	20.0	17.5	14.5	13.5	12.0	11.0	12.5	11.0	16.0	13.5	17.5	15.5
17	20.0	17.0	15.0	13.0	12.0	11.0	11.5	11.0	15.0	13.5	17.0	14.0
18	19.0	16.5	14.0	12.5	11.5	10.0	11.0	10.5	14.5	12.0	16.0	12.5
19	19.5	16.5	14.5	12.0	10.5	8.5	11.0	10.0	13.5	12.5	17.5	13.0
20	20.0	17.0	14.0	13.0	9.5	8.5	10.5	10.0	14.5	11.5	18.5	15.0
21	20.0	17.0	14.0	12.5	10.5	9.0	10.5	9.5	15.0	12.0	19.5	14.5
22	19.5	17.0	15.0	13.0	10.0	9.0	11.5	10.0	15.5	12.5	20.5	16.0
23	19.0	16.5	15.0	13.0	9.5	8.0	13.0	10.5	15.0	12.5	18.5	17.0
24	17.5	16.0	14.5	13.5	9.0	8.0	13.0	12.5	15.0	13.5	20.0	15.5
25	17.5	15.5	14.5	13.0	8.5	7.5	12.5	11.5	15.5	13.5	20.0	16.0
26	18.0	15.5	13.0	11.5	9.5	8.0	13.0	12.0	15.5	12.5	20.5	17.5
27	17.5	15.5	12.5	10.5	11.0	9.0	13.5	11.5	14.5	13.0	18.0	15.0
28	18.0	15.5	12.5	10.5	11.0	10.0	14.5	12.0	15.0	12.0	17.5	13.0
29	---	---	13.0	10.5	11.0	9.5	15.0	12.5	---	---	19.5	15.0
30	---	---	12.0	11.0	10.5	9.5	14.0	12.5	---	---	21.5	17.0
31	---	---	---	---	11.0	9.0	13.0	12.5	---	---	22.0	18.5
MONTH	---	---	17.0	---	13.0	7.5	15.0	9.0	16.0	9.0	22.0	12.5

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	20.0	16.5	22.0	17.5	27.5	22.5	28.5	25.0	28.5	25.5	28.5	24.0
2	17.5	15.5	20.0	17.0	28.0	23.5	28.5	24.5	27.5	25.5	29.0	24.5
3	18.0	14.0	19.0	16.5	29.5	24.0	28.0	24.0	28.5	24.5	29.0	25.0
4	17.0	15.0	20.0	17.0	29.0	24.5	27.5	24.0	28.5	24.5	29.5	25.0
5	18.0	14.0	21.0	16.0	29.0	24.5	28.5	24.0	28.5	24.5	29.0	24.0
6	18.5	14.0	22.0	17.5	28.0	23.5	28.5	24.0	28.0	24.5	28.0	23.5
7	19.5	14.5	21.0	18.0	28.0	23.0	28.5	24.5	27.5	24.0	27.0	22.5
8	21.5	16.0	20.0	17.0	28.0	23.0	27.0	23.0	27.5	23.5	26.5	22.5
9	21.5	17.5	21.0	16.0	28.0	23.0	28.0	23.5	28.0	24.0	26.0	21.5
10	22.0	18.0	22.0	16.5	27.0	22.5	28.0	24.5	28.0	23.5	26.5	22.0
11	21.5	18.0	23.5	17.5	26.0	21.5	28.5	24.5	27.0	24.0	27.0	21.5
12	19.5	17.0	24.0	18.5	25.5	21.0	29.0	25.0	27.5	23.5	28.0	22.5
13	19.5	15.5	25.5	19.5	25.5	21.0	29.0	24.5	27.5	24.0	27.0	22.5
14	20.0	15.5	23.5	20.5	25.5	21.5	30.5	24.5	27.5	24.0	27.0	22.5
15	20.0	15.0	24.5	18.5	26.0	21.5	29.5	25.0	27.0	24.0	27.5	22.5
16	19.0	16.5	22.5	19.0	27.0	23.0	30.0	25.0	27.5	24.0	27.0	22.0
17	18.5	16.5	22.5	19.0	28.5	24.0	30.0	26.0	28.5	24.5	24.5	20.5
18	19.5	15.0	21.0	16.5	27.5	24.5	30.5	27.0	29.0	24.0	24.5	19.5
19	20.5	15.5	22.5	17.0	27.0	23.0	31.0	27.5	29.0	24.5	25.5	20.0
20	19.0	17.0	24.0	18.5	25.5	21.0	31.5	27.5	29.0	24.5	26.0	20.5
21	19.0	16.5	26.0	20.0	25.5	21.0	31.5	28.0	27.5	25.5	27.0	21.5
22	19.5	16.0	27.0	22.0	25.5	21.0	31.5	28.0	27.0	24.5	27.0	22.0
23	21.0	16.0	29.0	23.5	25.5	21.0	31.0	28.0	27.5	23.5	27.0	22.5
24	18.5	17.0	28.0	24.0	24.5	21.0	31.5	28.0	29.0	24.0	26.0	22.5
25	19.5	16.0	27.0	22.5	26.0	21.5	31.0	27.5	28.0	24.5	25.0	21.5
26	20.0	15.5	26.5	22.0	28.0	23.0	30.0	27.0	29.5	25.5	25.0	21.5
27	21.5	16.5	27.5	21.0	29.0	25.0	30.0	26.5	29.0	25.5	25.0	21.5
28	21.0	17.5	28.5	23.0	29.0	25.5	30.5	26.5	28.0	24.0	25.5	21.5
29	20.0	17.0	28.0	24.5	28.5	25.5	30.0	27.0	27.0	23.0	24.5	21.5
30	21.5	16.0	27.0	22.5	29.0	24.5	30.0	27.0	27.5	23.0	25.0	21.0
31	---	---	28.0	22.5	---	---	28.5	26.5	27.5	23.5	---	---
MONTH	22.0	14.0	29.0	16.0	29.5	21.0	31.5	23.0	29.5	23.0	29.5	19.5

11262900 MUD SLOUGH NEAR GUSTINE, CA—Continued

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	Depth at sample location, feet (81903)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR					
09...*	1025	1.12	4400	18.3	2.55
09...*	1027	1.28	4390	18.3	7.65
09...*	1028	1.24	4400	18.3	12.8
09...*	1029	1.32	4400	18.3	17.9
09...*	1030	1.33	4400	18.3	22.9
09...*	1031	1.40	4400	18.3	28.1
09...*	1032	1.40	4390	18.3	33.1
09...*	1033	1.52	4380	18.3	38.2
09...*	1034	1.54	4380	18.3	43.4
09...*	1035	1.63	4380	18.3	48.5
AUG					
05...*	1617	1.52	2730	28.0	2.65
05...*	1618	1.80	2740	28.1	7.95
05...*	1619	1.73	2740	28.1	13.2
05...*	1620	1.83	2740	28.1	18.6
05...*	1621	1.94	2730	28.1	23.8
05...*	1622	2.02	2730	28.1	29.2
05...*	1623	2.02	2730	28.1	34.4
05...*	1624	1.96	2740	28.1	39.8
05...*	1625	2.02	2740	28.1	45.0
05...*	1626	1.60	2740	28.1	50.4

* Instantaneous discharge at time of cross-sectional measurement: Apr. 9, 62 ft^3/s, estimated; Aug. 5, 110 ft^3/s.

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA

LOCATION.—Lat 37° 43'54", long 119° 33'28", unsurveyed, Mariposa County, Hydrologic Unit 18040008, Yosemite National Park, on right bank, 10 ft downstream from remnents of footbridge, at Happy Isles, 0.4 mi downstream from Illilouette Creek, and 2.0 mi southeast of Yosemite National Park Headquarters.

DRAINAGE AREA.—181 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—August 1915 to current year.

REVISED RECORDS.—WSP 1215: 1938(M).

GAGE.—Water-stage recorder. Datum of gage is 4,016.58 ft above NGVD of 1929. Prior to Nov. 2, 1916, nonrecording gage at datum 0.55 ft lower.

REMARKS.—Records good. Up to 5 ft^3/s can be diverted upstream from station for Yosemite Valley water supply.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,100 ft^3/s, Jan. 2, 1997, gage height, 13.27 ft, from rating curve extended above 4,000 ft^3/s, on basis of contracted-opening measurements at gage heights 10.4 and 11.55 ft; minimum daily, 1.5 ft^3/s, Sept. 26, 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,900 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 29	0145	4,550	7.95

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	4.0	41	77	213	108	570	305	2830	461	277	27
2	5.7	4.2	38	84	196	101	461	312	2810	390	250	26
3	6.2	4.2	35	90	165	102	382	338	2930	363	242	41
4	5.8	4.0	34	95	150	101	327	374	2870	362	180	102
5	5.7	3.9	33	100	136	96	284	378	2410	341	139	77
6	5.8	3.9	32	107	128	97	274	393	2160	347	114	61
7	4.8	5.2	31	107	120	100	285	374	2070	325	95	50
8	4.7	772	29	110	109	105	369	351	1970	292	82	43
9	4.7	641	30	109	104	113	455	328	2050	266	72	38
10	4.7	208	29	111	102	121	514	324	1860	252	64	33
11	4.6	144	27	104	102	143	541	368	1710	244	58	30
12	4.5	132	27	101	102	178	566	522	1600	226	54	28
13	4.4	123	29	99	134	226	513	804	1450	211	53	25
14	4.4	110	47	97	140	245	453	1120	1450	198	50	23
15	4.4	97	47	93	135	371	405	1160	1480	185	47	21
16	4.2	84	48	96	136	292	368	1220	1400	178	42	20
17	4.1	76	42	107	125	242	342	1280	1380	176	40	19
18	4.0	68	61	121	115	211	323	1390	1280	189	38	18
19	4.1	63	75	129	115	197	322	1500	1180	345	37	17
20	4.2	72	70	134	111	203	356	1690	991	341	35	14
21	4.4	91	74	133	109	202	354	1970	838	273	45	13
22	4.4	99	68	127	108	251	326	2310	731	221	55	13
23	4.4	87	64	128	110	307	309	2560	635	275	52	12
24	4.1	76	64	130	117	281	362	2490	507	456	47	11
25	3.9	66	61	131	122	267	368	2650	451	270	40	11
26	3.9	56	61	141	118	294	352	2500	477	205	37	10
27	3.8	50	62	170	118	310	372	2880	519	174	36	9.4
28	3.7	46	66	175	109	296	380	3610	556	210	34	9.2
29	3.7	44	66	160	---	328	340	3840	573	271	33	8.8
30	3.9	43	71	158	---	421	307	3790	542	204	31	8.4
31	3.9	---	76	186	---	538	---	3230	---	210	30	---
TOTAL	140.3	3277.4	1538	3710	3549	6847	11580	46361	43710	8461	2409	818.8
MEAN	4.53	109	49.6	120	127	221	386	1496	1457	273	77.7	27.3
MAX	6.2	772	76	186	213	538	570	3840	2930	461	277	102
MIN	3.7	3.9	27	77	102	96	274	305	451	174	30	8.4
AC-FT	278	6500	3050	7360	7040	13580	22970	91960	86700	16780	4780	1620

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	35.6	61.5	83.1	90.4	109	192	542	1265	1221	472	112	43.6
MAX	267	818	736	1084	401	575	1007	2675	3317	2393	775	360
(WY)	1919	1951	1965	1997	1986	1986	1926	1969	1983	1995	1983	1978
MIN	2.58	4.89	4.49	6.56	8.89	25.2	173	231	120	28.6	7.79	3.18
(WY)	1956	1933	1977	1991	1991	1977	1975	1977	1924	1931	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1916 - 2003	
ANNUAL TOTAL	109605.1		132401.5			
ANNUAL MEAN	300		363		353	
HIGHEST ANNUAL MEAN					802	1983
LOWEST ANNUAL MEAN					84.9	1977
HIGHEST DAILY MEAN	2000	Jun 1	3840	May 29	9030	Jan 2 1997
LOWEST DAILY MEAN	3.7	Oct 28	3.7	Oct 28	1.5	Sep 26 1977
ANNUAL SEVEN-DAY MINIMUM	3.8	Oct 25	3.8	Oct 25	1.9	Oct 14 1964
MAXIMUM PEAK FLOW			4550	May 29	10100	Jan 2 1997
MAXIMUM PEAK STAGE			7.95	May 29	13.27	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	217400		262600		255500	
10 PERCENT EXCEEDS	980		1140		1130	
50 PERCENT EXCEEDS	98		118		100	
90 PERCENT EXCEEDS	5.2		5.8		11	

11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1966–96, October 2000 to current year.
CHEMICAL DATA: Water years 1968–96, October 2000 to current year.
BIOLOGICAL DATA: Water years 1973–81.
WATER TEMPERATURE: Water years 1966–77, 1979–93.
SEDIMENT DATA: Water years 1970–71, 1973–96, October 2000 to current year.

PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: October 1965 to September 1977, October 1978 to September 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)
JUN											
25...	1130	466	662	8.3	101	6.7	10	28.5	12.9	--	--
SEP											
11...	1030	31	663	9.3	99	7.0	26	12.0	12.5	7	.0

DATE	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)
JUN											
25...	<.01	<.008	.207	--	<.10	--	3	4	.49	<.02	.40
SEP											
11...	2.48	.235	.422	.3	2.02	36	6	8	3.17	5.70	.58

DATE	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Organic carbon, water, fltrd, mg/L (00681)
JUN										
25...	--	--	--	<10	--	<.015	.031	--	--	1.1
SEP										
11...	19	.03	1.75	21	--	<.015	.023	--	--	1.3

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
JUN						
25...	0900	466	12.5	40	4	5.0
SEP						
11...	1000	31	12.5	79	4	.33

< Actual value is known to be less than the value shown.

11266500 MERCED RIVER AT POHONO BRIDGE, NEAR YOSEMITE, CA

LOCATION.—Lat 37° 43'01", long 119° 39'55", unsurveyed, Mariposa County, Hydrologic Unit 18040008, Yosemite National Park, on left bank, 150 ft upstream from Pohono Bridge, 0.4 mi upstream from Artist Creek, and 4.8 mi southwest of Yosemite National Park Headquarters.

DRAINAGE AREA.—321 mi^2.

PERIOD OF RECORD.—October 1916 to current year. Monthly discharge only for October and November 1916, published in WSP 1315-A.
CHEMICAL DATA: Water years 1971–72, 1981–82, 1994, 1995.
WATER TEMPERATURE: Water year 1995.
SEDIMENT DATA: Water year 1995.

GAGE.—Water-stage recorder. Datum of gage is 3,861.66 ft above NGVD of 1929. Prior to Sept. 5, 1918, at datum 1.8 ft higher. Sept. 5, 1918, to Sept. 30, 1955, at datum 1.0 ft higher.

REMARKS.—Records good. No diversions between stations at Happy Isles Bridge and Pohono Bridge.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 24,600 ft^3/s, Jan. 3, 1997, gage height, 23.43 ft, from floodmarks in gagehouse, from rating curve extended above 17,000 ft^3/s, on basis of computation of flow over diversion dam for Yosemite Powerplant 1 mi downstream at gage heights 20.1 and 21.98 ft, present datum; minimum daily, 5.4 ft^3/s, Oct. 26, 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 2,900 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 8	1815	3,330	7.18	May 29	0400	6,510	9.93

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	15	87	162	458	241	1260	705	4560	638	414	48
2	17	15	82	193	419	219	1020	740	4450	560	363	47
3	17	15	77	213	350	230	839	809	4540	511	351	48
4	17	15	75	222	320	228	746	884	4420	499	274	121
5	17	14	73	227	288	210	637	886	3910	473	217	105
6	17	15	72	238	268	215	620	945	3470	464	179	86
7	17	18	69	236	255	223	638	915	3280	442	153	73
8	17	1570	63	241	229	233	812	832	3060	402	133	65
9	16	1780	64	242	217	251	988	764	3110	367	116	59
10	16	495	63	258	223	271	1100	757	2820	343	104	54
11	16	317	60	240	224	319	1170	858	2560	332	94	51
12	16	290	59	230	221	398	1270	1150	2380	311	87	48
13	16	263	66	225	280	501	1180	1660	2130	288	84	45
14	15	233	95	218	317	568	1050	2210	2090	270	80	42
15	15	204	124	207	312	848	928	2380	2100	249	76	39
16	15	178	147	211	312	704	842	2500	1980	235	73	38
17	15	160	122	229	283	568	782	2520	1930	229	69	36
18	15	144	121	260	253	481	735	2760	1770	227	66	35
19	15	132	150	279	257	446	721	2930	1650	391	65	33
20	15	146	161	287	244	464	807	3270	1420	439	62	32
21	15	183	163	286	243	455	808	3750	1250	357	65	31
22	15	194	151	272	242	560	738	4290	1100	289	78	30
23	15	177	141	273	247	701	694	4670	980	294	78	29
24	15	157	134	290	261	658	818	4580	825	516	73	28
25	15	138	129	291	271	628	832	4770	724	365	67	27
26	15	122	136	310	261	711	786	4480	720	284	63	27
27	15	110	141	355	262	776	824	e4900	747	245	60	26
28	15	98	154	375	237	717	850	e5700	771	239	57	26
29	15	93	154	349	---	781	777	5880	780	365	55	25
30	15	89	149	343	---	966	703	5780	744	286	53	24
31	15	---	176	405	---	1190	---	5170	---	266	51	---
TOTAL	486	7380	3458	8167	7754	15761	25975	84445	66271	11176	3760	1378
MEAN	15.7	246	112	263	277	508	866	2724	2209	361	121	45.9
MAX	17	1780	176	405	458	1190	1270	5880	4560	638	414	121
MIN	15	14	59	162	217	210	620	705	720	227	51	24
AC-FT	964	14640	6860	16200	15380	31260	51520	167500	131400	22170	7460	2730

e Estimated.

11266500 MERCED RIVER AT POHONO BRIDGE, NEAR YOSEMITE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	61.8	122	182	202	247	422	1107	2339	1918	642	149	64.8
MAX	436	1587	1666	2461	1035	1459	2136	5305	6279	3460	1045	426
(WY)	1983	1951	1951	1997	1986	1986	1982	1969	1983	1983	1983	1978
MIN	5.89	13.9	15.1	17.3	21.0	51.5	343	379	148	47.2	14.7	7.38
(WY)	1978	1930	1977	1977	1991	1977	1977	1977	1924	1931	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1917 - 2003	
ANNUAL TOTAL	196323		236011			
ANNUAL MEAN	538		647		622	
HIGHEST ANNUAL MEAN					1466	1983
LOWEST ANNUAL MEAN					127	1977
HIGHEST DAILY MEAN	3200	May 18	5880	May 29	21000	Jan 2 1997
LOWEST DAILY MEAN	14	Nov 5	14	Nov 5	5.4	Oct 26 1977
ANNUAL SEVEN-DAY MINIMUM	15	Oct 30	15	Oct 30	5.6	Oct 20 1977
MAXIMUM PEAK FLOW			6510	May 29	24600	Jan 3 1997
MAXIMUM PEAK STAGE			9.93	May 29	23.43	Jan 3 1997
ANNUAL RUNOFF (AC-FT)	389400		468100		450800	
10 PERCENT EXCEEDS	1890		1770		1920	
50 PERCENT EXCEEDS	196		249		183	
90 PERCENT EXCEEDS	17		17		26	

11267350 BIG CREEK DIVERSION NEAR FISH CAMP, CA

LOCATION.—Lat 37° 28'10", long 119° 36'51", in SE 1/4 NE 1/4 sec.25, T.5 S., R.21 E., Mariposa County, Hydrologic Unit 18040008, Sierra National Forest, on right bank, 0.5 mi downstream from diversion weir, 0.5 mi upstream from Rainier Creek, and 1.2 mi southeast of Fish Camp.

PERIOD OF RECORD.—October 1969 to June 1977, April 1987 to current year.

GAGE.—Water-stage recorder, crest-stage gage, and culvert control. Elevation of gage is 5,400 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Flow is diverted from the left bank of Big Creek, a tributary to South Fork of the Merced River, to Lewis Fork of the Fresno River. Flow is used for domestic and irrigation purposes.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 66 ft^3/s, June 1, 2, 1975; no flow for several days in summer months of most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.16	0.97	0.28	14	17	13	15	18	44	9.4	1.5	0.90
2	0.15	0.94	0.28	20	16	13	15	18	43	8.3	0.86	0.83
3	0.15	0.94	0.31	19	e13	13	15	19	40	7.4	0.79	0.76
4	0.14	0.93	0.32	13	e12	13	15	19	36	7.2	0.71	0.87
5	0.13	0.92	2.5	8.0	e11	12	15	18	35	7.0	0.68	0.95
6	0.13	0.98	4.4	8.0	e10	13	14	18	33	6.6	0.63	0.91
7	0.11	5.0	4.5	8.0	e9.9	13	16	18	31	6.2	0.86	0.86
8	0.40	51	4.3	8.0	e9.3	14	18	18	30	5.8	0.98	0.84
9	0.55	43	4.1	8.0	e9.0	14	18	18	28	5.3	e0.88	0.80
10	0.55	29	4.1	12	e9.0	15	18	18	25	5.1	e0.85	0.78
11	0.52	22	2.8	10	10	17	18	18	23	5.0	e0.82	0.83
12	0.47	19	2.5	9.1	13	19	18	18	22	4.7	e0.78	0.92
13	0.46	17	3.8	8.7	30	21	19	19	22	2.7	0.71	0.88
14	0.41	16	11	8.3	27	23	18	27	21	1.1	0.67	0.83
15	0.39	15	10	8.2	22	49	18	32	20	1.0	0.59	0.80
16	0.39	14	5.6	8.2	21	36	18	32	19	1.0	0.47	0.80
17	0.39	12	6.2	8.6	19	31	18	33	18	1.0	0.39	0.79
18	0.39	7.8	9.8	9.3	17	28	18	33	17	0.95	0.34	0.78
19	0.38	5.0	10	9.7	16	27	18	33	16	0.98	0.32	0.77
20	0.35	5.0	9.2	9.8	15	27	18	33	16	1.0	0.28	0.74
21	0.34	4.9	9.0	9.8	15	26	18	34	15	1.00	0.28	0.76
22	0.34	4.5	9.3	9.8	15	27	18	41	15	0.94	0.54	0.73
23	0.34	4.4	11	10	15	28	18	46	15	0.94	1.1	0.72
24	0.34	4.3	12	11	15	28	18	47	14	0.91	1.0	0.70
25	0.32	3.9	12	11	15	27	18	48	13	0.87	1.00	0.71
26	0.29	1.8	11	12	14	20	18	46	12	0.83	0.96	0.70
27	0.28	0.35	12	14	14	15	18	46	11	0.86	0.94	0.74
28	0.66	0.34	13	14	13	15	18	44	11	0.94	0.89	0.78
29	0.94	0.28	12	13	---	15	18	44	10	0.88	0.86	0.79
30	0.94	0.28	13	13	---	15	18	43	9.9	0.81	0.90	0.82
31	0.99	---	16	16	---	15	---	44	---	1.7	1.0	---
TOTAL	12.40	291.53	226.29	341.5	422.2	642	520	943	664.9	98.41	23.58	24.09
MEAN	0.40	9.72	7.30	11.0	15.1	20.7	17.3	30.4	22.2	3.17	0.76	0.80
MAX	0.99	51	16	20	30	49	19	48	44	9.4	1.5	0.95
MIN	0.11	0.28	0.28	8.0	9.0	12	14	18	9.9	0.81	0.28	0.70
AC-FT	25	578	449	677	837	1270	1030	1870	1320	195	47	48

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

MEAN	1.31	3.98	6.40	8.04	9.90	17.0	23.4	29.0	17.3	3.94	0.90	0.76
MAX	7.61	11.9	31.3	35.8	32.7	37.3	43.3	56.2	58.0	22.3	3.14	3.46
(WY)	1970	1997	1997	1970	1970	1972	1993	1975	1998	1998	1973	1995
MIN	0.026	1.10	0.75	0.76	0.19	0.32	3.21	2.65	0.025	0.52	0.025	0.000
(WY)	1989	1991	1991	1996	1997	1996	1995	1995	1995	1995	1988	1987

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL TOTAL	2755.36		4209.90			
ANNUAL MEAN	7.55		11.5		10.6	
HIGHEST ANNUAL MEAN					19.3	1993
LOWEST ANNUAL MEAN					3.67	1995
HIGHEST DAILY MEAN	51	Nov 8	51	Nov 8	66	Jun 1 1975
LOWEST DAILY MEAN	0.00	Jul 30	0.11	Oct 7	0.00	Jul 1 1973
ANNUAL SEVEN-DAY MINIMUM	0.02	Jul 26	0.14	Oct 1	0.00	Aug 1 1987
ANNUAL RUNOFF (AC-FT)	5470		8350		7710	
10 PERCENT EXCEEDS	23		27		34	
50 PERCENT EXCEEDS	5.0		9.9		4.1	
90 PERCENT EXCEEDS	0.13		0.47		0.22	

e Estimated.

11269500 LAKE MCCLURE AT EXCHEQUER, CA

LOCATION.—Lat 37° 35'02", long 120° 16'09", in NW 1/4 SE 1/4 sec.13, T.4 S., R.15 E., Mariposa County, Hydrologic Unit 18040008, on left end of New Exchequer Dam on Merced River, 0.9 mi east of Exchequer, and 5.5 mi northeast of Merced Falls.

DRAINAGE AREA.—1,037 mi^2.

PERIOD OF RECORD.—April 1926 to September 1930 (daily gage heights; also summary of yearly contents in WSP 881), October 1930 to current year.

REVISED RECORDS.—WSP 881: 1926–32 (yearly summaries only). WSP 1345: 1951(M). WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Merced Irrigation District). Prior to Oct. 1, 1964, indicator in powerplant at same datum. Oct. 1, 1964, to July 31, 1966, nonrecording gage at center of upstream face of dam at same datum.

REMARKS.—Reservoir is formed by a rockfill dam with a reinforced concrete face completed in March 1967. Dam is downstream from and connected to the original concrete arch and gravity-type dam which was completed in April 1926. Usable capacity, 1,024,000 acre-ft, between elevations 440.0 ft, invert entrance to outlet tunnel, and 867.0 ft, top of spillway gates. Dead storage, 300 acre-ft. Water is released through Exchequer Powerplant (station 11269700) down the Merced River to a diversion dam for Merced Irrigation District's main canal.

COOPERATION.—Records were provided by Pacific Gas and Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2179.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 1,026,000 acre-ft, July 14, 15, 1969, elevation, 867.2 ft; practically no storage at times in 1926, 1930–31, 1964–65 when reservoir was drained for inspection or construction. Minimum since construction of New Exchequer Dam in 1966 and since lake first filled, 66,100 acre-ft, Feb. 28, 1991, elevation, 588.4 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 677,900 acre-ft, June 21, elevation, 810.29 ft; minimum, 283,300 acre-ft, Nov. 8, minimum elevation, 707.75 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Merced Irrigation District, dated June 1966)

590	67,900	640	137,800	720	317,800	840	845,800
600	79,900	660	173,500	750	415,900	860	975,700
610	92,800	680	215,200	780	534,500	870	1,046,000
620	106,700	700	263,000	820	729,600		

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	332600	286000	301000	319900	347000	366400	387200	434500	596400	659600	572900	493700
2	331400	285600	300900	321500	348100	367000	390000	434800	606400	657400	570300	491400
3	330100	285300	300700	322500	349300	367600	391300	434300	614300	654400	568300	489300
4	328700	285100	300300	323500	350000	367900	392400	434800	623800	652100	565600	487500
5	327600	284300	300100	324300	350700	368400	393700	436700	632500	649700	562900	485600
6	326600	283800	299900	325000	351300	368800	394600	437800	639700	647400	560400	484000
7	325500	283600	299500	326300	351900	369200	395700	437600	646100	645400	557800	482200
8	324200	283300	299300	327500	352500	368400	396600	437800	651000	642500	555200	480400
9	323600	287500	298900	328600	353200	367900	398100	437500	655500	639600	553200	478800
10	322200	297300	298500	329800	354000	367600	399600	436700	660100	638200	550500	477400
11	320900	299600	298200	331400	354300	367400	401200	435600	663300	633700	547900	475300
12	319400	300400	298200	333100	354800	367300	402300	435000	666300	630800	545000	473600
13	318200	300900	298100	334400	355200	367800	403700	436500	668900	628100	542100	471800
14	316700	301200	298000	335600	355900	367500	410600	439200	670800	625100	539400	470100
15	315800	301300	298300	336700	357200	368700	417400	444100	672500	622600	536700	468100
16	314100	301100	298800	337500	358300	372700	420600	448300	674200	619600	533800	466400
17	311700	301300	301600	338200	359300	376200	422800	453200	675400	616400	531100	465000
18	309000	301400	305500	338600	360300	377700	424500	458200	676200	613800	528200	463600
19	306400	301400	307200	339000	361000	379000	425400	463200	676500	610700	525500	462200
20	304100	301700	308800	339700	361700	379700	426100	468800	676800	607700	522700	460700
21	301700	301700	310700	340300	362000	380500	426500	475900	677000	604900	520300	459200
22	298800	301500	312100	341000	362500	380200	428000	483600	676400	601900	517800	457800
23	296700	301700	313000	341600	363100	380800	428900	492600	675200	599000	515200	456200
24	294600	301800	313600	342300	363700	381800	429500	503200	673400	596000	512400	454700
25	293300	301900	313800	343000	364200	382500	430200	514500	671500	593500	510200	453100
26	291800	301800	314100	343700	364700	382900	431000	525300	669500	591000	507900	451400
27	291200	301500	314300	344600	365300	383200	431800	535000	667400	587700	505200	449400
28	290400	301400	314600	345300	365800	383900	432400	545400	665300	584800	503100	447400
29	288900	301300	315100	345500	---	383900	433600	558000	663300	581300	500900	446000
30	287900	301200	316900	345500	---	385000	434400	571900	661400	578400	498800	444400
31	286600	---	318300	346100	---	385400	---	584600	---	575500	496000	---
MAX	332600	301900	318300	346100	365800	385400	434400	584600	677000	659600	572900	493700
MIN	286600	283300	298000	319900	347000	366400	387200	434300	596400	575500	496000	444400
a	708.95	714.23	720.14	729.31	735.41	741.28	755.05	791.18	807.06	789.21	770.85	757.73
b	-46100	+14600	+17100	+27800	+19700	+19600	+49000	+150200	+76800	-85900	-79500	-51600
c	48930	15680	15520	6370	14120	42560	66420	108000	110000	115600	89540	54620

CAL YR 2002 b -70800
WTR YR 2003 b +111700

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.
c Diversion, in acre-feet, through Exchequer Powerplant (station 11269700), provided by Pacific Gas & Electric Co.

11270900 MERCED RIVER BELOW MERCED FALLS DAM, NEAR SNELLING, CA

LOCATION.—Lat 37° 31'18", long 120° 19'53", in SE 1/4 SW 1/4 sec.4, T.5 S., R.15 E., Merced County, Hydrologic Unit 18040008, on right bank, 0.1 mi south of Merced Falls, 0.2 mi downstream from Merced Falls Dam, and 5.8 mi east of Snelling.

DRAINAGE AREA.—1,061 mi^2.

PERIOD OF RECORD.—April 1901 to current year. Records for water years 1914–16 incomplete, yearly estimates published in WSP 1315-A. Published as "near Merced Falls" 1901–13; as "at Exchequer" 1916–64.

REVISED RECORDS.—WSP 1315-A: 1901–09, 1911(M). WSP 1515: 1918–20, 1942–43 (published as station 11270000). WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 310.55 ft above NGVD of 1929. See WSP 1930 for history of changes prior to Oct. 1, 1964.

REMARKS.—Merced Falls Dam diverts water to Northside Canal for irrigation downstream from station. Flow regulated by Exchequer (station 11269700), McSwain Powerplant (station 11270610), and Merced Falls Powerplant, Lake McClure (station 11269500) since 1926, enlarged 1967, and McSwain Reservoir (station 11270600) since 1966, capacity, 9,200 acre-ft.

COOPERATION.—Records were provided by Pacific Gas and Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2179.

EXTREMES FOR PERIOD OF RECORD (water years 1901–13, 1916–2001).—Maximum discharge observed, 47,700 ft^3/s, Jan. 31, 1911, gage height, 23.3 ft, site and datum then in use; no flow for part of Nov. 21, 1901. Since construction of Exchequer Dam in 1926: Maximum discharge, 46,200 ft^3/s, Dec. 4, 1950, gage height, 22.6 ft, from floodmarks, site and datum then in use, from rating curve extended above 16,000 ft^3/s, on basis of computation of peak flow over dam; minimum daily, 3.4 ft^3/s, Mar. 5, 1966.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	681	227	232	203	234	258	994	1450	1780	1840	1760	1120
2	663	227	229	203	274	261	996	1680	1820	1780	1760	1070
3	646	227	230	203	242	262	874	1970	1800	1750	1720	1020
4	626	233	239	203	242	263	762	1980	1730	1740	1640	944
5	606	227	234	207	242	265	682	1950	1710	1740	1550	942
6	589	227	234	206	241	273	670	1980	1730	1760	1450	942
7	573	260	234	197	245	671	687	2010	1760	1740	1410	941
8	571	264	235	198	240	699	743	2040	1760	1810	1440	955
9	574	253	235	198	238	703	782	2070	1700	1890	1450	968
10	578	251	230	214	240	703	980	2140	1640	1880	1430	968
11	572	251	228	196	241	700	1320	1740	1650	1790	1430	907
12	510	251	223	194	241	705	1320	1320	1670	1760	1420	865
13	516	257	215	195	242	624	1310	1230	1690	1760	1450	864
14	823	257	205	196	243	604	1190	1200	1710	1730	1480	865
15	966	258	204	196	244	604	1130	1340	1710	1720	1490	841
16	1190	259	209	196	241	583	1150	1500	1720	1770	1490	787
17	1180	251	204	195	244	578	1190	1590	1690	1820	1500	754
18	1190	271	203	196	245	573	1210	1550	1700	1850	1490	758
19	1190	261	223	197	245	673	1220	1520	1710	1850	1400	803
20	1160	262	202	202	248	769	1220	1580	1720	1850	1340	839
21	1100	275	203	202	250	817	1210	1650	1840	1770	1320	849
22	1080	259	203	202	250	876	1130	1630	1910	1730	1320	849
23	811	259	203	203	250	949	1090	1580	1910	1740	1320	832
24	671	259	203	206	254	955	1140	1580	1870	1780	1310	835
25	592	261	202	197	253	959	1190	1640	1830	1820	1270	883
26	456	242	202	201	256	957	1240	1720	1820	1840	1220	894
27	509	235	203	202	259	988	1310	1750	1870	1830	1210	838
28	488	229	209	202	261	987	1330	1750	1930	1780	1210	807
29	453	230	207	207	---	993	1280	1730	1920	1720	1210	807
30	233	234	203	198	---	995	1250	1730	1880	1710	1210	806
31	232	---	207	230	---	995	---	1760	---	1730	1190	---
TOTAL	22029	7457	6693	6245	6905	21242	32600	52360	53180	55280	43890	26553
MEAN	711	249	216	201	247	685	1087	1689	1773	1783	1416	885
MAX	1190	275	239	230	274	995	1330	2140	1930	1890	1760	1120
MIN	232	227	202	194	234	258	670	1200	1640	1710	1190	754
AC-FT	43690	14790	13280	12390	13700	42130	64660	103900	105500	109600	87060	52670
a	9290	8660	9250	8800	9330	8960	8340	9130	8940	9390	8920	8870
b	40420	472	0.00	0.00	0.00	37490	63080	94610	99550	105200	82370	53220

a End of month contents, in acre-feet, McSwain Reservoir (station 11270600), provided by Pacific Gas & Electric Co.
b Total discharge, in acre-feet, McSwain Powerplant (station 11270610), provided by Pacific Gas & Electric Co.

11270900 MERCED RIVER BELOW MERCED FALLS DAM, NEAR SNELLING, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1901 - 1925, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	224	222	396	1095	1290	2102	2644	4362	3719	1261	306	144
MAX	1522	531	1676	4409	3232	6995	5749	6768	8225	5867	958	302
(WY)	1905	1910	1910	1911	1909	1907	1907	1922	1906	1906	1906	1904
MIN	49.4	58.5	83.7	100	208	314	774	1478	212	61.3	29.9	20.5
(WY)	1914	1922	1906	1918	1913	1924	1912	1924	1924	1924	1924	1924

SUMMARY STATISTICS	WATER YEARS 1901 - 1925	
ANNUAL MEAN	1443	
HIGHEST ANNUAL MEAN	2937	1907
LOWEST ANNUAL MEAN	348	1924
HIGHEST DAILY MEAN	37200	Jan 30 1911
LOWEST DAILY MEAN	1.0	Nov 21 1901
ANNUAL SEVEN-DAY MINIMUM	20	Sep 4 1924
MAXIMUM PEAK FLOW	47700	Jan 31 1911
MAXIMUM PEAK STAGE	23.30	Jan 31 1911
ANNUAL RUNOFF (AC-FT)	1045000	
10 PERCENT EXCEEDS	4340	
50 PERCENT EXCEEDS	488	
90 PERCENT EXCEEDS	80	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1964, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	223	57.8	267	402	694	1059	1892	3143	2737	1739	1400	884
MAX	638	385	4698	3869	3155	5375	3876	7249	7426	2384	1713	1313
(WY)	1945	1951	1951	1956	1938	1938	1958	1952	1938	1938	1963	1952
MIN	20.8	25.2	26.0	20.7	35.1	33.3	275	1049	1090	210	171	17.2
(WY)	1932	1932	1934	1940	1960	1948	1948	1955	1934	1931	1961	1931

SUMMARY STATISTICS	WATER YEARS 1927 - 1964	
ANNUAL MEAN	1210	
HIGHEST ANNUAL MEAN	2738	1938
LOWEST ANNUAL MEAN	360	1931
HIGHEST DAILY MEAN	24000	Dec 4 1950
LOWEST DAILY MEAN	4.5	Feb 11 1960
ANNUAL SEVEN-DAY MINIMUM	8.7	Jan 12 1940
MAXIMUM PEAK FLOW	46200	Dec 4 1950
MAXIMUM PEAK STAGE	22.60	Dec 4 1950
ANNUAL RUNOFF (AC-FT)	876500	
10 PERCENT EXCEEDS	2510	
50 PERCENT EXCEEDS	1150	
90 PERCENT EXCEEDS	38	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	895	386	537	749	1086	1301	1791	2236	2271	2099	1713	1334
MAX	3143	1396	2451	7368	6686	4680	5278	5701	6975	5177	2761	3049
(WY)	1984	1970	1983	1997	1997	1983	1983	1982	1983	1983	1983	1983
MIN	76.4	118	120	133	113	139	394	528	813	922	636	83.1
(WY)	1978	1969	1969	1977	1977	1977	1991	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1968 - 2003	
ANNUAL TOTAL	335324		334434			
ANNUAL MEAN	919		916		1368	
HIGHEST ANNUAL MEAN					3779	1983
LOWEST ANNUAL MEAN					363	1977
HIGHEST DAILY MEAN	2410	May 7	2140	May 10	8020	Jan 4 1997
LOWEST DAILY MEAN	202	Dec 20	194	Jan 12	46	Oct 3 1968
ANNUAL SEVEN-DAY MINIMUM	203	Dec 20	195	Jan 11	74	Oct 12 1977
MAXIMUM PEAK FLOW			2180	May 10	9360	Jun 1 1969
MAXIMUM PEAK STAGE			7.07	May 10	12.40	Jun 1 1969
ANNUAL RUNOFF (AC-FT)	665100		663300		990900	
TOTAL DIVERSION (AC-FT) a	604600		576400			
10 PERCENT EXCEEDS	1770		1770		2800	
50 PERCENT EXCEEDS	824		849		1170	
90 PERCENT EXCEEDS	234		204		188	

a Total discharge, in acre-feet, McSwain Powerplant (station 11270610), provided by Pacific Gas & Electric Co.

11271290 MERCED RIVER AT SHAFFER BRIDGE, NEAR CRESSEY, CA

LOCATION.—Lat 37° 27'15", long 120° 36'28", in NW 1/4 SW 1/4 sec.36, T.5 S., R.12 E., Merced County, Hydrologic Unit 18040002, near center of span on downstream side of county road bridge, 0.6 mi upstream from Dry Creek, and 4.0 mi northeast of Cressey.

DRAINAGE AREA.—1,117 mi^2.

PERIOD OF RECORD.—October 1965 to current year (low-flow records only).

GAGE.—Water-stage recorder. Datum of gage is 116.79 ft above NGVD of 1929.

REMARKS.—No records computed above 200 ft^3/s. Most water released from Lake McClure (station 11269500) is diverted upstream into the main canal of Merced Irrigation District. Flow past station consists of releases from diversion dam, irrigation return flow, and tributary inflow.

COOPERATION.—Records were provided by Pacific Gas and Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2179.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	107	195	195	192	178	191	199	---	---	145	125	119
2	110	188	195	187	185	190	199	---	---	147	128	123
3	115	189	195	186	---	189	---	---	---	154	140	107
4	120	186	190	185	198	188	---	---	196	142	134	95
5	117	185	194	183	196	185	---	---	---	149	136	97
6	121	183	196	185	195	187	---	---	---	162	138	102
7	124	189	194	184	189	195	---	---	---	164	126	107
8	129	---	195	181	188	189	---	---	---	165	128	110
9	114	---	196	175	187	187	---	---	---	156	140	109
10	110	---	197	188	190	184	---	---	---	160	146	115
11	113	---	196	---	193	178	---	---	190	151	129	116
12	122	---	198	187	192	177	---	---	192	145	118	108
13	119	---	200	178	200	176	---	---	192	140	125	109
14	127	---	---	176	197	175	---	---	187	143	117	104
15	---	---	193	174	194	---	---	---	192	140	125	100
16	---	---	---	173	195	---	---	---	187	139	126	99
17	---	---	---	173	190	---	---	---	---	135	132	88
18	---	---	198	173	189	---	---	---	198	137	120	87
19	---	---	192	173	192	---	---	---	---	136	109	95
20	---	---	---	173	190	199	---	---	---	133	117	107
21	---	---	---	175	189	198	---	---	---	138	124	111
22	---	---	196	177	189	197	---	---	---	146	136	117
23	---	---	192	172	189	197	---	---	---	153	121	113
24	---	---	190	170	186	---	---	---	196	144	100	108
25	---	---	187	169	189	191	---	---	---	136	89	118
26	---	---	186	168	189	186	---	---	199	129	84	121
27	---	---	186	167	189	180	---	---	182	115	83	121
28	---	---	187	166	189	176	---	---	175	116	80	118
29	---	---	198	167	---	182	---	---	163	121	89	118
30	---	196	200	167	---	192	---	---	153	116	114	118
31	---	---	193	165	---	197	---	---	---	123	123	---
TOTAL	---	---	---	---	---	---	---	---	---	4380	3702	3260
MEAN	---	---	---	---	---	---	---	---	---	141	119	109
MAX	---	---	---	---	---	---	---	---	---	165	146	123
MIN	---	---	---	---	---	---	---	---	---	115	80	87
AC-FT	---	---	---	---	---	---	---	---	---	8690	7340	6470

11272500 MERCED RIVER NEAR STEVINSON, CA

LOCATION.—Lat 37° 22'15", long 120° 55'46", in SW 1/4 NE 1/4 sec.36, T.6 S., R.9 E., Merced County, Hydrologic Unit 18040002, on right bank, 4.4 mi upstream from mouth, and 5.3 mi northwest of Stevinson.

DRAINAGE AREA.—1,273 mi^2.

PERIOD OF RECORD.—October 1940 to September 1995, October 2001 to current year.
SPECIFIC CONDUCTANCE: Water years 1989–92.
WATER TEMPERTURE: Water years 1989–92.

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929. October 1940 to Aug. 15, 1955, at datum 55.74 ft higher; Aug. 16, 1955, to Sept. 30, 1959, at datum 54.74 ft higher.

REMARKS.—Practically entire flow is diverted upstream from station for irrigation of 120,000 acres during low runoff years. Some return flow enters upstream from station. Flow regulated by three reservoirs, combined capacity, 1,035,000 acre-ft, the largest of which is Lake McClure (station 11269500).

COOPERATION.—Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 13,600 ft^3/s, Dec. 5, 1950, elevation, 73.79 ft, present datum; no flow July 19 to Aug. 21, 1961, result of temporary dam.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	274	235	263	200	225	222	553	e189	e156	e85	e96
2	98	260	233	252	208	225	243	640	e213	e128	e83	e94
3	92	256	232	245	218	223	238	889	e197	e123	e91	e110
4	94	248	234	237	228	214	265	1170	e207	e131	e132	e103
5	95	240	233	229	230	213	271	1350	e182	e131	e130	e87
6	92	233	234	225	228	217	286	1380	e195	e128	e132	e80
7	90	229	236	222	226	227	270	1410	e212	e149	e120	e80
8	107	248	237	224	222	225	275	1440	e216	e156	e102	e86
9	103	336	238	222	220	224	262	1450	e210	e148	e101	e75
10	98	359	240	222	219	222	263	1460	e206	e140	e107	e73
11	104	307	239	238	220	225	269	1480	e201	e143	e119	e91
12	100	282	239	323	222	211	393	1250	e190	e139	e122	e95
13	115	269	243	272	224	246	605	842	e189	e136	e130	e97
14	107	262	252	246	227	234	668	632	e190	e143	e108	e93
15	103	255	253	235	225	242	660	500	e185	e139	e92	e95
16	217	261	261	228	221	285	676	425	e197	e135	e84	e95
17	447	261	279	219	222	289	681	390	e190	e129	e74	e90
18	650	257	321	215	219	264	688	341	e208	e120	e83	e90
19	710	252	283	212	216	247	709	336	e197	e109	e100	e89
20	761	248	282	211	217	240	721	288	e204	e102	e102	e90
21	830	252	310	211	218	235	715	249	e197	e117	e101	e106
22	805	250	310	211	215	228	676	e246	e191	e116	e95	e100
23	765	253	293	211	214	233	619	e244	e200	e125	e84	e111
24	700	251	277	209	216	249	549	e242	e202	e136	e82	e113
25	612	248	262	205	225	241	573	e219	e180	e138	e94	e109
26	499	245	250	205	223	227	576	e228	e182	e123	e100	e96
27	409	243	241	204	225	220	563	e230	e175	e115	e96	e88
28	364	241	233	200	224	221	573	e243	e152	e103	e84	e104
29	345	240	232	199	---	214	576	e215	e145	e83	e88	e123
30	322	238	237	200	---	215	558	e196	e170	e92	e88	e126
31	295	---	265	200	---	226	---	e188	---	e78	e94	---
TOTAL	10224	7798	7914	6995	6172	7207	14643	20726	5772	3911	3103	2885
MEAN	330	260	255	226	220	232	488	669	192	126	100	96.2
MAX	830	359	321	323	230	289	721	1480	216	156	132	126
MIN	90	229	232	199	200	211	222	188	145	78	74	73
AC-FT	20280	15470	15700	13870	12240	14300	29040	41110	11450	7760	6150	5720

e Estimated.

11272500 MERCED RIVER NEAR STEVINSON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	360	300	510	698	817	1004	1020	1277	1050	384	222	300
MAX	2739	1314	4718	4568	4695	5478	4949	5792	4545	3593	1192	1716
(WY)	1984	1970	1951	1956	1983	1983	1983	1952	1983	1983	1983	1983
MIN	11.4	69.9	105	109	69.2	94.4	59.7	65.1	19.2	6.18	8.91	11.3
(WY)	1978	1962	1962	1962	1991	1977	1961	1977	1977	1991	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1941 - 2003	
ANNUAL TOTAL	96089		97350			
ANNUAL MEAN	263		267		661	
HIGHEST ANNUAL MEAN					3155	1983
LOWEST ANNUAL MEAN					78.8	1961
HIGHEST DAILY MEAN	1340	May 5	1480	May 11	12000	Dec 10 1950
LOWEST DAILY MEAN	65	Jul 17	73	Sep 10	0.00	Jul 19 1961
ANNUAL SEVEN-DAY MINIMUM	75	Jul 15	82	Sep 5	0.00	Jul 19 1961
MAXIMUM PEAK FLOW			1500	May 11	13600	Dec 5 1950
MAXIMUM PEAK STAGE			61.34	May 11	73.79	Dec 5 1950
ANNUAL RUNOFF (AC-FT)	190600		193100		478600	
10 PERCENT EXCEEDS	458		567		1740	
50 PERCENT EXCEEDS	237		222		232	
90 PERCENT EXCEEDS	87		95		99	

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA

LOCATION.—Lat 37° 21'04", long 120° 57'39", in NE 1/4 SE 1/4 sec.4, T.7 S., R.9 E., Merced County, Hydrologic Unit 18040002, on upstream side of River Road Bridge, near right bank, just downstream from Hatfield State Park, and 1.1 river miles upstream from confluence with the San Joaquin River.

DRAINAGE AREA.—1,276 mi^2.

PERIOD OF RECORD.—April 1992 to current year. Published as "Merced River near Stevinson" (11272500) water years 1985–94.
CHEMICAL DATA: Water years 1994–95, February 1997 to September 1999, October 2000 to currrent year.
SPECIFIC CONDUCTANCE: April 1992 to current year.
WATER TEMPERATURE: April 1992 to current year.
SEDIMENT DATA: Water years 1994–95, February 1997 to current year.

PERIOD OF DAILY RECORD.—April 1992 to current year.
SPECIFIC CONDUCTANCE: April 1992 to current year.
WATER TEMPERATURE: April 1992 to current year.

INSTRUMENTATION.—Water-quality monitor since April 1992.

REMARKS.—Specific conductance records rated excellent except for Oct. 5–10, Oct. 22 to Nov. 7, Nov. 9–13, which are rated good; and Nov. 14–21, which are rated fair. Water temperature records rated excellent except for Nov. 17 to Jan. 8, Apr. 17 to May 20, which are rated good. Interruptions in record were due to malfunction of the recording instruments. Specific-conductance and water-temperature values are affected by irrigation return flow. Discharges based on upstream California Department of Water Resources gage 11272500 with appropriate travel times taken into account.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum recorded, 910 microsiemens, Aug. 7, 1992; minimum recorded, 22 microsiemens, June 23, 1995.
WATER TEMPERATURE: Maximum recorded, 34.0° C, July 12, 13, 1999; minimum recorded, 4.5° C, Dec. 24, 1998.

EXTREMES FOR CURRENT YEAR.—
SPECIFIC CONDUCTANCE: Maximum recorded, 504 microsiemens, Aug. 15, 16, but may have been higher during period of missing record; minimum recorded, 28 microsiemens, Oct. 20, 21, but may have been lower during period of missing record.
WATER TEMPERATURE: Maximum recorded, 30.5° C, June 27, 28, but may have been higher during period of missing record; minimum recorded, 8.0° C, Dec. 24, 25.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)
OCT									
05...	1200	e234	761	8.2	89	7.6	191	19.5	53
NOV									
02...	1230	e362	762	9.3	94	7.6	168	16.0	48
DEC									
07...	1050	e258	765	10.1	89	8.0	164	10.0	47
JAN									
06...	1000	e229	--	--	--	--	179	--	--
12...	1100	e231	766	10.1	88	7.8	190	9.5	55
19...	1050	e289	--	--	--	--	138	--	--
25...	1440	e361	--	--	--	--	106	--	--
26...	1100	e528	--	--	--	--	82	--	--
FEB									
04...	1020	e296	--	--	--	--	179	--	--
09...	1010	e316	--	--	--	--	170	--	--
11...	1730	e352	--	--	--	--	139	--	--
12...	0800	e384	--	--	--	--	130	--	--
12...	1515	e426	--	--	--	--	91	--	--
12...	2100	e424	--	--	--	--	83	--	--
13...	0350	e446	--	--	--	--	95	--	--
13...	1000	e726	--	--	--	--	80	--	--
13...	1800	e731	--	--	--	--	104	--	--
14...	0150	e604	--	--	--	--	217	--	--
14...	1345	e1020	--	--	--	--	81	--	--
14...	2330	e1690	--	--	--	--	82	--	--
15...	0710	e1700	--	--	--	--	72	--	--
15...	1600	e2220	--	--	--	--	65	--	--
16...	0150	e2670	--	--	--	--	58	--	--
25...	1300	e2880	764	10.2	90	7.7	60	10.0	--
MAR									
08...	1250	e3090	759	10.7	--	7.7	[1]65	11.0	23
28...	1150	e629	--	--	--	7.4	114	15.0	--
APR									
10...	1220	e442	--	--	--	7.8	142	19.0	43
26...	1130	e1870	--	--	--	8.0	59	15.5	--
MAY									
16...	1400	e567	761	8.2	87	7.6	128	18.0	38
30...	1230	e358	758	7.4	85	8.0	240	22.0	--
JUN									
13...	1300	e316	758	7.8	93	7.8	200	24.0	53
28...	1130	e208	758	7.4	93	8.1	288	26.5	--
JUL									
06...	1330	e199	758	--	--	7.5	294	--	75
20...	1230	e187	759	7.9	96	7.6	366	25.0	--
AUG									
09...	1130	e172	760	--	--	8.2	266	--	72
SEP									
12...	1330	e213	758	8.2	96	7.9	279	23.0	77

e Estimated.
[1] Laboratory value.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Noncarb hard-ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alka-linity, wat flt Gran, field, mg/L as CaCO3 (29802)	Chlor-ide, water, fltrd, mg/L (00940)
OCT									
05...	9	13.6	4.68	1.46	.9	15.4	38	44.0	14.8
NOV									
02...	7	12.3	4.16	1.02	.9	13.6	38	41.0	13.1
DEC									
07...	4	11.9	4.11	.99	.7	11.6	34	43.0	11.4
JAN									
06...	--	--	--	--	--	--	--	--	--
12...	13	14.0	4.83	1.36	.8	14.3	35	42.0	13.5
19...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
MAR									
08...	--	5.55	2.27	.97	.2	2.76	20	--	1.47
28...	--	--	--	--	--	--	--	33.0	--
APR									
10...	9	10.7	3.95	1.41	.7	10.1	33	34.0	8.87
26...	--	--	--	--	--	--	--	23.0	--
MAY									
16...	18	9.50	3.37	1.04	.6	8.41	32	20.0	7.27
30...	--	--	--	--	--	--	--	56.0	--
JUN									
13...	3	13.4	4.76	1.34	.8	14.2	36	50.0	12.3
28...	--	--	--	--	--	--	--	81.0	--
JUL									
06...	15	19.0	6.78	4.35	1	26.1	41	60.0	25.2
20...	--	--	--	--	--	--	--	89.0	--
AUG									
09...	11	18.1	6.46	1.87	1	22.5	40	61.0	20.3
SEP									
12...	17	19.9	6.59	1.70	1	24.4	40	60.0	22.2

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT									
05...	<.1	12.6	10.8	110	.16	119	.20	.23	.03
NOV									
02...	<.1	12.2	9.0	99	.17	123	.12	.20	.02
DEC									
07...	<.1	10.7	9.9	95	.13	98	e.08	e.07	.02
JAN									
06...	--	--	--	--	--	--	--	--	--
12...	<.1	11.2	11.8	108	.15	113	.18	.16	.05
19...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	.21	.52	.04
13...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	.49	1.1	.09
14...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	.86	1.5	.12
15...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	.19	1.2	<.02
MAR									
08...	<.1	10.9	3.0	--	--	48	.16	.23	<.02
28...	--	--	--	--	--	--	--	--	--
APR									
10...	<.1	11.7	8.1	81	.13	93	.15	.44	.06
26...	--	--	--	--	--	--	--	--	--
MAY									
16...	<.1	11.1	6.7	65	.11	84	.19	.31	.04
30...	--	--	--	--	--	--	--	--	--
JUN									
13...	<.1	11.5	10.7	107	.16	114	.15	.24	<.02
28...	--	--	--	--	--	--	--	--	--
JUL									
06...	<.1	13.3	14.2	158	.23	172	1.1	1.3	.71
20...	--	--	--	--	--	--	--	--	--
AUG									
09...	.1	13.6	14.2	146	.23	168	.23	.32	<.02
SEP									
12...	<.1	14.6	16.3	157	.22	161	.18	.19	<.02

< Actual value is known to be less than value shown.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
OCT									
05...	2.29	.021	.04	.051	.068	--	18	23	21.8
NOV									
02...	2.12	.011	.02	.025	.044	--	17	33	12.6
DEC									
07...	2.02	.013	.01	.016	.038	--	16	14	17.6
JAN									
06...	--	--	--	--	--	--	--	--	--
12...	2.62	.021	.01	.015	.031	--	20	37	25.3
19...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	.47	<.010	.03	.036	.143	4.8	--	--	--
13...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	.50	.012	.06	.087	.22	9.1	--	--	--
14...	--	--	--	--	--	--	--	--	--
15...	.42	.012	.11	.141	.35	15.8	--	--	--
15...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
25...	.21	<.010	.04	.051	.090	--	<16	--	--
MAR									
08...	.15	<.010	.02	.030	.060	--	<16	28	5.4
28...	--	--	--	--	--	--	--	--	--
APR									
10...	1.32	.013	.04	.044	.103	--	20	38	19.7
26...	--	--	--	--	--	--	--	--	--
MAY									
16...	1.31	<.010	.02	.015	.058	--	e13	47	12.7
30...	--	--	--	--	--	--	--	--	--
JUN									
13...	1.90	.014	.02	.029	.052	--	20	57	19.5
28...	--	--	--	--	--	--	--	--	--
JUL									
06...	2.54	.027	.26	.29	.34	--	35	33	40.3
20...	--	--	--	--	--	--	--	--	--
AUG									
09...	2.65	.018	.05	.067	.086	--	27	30	47.0
SEP									
12...	3.37	.021	.03	.041	.052	--	31	31	28.0

< Actual value is known to be less than value shown.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Selenium, water, fltrd, ug/L (01145)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphosmethyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)
OCT									
05...	<2	--	--	--	--	--	--	--	--
NOV									
02...	<2	--	--	--	--	--	--	--	--
DEC									
07...	<2	--	--	--	--	--	--	--	--
JAN									
06...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
12...	<2	<.003	e.003	<.002	<.002	<.002	e.004	<.001	<.002
19...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
25...	--	<.003	<.002	<.002	<.002	<.002	e.002	<.001	<.002
26...	--	<.003	<.002	<.002	<.002	<.002	<.005	<.001	<.002
FEB									
04...	--	<.003	e.003	<.002	<.002	<.002	<.001	<.001	<.002
09...	--	<.003	<.002	<.002	<.002	<.002	<.003	<.001	<.002
11...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
12...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
12...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
12...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
13...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
13...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
13...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
14...	--	<.003	<.002	<.002	<.002	<.002	<.005	<.001	<.002
14...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
14...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
15...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
15...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
16...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
25...	<2	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
MAR									
08...	<2	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
28...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
APR									
10...	<2	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
26...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
MAY									
16...	<2	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
30...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
JUN									
13...	<2	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
28...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
JUL									
06...	<2	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
20...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
AUG									
09...	<2	--	--	--	--	--	--	--	--
SEP									
12...	<2	--	--	--	--	--	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Diazi-non, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)
OCT									
05...	--	--	--	--	--	--	--	--	--
NOV									
02...	--	--	--	--	--	--	--	--	--
DEC									
07...	--	--	--	--	--	--	--	--	--
JAN									
06...	<.002	<.003	<.003	<.004	<.005	<.004	<.002	<.002	<.001
12...	<.002	<.003	<.003	<.004	<.005	<.004	<.002	.006	<.001
19...	<.002	<.003	<.003	e.003	<.005	<.004	e.002	.007	<.001
25...	<.002	<.003	<.003	.005	<.005	<.004	<.002	.042	<.001
26...	<.002	<.003	<.003	.007	<.005	<.004	<.002	.010	<.001
FEB									
04...	<.002	<.003	<.003	<.004	<.005	<.004	<.002	.005	<.001
09...	<.002	<.003	<.003	<.004	<.005	<.004	<.002	.004	<.001
11...	<.002	<.003	<.003	<.004	<.005	<.004	<.002	e.004	<.001
12...	<.002	<.003	<.003	.005	<.005	<.004	<.002	.007	<.001
12...	<.002	e.004	<.003	.005	<.005	.028	<.002	.007	<.001
12...	<.002	<.003	<.010	e.003	<.005	<.004	<.002	.006	<.001
13...	<.002	<.003	<.003	e.003	<.005	<.004	<.002	.005	<.001
13...	<.002	<.003	<.003	.007	<.005	<.004	<.002	.008	<.001
13...	<.002	e.004	<.003	.012	<.005	<.004	<.002	.012	<.001
14...	<.002	<.003	<.003	.011	<.005	<.004	e.002	.014	<.001
14...	<.002	<.003	<.003	.011	<.005	<.004	<.002	.013	<.001
14...	<.002	<.003	<.003	.010	<.005	.010	<.002	.014	<.001
15...	<.002	e.004	<.003	.005	<.005	<.004	<.002	.008	<.001
15...	<.002	e.004	<.003	.005	<.005	<.004	<.002	.009	<.001
16...	<.002	e.003	<.003	e.004	<.005	<.004	<.002	.007	<.001
25...	<.002	<.003	<.003	.004	<.005	<.004	<.002	e.003	<.001
MAR									
08...	<.002	<.003	e.010	e.003	<.005	<.004	e.001	e.002	<.001
28...	<.002	<.003	<.003	<.004	<.005	<.004	<.002	<.002	<.001
APR									
10...	<.002	<.003	e.037	<.004	<.005	<.004	<.002	<.002	<.001
26...	<.002	<.003	<.003	.007	<.005	<.004	<.002	<.002	<.001
MAY									
16...	<.002	<.003	<.003	<.004	<.005	<.004	<.002	<.002	<.001
30...	<.002	<.003	<.003	<.004	<.005	<.004	<.002	.005	<.001
JUN									
13...	<.002	<.003	<.003	<.004	<.005	<.004	<.002	<.002	<.001
28...	<.002	e.029	<.003	.007	<.005	<.004	<.002	<.002	<.001
JUL									
06...	<.002	e.013	<.003	<.010	<.005	<.004	<.002	<.010	<.001
20...	<.002	<.003	<.003	.015	<.005	<.004	<.002	<.002	<.001
AUG									
09...	--	--	--	--	--	--	--	--	--
SEP									
12...	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)
OCT									
05...	--	--	--	--	--	--	--	--	--
NOV									
02...	--	--	--	--	--	--	--	--	--
DEC									
07...	--	--	--	--	--	--	--	--	--
JAN									
06...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
12...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
19...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
25...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
26...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
FEB									
04...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
09...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
11...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
12...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
12...	<.02	e.001	<.004	<.003	<.003	<.004	<.002	<.005	<.006
12...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
13...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
13...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
13...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
14...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
14...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
14...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
15...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
15...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
16...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
25...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
MAR									
08...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
28...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	.013	<.006
APR									
10...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
26...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
MAY									
16...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
30...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
JUN									
13...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
28...	<.02	.005	<.004	<.003	<.003	<.004	<.002	<.005	<.006
JUL									
06...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	.005	<.006
20...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
AUG									
09...	--	--	--	--	--	--	--	--	--
SEP									
12...	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)
OCT									
05...	--	--	--	--	--	--	--	--	--
NOV									
02...	--	--	--	--	--	--	--	--	--
DEC									
07...	--	--	--	--	--	--	--	--	--
JAN									
06...	.008	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
12...	.005	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
19...	e.003	<.004	<.004	<.003	<.006	<.004	<.004	.008	<.002
25...	.005	<.004	<.004	<.003	<.006	<.004	<.004	.077	<.002
26...	e.004	<.004	<.004	<.003	<.006	<.004	<.004	.042	<.002
FEB									
04...	.005	<.004	<.004	<.003	<.006	<.004	<.004	.007	<.002
09...	.004	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
11...	e.004	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
12...	.006	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
12...	<.005	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
12...	<.002	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
13...	<.002	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
13...	.022	<.004	<.004	<.003	<.006	<.004	<.004	.009	<.002
13...	.017	<.004	<.004	<.003	<.006	<.004	<.004	.016	<.002
14...	.013	<.004	<.004	<.003	<.006	<.004	<.004	.022	<.002
14...	.008	<.004	<.004	<.003	<.006	<.004	<.004	.018	<.002
14...	.010	<.004	<.004	<.003	<.006	<.004	<.004	.021	<.002
15...	.006	<.004	<.004	<.003	<.006	<.004	<.004	.026	<.002
15...	.005	<.004	<.004	<.003	<.006	<.004	<.004	.017	<.002
16...	.005	<.004	<.004	<.003	<.006	<.004	<.004	.021	<.002
25...	e.003	<.004	<.004	<.003	<.006	<.004	<.004	.008	<.002
MAR									
08...	e.002	<.004	<.004	<.003	<.006	<.004	<.004	.004	<.002
28...	.006	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
APR									
10...	<.002	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
26...	<.002	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
MAY									
16...	<.002	<.004	.007	<.003	<.006	<.004	<.004	<.004	<.002
30...	<.002	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
JUN									
13...	<.002	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
28...	.008	<.010	<.004	<.003	<.006	<.004	<.004	<.004	<.002
JUL									
06...	.008	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
20...	.005	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
AUG									
09...	--	--	--	--	--	--	--	--	--
SEP									
12...	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Prometon, water, fltrd, ug/L (04037)	Pronamide, water, fltrd 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)
OCT									
05...	--	--	--	--	--	--	--	--	--
NOV									
02...	--	--	--	--	--	--	--	--	--
DEC									
07...	--	--	--	--	--	--	--	--	--
JAN									
06...	<.02	<.003	<.007	<.004	--	.009	<.01	<.007	<.01
12...	<.02	<.003	<.007	<.004	--	.011	<.01	<.007	<.01
19...	<.02	<.003	<.007	<.004	<.01	.017	<.01	<.007	<.01
25...	<.02	<.003	<.007	<.004	<.01	.020	<.01	<.007	<.01
26...	<.02	<.003	<.007	<.004	<.01	.053	<.01	<.007	<.01
FEB									
04...	<.02	<.003	<.007	<.004	<.01	.026	<.01	<.007	<.01
09...	<.02	<.003	<.007	<.004	<.01	.014	<.01	<.007	<.01
11...	<.02	<.003	<.007	<.004	<.01	.009	<.01	<.007	<.01
12...	<.02	<.003	<.007	<.004	<.01	.010	<.01	<.007	<.01
12...	<.02	<.003	<.007	<.004	<.01	.010	<.01	<.007	<.01
12...	<.02	<.003	<.007	<.004	<.01	.011	<.01	<.007	<.01
13...	<.02	<.003	<.007	<.004	<.01	.014	<.01	<.007	<.01
13...	<.02	<.003	<.007	<.004	<.01	1.26	<.01	<.007	<.01
13...	<.02	<.003	<.007	<.004	<.01	1.27	<.01	<.007	<.01
14...	<.02	<.003	<.007	<.004	<.01	1.02	<.01	<.007	<.01
14...	<.02	<.003	<.007	<.004	<.01	.646	<.01	<.007	<.01
14...	<.02	<.003	<.007	<.004	<.01	1.09	<.01	<.007	<.01
15...	<.02	<.003	<.007	<.004	<.01	.713	<.01	<.007	<.01
15...	<.02	<.003	<.007	<.004	<.01	.492	<.01	<.007	<.01
16...	<.02	<.003	<.007	<.004	<.01	.248	<.01	<.007	<.01
25...	<.02	<.003	<.007	<.004	<.01	.078	<.01	<.007	<.01
MAR									
08...	<.02	<.003	<.007	<.004	<.01	.049	<.01	<.007	<.01
28...	<.02	<.003	<.007	<.004	<.01	.042	<.01	<.007	<.01
APR									
10...	<.02	<.003	<.007	<.004	<.01	.019	<.01	<.007	<.01
26...	<.02	<.003	<.007	<.004	<.01	<.005	<.01	<.007	<.01
MAY									
16...	<.02	<.003	<.007	<.004	<.01	.009	<.01	<.007	<.01
30...	<.02	<.003	<.007	<.004	<.01	.009	<.01	<.007	<.01
JUN									
13...	<.02	<.003	<.007	<.004	<.01	.009	<.01	<.007	<.01
28...	<.02	<.003	<.007	<.004	<.01	.011	<.01	<.007	<.01
JUL									
06...	<.02	<.003	<.007	<.004	<.01	.007	<.01	<.007	<.01
20...	<.02	<.003	<.007	<.004	<.01	.007	<.01	<.007	<.01
AUG									
09...	--	--	--	--	--	--	--	--	--
SEP									
12...	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than value shown.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
OCT			
05...	--	--	--
NOV			
02...	--	--	--
DEC			
07...	--	--	--
JAN			
06...	<.002	<.001	<.002
12...	<.002	<.001	<.002
19...	<.002	<.001	e.002
25...	<.002	<.001	e.001
26...	<.002	<.001	e.001
FEB			
04...	<.002	<.001	.005
09...	<.002	<.001	<.005
11...	<.002	<.001	e.001
12...	<.002	<.001	<.004
12...	<.002	<.001	e.004
12...	<.002	<.001	<.002
13...	<.002	<.001	e.001
13...	<.002	<.001	e.003
13...	<.002	<.001	.010
14...	<.002	<.001	.013
14...	<.002	<.001	.010
14...	<.002	<.001	.013
15...	<.002	<.001	.008
15...	<.002	<.001	.005
16...	<.002	<.001	e.002
25...	<.002	<.001	e.003
MAR			
08...	<.002	<.001	e.002
28...	<.002	<.001	.006
APR			
10...	<.002	<.001	.006
26...	<.002	<.001	<.002
MAY			
16...	<.002	<.001	e.002
30...	<.002	<.001	e.002
JUN			
13...	<.002	<.001	e.003
28...	<.002	<.001	e.004
JUL			
06...	<.002	<.001	.005
20...	<.002	<.001	<.002
AUG			
09...	--	--	--
SEP			
12...	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
(REVISED)

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)	Suspnd. sediment, sieve diametr percent <.063mm (70331)
OCT						
05...SS	1200	e234	19.5	11	e6.9	96
NOV						
02...SS	1230	e362	16.0	12	e12	84
DEC						
07...SS	1050	e258	10.0	3	e2.1	96
JAN						
12...SS	1100	e231	9.5	12	e7.5	56
FEB						
25...SS	1300	e2880	10.0	37	e287	94
MAR						
08...SS	1250	e3090	11.0	22	e184	88
28...SS	1150	e629	15.0	15	e25	70
APR						
10...SS	1220	e442	19.0	28	e33	62
26...SS	1130	e1870	15.5	31	e157	64
MAY						
16...SS	1400	e567	18.0	25	e38	92
30...SS	1230	e358	22.0	10	e9.7	73
JUN						
13...SS	1300	e316	24.0	16	e14	69
28...SS	1130	e208	26.5	13	e7.3	81
JUL						
06...SS	1330	e199	--	19	e10	52
20...SS	1230	e187	25.0	11	e5.6	72
AUG						
09...SS	1130	e172	--	5	e2.3	77
SEP						
12...SS	1330	e213	23.0	3	e1.7	24

SS Suspended-sediment data determined from a sample collected and processed according to National Water-Quality Assessment (NAWQA) protocol.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)
OCT									
16...	1220	e200	758	9.1	97	7.1	178	18.0	46
NOV									
07...	1230	e228	759	10.2	99	7.1	146	14.0	45
DEC									
12...	1230	e239	763	10.0	92	7.2	133	11.5	43
17...	0030	e256	--	--	--	--	--	--	46
17...	1550	e268	755	6.2	59	6.7	136	12.5	41
18...	0900	e337	--	--	--	--	--	--	31
20...	2150	e280	--	10.6	--	7.2	207	10.0	46
21...	1115	e307	--	--	--	--	--	--	45
21...	1615	e315	--	--	--	--	--	--	37
22...	1030	e315	--	--	--	--	--	--	36
JAN									
09...	1200	e222	760	7.6	68	7.1	197	10.5	60
23...	1140	e211	767	10.5	96	7.2	175	11.5	51
FEB									
06...	1300	e229	761	10.7	97	7.4	156	11.0	49
20...	1220	e216	762	11.0	103	7.4	176	12.5	53
MAR									
12...	1340	e212	759	10.2	109	7.4	182	18.5	53
28...	1320	e223	765	10.5	109	7.7	157	17.5	46
APR									
09...	1330	e260	763	8.8	96	7.4	168	19.5	46
29...	1450	e582	763	9.2	96	7.3	66	17.5	21
MAY									
14...	1500	e653	760	9.1	99	7.1	65	19.5	23
28...	1250	e225	773	8.0	95	7.8	140	25.0	50
JUN									
11...	1340	e180	760	8.2	101	7.5	198	25.5	60
25...	1350	e161	767	8.6	106	7.5	272	26.5	74
JUL									
10...	1340	e124	765	10.5	134	7.6	289	28.0	--
24...	1250	e71	760	11.0	144	7.6	398	29.0	--
AUG									
07...	1340	e93	758	11.4	145	8.5	327	27.5	98
SEP									
04...	1130	e109	757	8.8	109	7.8	272	26.0	75

e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Noncarb hard-ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alka-linity, wat flt Gran, field, mg/L as CaCO3 (29802)	Chlor-ide, water, fltrd, mg/L (00940)
OCT									
16...	--	11.9	3.91	1.36	1	15.3	41	--	13.3
NOV									
07...	5	12.0	3.74	1.21	.8	11.7	35	40.0	8.42
DEC									
12...	--	11.1	3.80	1.17	.7	10.7	34	47.0	9.40
17...	--	11.8	4.04	1.31	.8	11.8	35	--	9.31
17...	--	10.5	3.59	1.27	.7	9.92	34	--	7.59
18...	--	8.08	2.73	3.52	.4	5.43	25	--	5.53
20...	--	11.6	4.16	3.56	.7	10.3	31	--	9.45
21...	--	11.4	3.88	14.1	.5	8.29	22	--	7.07
21...	--	9.05	3.38	3.24	.5	7.61	29	--	6.73
22...	--	8.87	3.29	3.49	.5	7.12	28	--	6.66
JAN									
09...	14	15.5	5.13	1.55	.9	16.2	36	46.0	14.1
23...	--	12.9	4.59	1.31	.8	12.5	34	--	10.4
FEB									
06...	3	12.5	4.30	1.29	.7	11.2	33	46.0	8.61
20...	--	13.5	4.67	1.15	.8	14.1	36	--	10.7
MAR									
12...	10	13.5	4.59	1.14	.8	14.1	36	43.0	11.2
28...	--	11.6	4.15	1.08	.8	12.0	35	--	9.39
APR									
09...	9	12.0	4.00	1.10	.9	13.7	38	37.0	11.7
29...	--	5.56	1.83	.75	.4	3.81	27	--	2.95
MAY									
14...	1	6.06	1.97	.86	.3	3.15	22	22.0	2.08
28...	--	13.0	4.33	1.82	.8	13.4	36	--	11.5
JUN									
11...	--	15.5	5.15	1.51	.9	16.2	36	--	13.7
25...	--	19.5	6.22	2.28	1	23.7	40	--	24.4
JUL									
10...	--	--	--	--	--	--	--	74.0	--
24...	--	--	--	--	--	--	--	--	--
AUG									
07...	12	25.1	8.62	3.00	1	31.1	40	86.0	26.6
SEP									
04...	3	19.4	6.54	1.80	1	23.0	39	72.0	21.3

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT									
16...	<.17	9.78	9.8	--	--	106	.29	<.04	1.90
NOV									
07...	<.17	9.47	8.0	86	.12	90	.17	<.04	1.75
DEC									
12...	<.17	8.32	8.2	88	.13	98	.23	<.04	1.69
17...	<.17	8.99	9.1	--	--	98	.27	<.04	1.87
17...	<.17	8.40	7.9	--	--	92	.26	e.02	1.69
18...	<.17	6.78	4.3	--	--	73	1.0	.33	.87
20...	<.17	9.47	9.3	--	--	109	.54	.12	1.67
21...	<.17	12.0	14.4	--	--	132	2.3	.18	1.86
21...	<.17	9.01	6.8	--	--	83	.57	.07	1.38
22...	<.17	8.47	5.9	--	--	85	.62	.08	1.11
JAN									
09...	<.17	10.8	11.7	113	.17	123	.28	e.03	2.31
23...	<.17	9.56	10.5	--	--	103	.24	<.04	2.00
FEB									
06...	.07	9.49	9.8	92	.14	100	.18	<.04	1.66
20...	.06	9.44	10.5	--	--	106	.21	e.02	1.63
MAR									
12...	.07	7.84	10.5	96	.14	104	.29	<.04	1.69
28...	.05	7.11	9.1	--	--	94	.24	<.04	1.55
APR									
09...	.09	7.71	9.4	88	.14	101	.29	<.04	1.43
29...	<.17	7.63	3.4	--	--	56	.20	<.04	.16
MAY									
14...	<.17	8.95	3.3	40	.07	50	.23	<.04	.09
28...	<.2	8.01	9.2	--	--	99	.47	<.04	1.29
JUN									
11...	<.2	8.38	11.4	--	--	130	.54	<.04	1.43
25...	<.2	11.3	14.3	--	--	144	e.46	<.04	e2.37
JUL									
10...	--	--	--	--	--	--	.36	e.03	1.83
24...	--	--	--	--	--	--	.26	<.04	2.54
AUG									
07...	<.2	13.9	18.7	191	.28	204	.78	.19	2.71
SEP									
04...	<.2	12.7	14.6	153	.22	160	.35	e.02	2.34

< Actual value is known to be less than value shown.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Partic-ulate nitro-gen, susp, water, mg/L (49570)	Phos-phorus, water, unfltrd mg/L (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inor-ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Iron, water, fltrd, ug/L (01046)
OCT									
16...	.012	e.02	.21	.070	1.5	<.1	1.4	3.2	43
NOV									
07...	.009	e.01	.06	.032	.7	<.1	.7	4.0	30
DEC									
12...	.012	<.02	.23	.041	2.0	<.1	2.0	2.6	57
17...	.015	e.01	.08	.046	.8	<.1	.8	--	47
17...	.012	e.01	.09	.048	.7	<.1	.7	--	77
18...	.025	.07	.38	.103	2.4	<.1	2.4	--	70
20...	.022	.13	.04	.20	.2	<.1	.2	--	68
21...	.054	.68	.43	1.23	3.1	<.1	3.1	--	50
21...	.023	.11	.14	.192	1.1	<.1	1.1	--	171
22...	.018	.12	.23	.189	1.4	.3	1.1	--	68
JAN									
09...	.022	.02	.37	.049	2.4	<.1	2.4	4.0	58
23...	.016	e.02	.10	.044	.4	<.1	.4	2.8	74
FEB									
06...	.011	<.09	.03	.037	.8	<.1	.8	2.0	80
20...	.012	e.01	.08	.045	.6	<.1	.6	1.8	74
MAR									
12...	.012	e.01	.15	.064	.8	<.1	.8	1.8	55
28...	.010	e.02	.12	.045	.7	<.1	.6	2.5	71
APR									
09...	.012	e.01	.11	.054	.8	<.1	.8	2.7	84
29...	<.008	e.01	.14	.046	.7	<.1	.7	2.2	63
MAY									
14...	.013	<.02	.10	.054	.8	<.1	.8	2.9	98
28...	.016	.02	.14	.103	.9	<.1	.9	2.9	75
JUN									
11...	.026	<.02	.23	.114	1.6	<.1	1.6	2.4	86
25...	e.030	e.09	.17	e.21	1.3	<.1	1.3	2.8	45
JUL									
10...	.041	<.02	.09	.091	.8	<.1	.8	2.8	--
24...	.094	<.02	.11	.060	.5	<.1	.5	2.7	--
AUG									
07...	.025	.07	.29	.147	2.0	<.1	2.0	3.9	45
SEP									
04...	.021	<.18	.06	.069	.4	<.1	.4	2.9	30

e Estimated.
< Actual value is known to be less than value shown.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Manganese, water, fltrd, ug/L (01056)	1,4-Naphthoquinone, water, fltrd, ug/L (61611)	1-Naphthol, water, fltrd 0.7u GF ug/L (49295)	2-(4-t-Butylphenoxy)cyclohexanol wat flt ug/L (61637)	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,5-Dichloroaniline water, fltrd, ug/L (61614)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)
OCT									
16...	27.3	<.05	<.09	<.01	--	--	--	<.03	<.006
NOV									
07...	25.7	--	--	--	<.009	.04	<.02	--	<.006
DEC									
12...	25.3	<.05	<.09	<.01	--	--	--	<.03	<.006
17...	21.7	--	<.09	--	--	--	--	--	<.006
17...	25.8	--	<.09	--	--	--	--	--	<.006
18...	16.1	--	<.09	--	--	--	--	--	<.006
20...	21.2	--	<.09	--	--	--	--	--	<.006
21...	4.3	--	<.09	--	--	--	--	--	<.006
21...	27.0	--	<.09	--	--	--	--	--	<.006
22...	22.2	--	<.09	--	--	--	--	--	<.006
JAN									
09...	26.9	<.05	<.09	<.01	--	--	--	<.03	<.006
23...	24.4	<.05	<.09	<.01	--	--	--	<.03	<.006
FEB									
06...	15.2	<.05	<.09	<.01	--	--	--	<.03	<.006
20...	32.8	<.05	<.09	<.01	--	--	--	<.03	<.006
MAR									
12...	20.0	<.05	<.09	<.01	--	--	--	<.03	<.006
28...	18.6	<.05	<.09	<.01	--	--	--	<.03	<.006
APR									
09...	18.6	<.05	<.09	<.01	--	--	--	<.03	<.006
29...	10.9	<.05	<.09	<.01	--	--	--	<.03	<.006
MAY									
14...	14.0	<.05	<.09	<.01	--	--	--	<.03	<.006
28...	24.5	<.05	<.09	<.01	--	--	--	<.03	<.006
JUN									
11...	30.3	<.05	<.09	<.01	--	--	--	<.03	<.006
25...	36.7	<.05	e.02	.07	--	--	--	<.03	<.006
JUL									
10...	--	<.05	<.09	.15	--	--	--	<.03	<.006
24...	--	<.05	<.09	.18	--	--	--	<.03	<.006
AUG									
07...	67.0	<.05	<.09	.08	--	--	--	<.03	<.006
SEP									
04...	55.2	<.05	<.09	.03	--	--	--	<.03	<.006

< Actual value is known to be less than value shown.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	2-[(2-Et-6-Me-Ph)--amino]propan-1-ol, ug/L (61615)	2Amino-N-iso-propyl-benz-amide, wat flt ug/L (61617)	2Chloro-2',6'-diethyl acet-anilide wat flt ug/L (61618)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	2-Ethyl-6-methyl-aniline water, fltrd, ug/L (61620)	OIET, water, fltrd, ug/L (50355)	3-(Trifluoro-methyl) aniline water, fltrd, ug/L (61630)	3,4-Dichloro-aniline water fltrd, ug/L (61625)
OCT									
16...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	<.004
NOV									
07...	--	--	--	<.006	<.04	--	<.008	--	--
DEC									
12...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	<.004
17...	<.1	--	<.005	<.006	--	<.004	--	--	<.004
17...	<.1	--	<.005	<.006	--	<.004	--	--	<.004
18...	<.1	--	<.005	<.006	--	<.004	--	--	.011
20...	<.1	--	<.005	<.006	--	<.004	--	--	.019
21...	<.1	--	<.005	<.006	--	<.004	--	--	.014
21...	<.1	--	<.005	<.006	--	<.004	--	--	.012
22...	<.1	--	<.005	<.006	--	<.004	--	--	<.008
JAN									
09...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	<.004
23...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	<.004
FEB									
06...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	<.004
20...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	<.004
MAR									
12...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	<.004
28...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	<.004
APR									
09...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	<.004
29...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	<.004
MAY									
14...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	<.004
28...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	.022
JUN									
11...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	<.004
25...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	<.004
JUL									
10...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	.008
24...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	<.004
AUG									
07...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	<.004
SEP									
04...	<.1	<.005	<.005	<.006	--	<.004	--	<.01	.010

< Actual value is known to be less than value shown.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	3,5-Di-chloro-aniline water, fltrd, ug/L (61627)	3-Hydroxy carbo-furan, wat flt 0.7u GF ug/L (49308)	3-Keto-carbo-furan, water, fltrd, ug/L (50295)	3-Phen-oxy-benzyl alcohol water, fltrd, ug/L (61629)	4-(MeOH)-pendi-meth-alin, wat flt ug/L (61665)	4,4'-Di chloro-benzo-phen-one, wat flt ug/L (61631)	4Chloro 2methyl phenol, water, fltrd, ug/L (61633)	4Chloro phenyl-methyl sulfone water, fltrd, ug/L (61634)	Aceto-chlor ESA, water, fltrd 0.7u GF ug/L (61029)
OCT									
16...	<.005	--	--	<.05	<.1	<.003	<.006	<.03	.05
NOV									
07...	--	<.006	<2	--	--	--	--	--	<.05
DEC									
12...	<.005	--	--	<.05	<.1	<.003	<.006	<.03	<.05
17...	--	--	--	--	--	--	<.006	--	<.05
17...	--	--	--	--	--	--	<.006	--	<.05
18...	--	--	--	--	--	--	<.006	--	<.05
20...	--	--	--	--	--	--	<.006	--	<.05
21...	--	--	--	--	--	--	<.006	--	<.05
21...	--	--	--	--	--	--	<.006	--	--
22...	--	--	--	--	--	--	<.006	--	<.05
JAN									
09...	<.005	--	--	<.05	<.1	<.003	<.006	<.03	<.05
23...	<.005	--	--	<.05	<.1	<.003	<.006	<.03	<.05
FEB									
06...	<.005	--	--	<.05	<.1	<.003	<.006	<.03	<.05
20...	<.005	--	--	<.05	<.1	<.003	<.006	<.03	<.05
MAR									
12...	<.005	--	--	<.05	<.1	<.003	<.006	<.03	<.05
28...	<.005	--	--	<.05	<.1	<.003	<.006	<.03	<.05
APR									
09...	<.005	--	--	--	--	<.003	<.006	<.03	<.05
29...	<.005	--	--	<.05	<.1	<.003	<.006	<.03	<.05
MAY									
14...	<.005	--	--	<.05	<.1	<.003	<.006	<.03	<.05
28...	<.005	--	--	<.05	<.1	<.003	<.006	<.03	<.05
JUN									
11...	<.005	--	--	<.05	--	<.003	<.006	<.03	<.05
25...	<.005	--	--	<.05	<.1	<.016	<.006	<.03	<.05
JUL									
10...	<.005	--	--	<.05	<.1	<.003	<.006	<.03	<.05
24...	<.005	--	--	--	--	<.003	<.006	<.03	<.05
AUG									
07...	<.005	--	--	<.05	--	<.003	<.006	<.03	<.05
SEP									
04...	<.005	--	--	--	--	<.003	<.006	<.03	<.05

< Actual value is known to be less than value shown.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Aceto-chlor OA, water, fltrd 0.7u GF ug/L (61030)	Aceto-chlor, water, fltrd, ug/L (49260)	Aci-fluor-fen, water, fltrd 0.7u GF ug/L (49315)	Ala-chlor ESA, water, fltrd 0.7u GF ug/L (50009)	Ala-chlor OA, water, fltrd 0.7u GF ug/L (61031)	Ala-chlor, water, fltrd, ug/L (46342)	Aldi-carb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)	Aldi-carb, water, fltrd 0.7u GF ug/L (49312)
OCT									
16...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
NOV									
07...	<.05	<.006	<.007	<.05	<.05	<.004	<.02	<.008	<.04
DEC									
12...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
17...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
17...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
18...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
20...	<.05	<.006	--	.06	<.05	<.004	--	--	--
21...	<.05	<.006	--	.05	<.05	<.004	--	--	--
21...	--	<.006	--	--	--	<.004	--	--	--
22...	<.05	<.006	--	.05	<.05	<.004	--	--	--
JAN									
09...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
23...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
FEB									
06...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
20...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
MAR									
12...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
28...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
APR									
09...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
29...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
MAY									
14...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
28...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
JUN									
11...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
25...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
JUL									
10...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
24...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
AUG									
07...	<.05	<.006	--	<.05	<.05	<.004	--	--	--
SEP									
04...	<.05	<.006	--	<.05	<.05	<.004	--	--	--

< Actual value is known to be less than value shown.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	alpha-Endosulfan, water, fltrd, ug/L (34362)	alpha-HCH, water, fltrd, ug/L (34253)	Aminomethylphosphonic acid, wat flt ug/L (62649)	Atrazine, water, fltrd, ug/L (39632)	Azinphosmethyl oxon, water, fltrd, ug/L (61635)	Azinphosmethyl, water, fltrd 0.7u GF ug/L (82686)	Bendiocarb, water, fltrd, ug/L (50299)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Benomyl water, fltrd, ug/L (50300)
OCT									
16...	<.005	<.005	<.1	<.007	<.02	<.050	--	<.010	--
NOV									
07...	--	<.005	<.1	<.007	--	<.050	<.03	<.010	<.004
DEC									
12...	<.005	<.005	<.1	<.007	<.02	<.050	--	<.010	--
17...	--	--	--	<.007	<.02	<.050	--	<.010	--
17...	--	--	--	<.007	<.02	<.050	--	<.010	--
18...	--	--	--	<.007	<.02	<.050	--	<.010	--
20...	--	--	--	<.008	<.02	<.050	--	<.010	--
21...	--	--	--	<.008	<.02	<.050	--	<.010	--
21...	--	--	--	<.031	<.02	<.050	--	<.010	--
22...	--	--	--	<.009	<.02	<.050	--	<.010	--
JAN									
09...	<.005	<.005	<.1	<.007	<.02	<.050	--	<.010	--
23...	<.005	<.005	<.1	<.007	<.02	<.050	--	<.010	--
FEB									
06...	<.005	<.005	<.1	<.007	<.12	<.050	--	<.010	--
20...	<.005	<.005	<.1	<.007	<.02	<.050	--	<.010	--
MAR									
12...	<.005	<.005	<.1	<.007	<.02	<.050	--	<.010	--
28...	<.005	<.005	<.1	<.007	<.02	<.050	--	<.010	--
APR									
09...	<.005	<.005	<.1	<.007	<.02	<.050	--	<.010	--
29...	<.005	<.005	<.1	<.007	<.02	<.050	--	<.010	--
MAY									
14...	<.005	<.005	<.1	<.007	<.02	<.050	--	<.010	--
28...	<.005	<.005	<.1	<.007	<.03	<.050	--	<.010	--
JUN									
11...	<.005	<.005	<.1	e.002	<.02	<.050	--	<.010	--
25...	<.005	<.005	<.1	<.007	<.02	<.050	--	<.010	--
JUL									
10...	<.005	<.005	<.1	<.007	<.02	<.050	--	<.010	--
24...	<.005	<.005	<.1	<.007	<.03	<.050	--	<.010	--
AUG									
07...	<.005	<.005	.2	<.007	<.02	<.050	--	<.010	--
SEP									
04...	<.005	<.005	<.1	<.007	<.02	<.050	--	<.010	--

< Actual value is known to be less than value shown.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Bensul-furon, water, fltrd, ug/L (61693)	Ben-tazon, water, fltrd 0.7u GF ug/L (38711)	beta-Endo-sulfan, water, fltrd, ug/L (34357)	Bifen-thrin, water, fltrd, ug/L (61580)	Broma-cil, water, fltrd, ug/L (04029)	Brom-oxynil, water, fltrd 0.7u GF ug/L (49311)	Butyl-ate, water, fltrd, ug/L (04028)	Caf-feine, water, fltrd, ug/L (50305)
OCT								
16...	--	--	<.01	<.005	--	--	<.002	--
NOV								
07...	<.02	<.01	--	--	<.03	<.02	<.002	<.010
DEC								
12...	--	--	<.01	<.005	--	--	<.002	--
17...	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--
JAN								
09...	--	--	<.01	<.005	--	--	<.002	--
23...	--	--	<.01	<.005	--	--	<.002	--
FEB								
06...	--	--	<.01	<.005	--	--	<.002	--
20...	--	--	<.01	<.005	--	--	<.002	--
MAR								
12...	--	--	<.01	<.005	--	--	<.002	--
28...	--	--	<.01	<.005	--	--	<.002	--
APR								
09...	--	--	<.01	<.005	--	--	<.002	--
29...	--	--	<.01	<.005	--	--	<.002	--
MAY								
14...	--	--	<.01	<.005	--	--	<.002	--
28...	--	--	<.01	<.005	--	--	<.002	--
JUN								
11...	--	--	<.01	<.005	--	--	<.002	--
25...	--	--	<.01	<.005	--	--	<.002	--
JUL								
10...	--	--	<.01	<.005	--	--	<.002	--
24...	--	--	<.01	<.005	--	--	<.002	--
AUG								
07...	--	--	<.01	<.005	--	--	<.002	--
SEP								
04...	--	--	<.01	<.005	--	--	<.002	--

< Actual value is known to be less than value shown.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Car-baryl, water, fltrd 0.7u GF ug/L (49310)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (49309)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-amben methyl ester, water, fltrd, ug/L (61188)	Chlori-muron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-tri-azine, wat flt ug/L (04039)	Chloro-thalo-nil, water, fltrd 0.7u GF ug/L (49306)	Chlor-pyrifos oxon, water, fltrd, ug/L (61636)
OCT									
16...	--	<.041	--	<.020	--	--	--	--	<.06
NOV									
07...	<.03	<.041	<.006	<.090	<.02	<.010	<.01	<.04	--
DEC									
12...	--	<.041	--	<.020	--	--	--	--	<.06
17...	--	<.041	--	--	--	--	--	--	<.06
17...	--	<.041	--	--	--	--	--	--	<.06
18...	--	e.006	--	--	--	--	--	--	<.06
20...	--	<.041	--	--	--	--	--	--	<.06
21...	--	<.041	--	--	--	--	--	--	<.06
21...	--	<.041	--	--	--	--	--	--	<.06
22...	--	<.041	--	--	--	--	--	--	<.06
JAN									
09...	--	<.041	--	<.020	--	--	--	--	<.06
23...	--	<.041	--	<.020	--	--	--	--	<.06
FEB									
06...	--	<.041	--	<.020	--	--	--	--	<.06
20...	--	<.041	--	<.020	--	--	--	--	<.06
MAR									
12...	--	<.041	--	<.020	--	--	--	--	<.06
28...	--	<.041	--	<.020	--	--	--	--	<.06
APR									
09...	--	<.041	--	<.020	--	--	--	--	<.06
29...	--	<.041	--	<.020	--	--	--	--	<.06
MAY									
14...	--	<.041	--	<.020	--	--	--	--	<.06
28...	--	<.041	--	<.020	--	--	--	--	<.06
JUN									
11...	--	<.041	--	<.020	--	--	--	--	<.06
25...	--	e.182	--	<.020	--	--	--	--	<.02
JUL									
10...	--	<.041	--	<.020	--	--	--	--	<.06
24...	--	<.041	--	<.020	--	--	--	--	<.06
AUG									
07...	--	<.041	--	<.020	--	--	--	--	<.06
SEP									
04...	--	<.041	--	<.020	--	--	--	--	<.06

< Actual value is known to be less than value shown.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	cis-Propi-cona-zole, water, fltrd, ug/L (79846)	Clopyr-alid, water, fltrd 0.7u GF ug/L (49305)	Cyana-zine, water, fltrd, ug/L (04041)	Cyclo-ate, water, fltrd, ug/L (04031)	Cyflu-thrin, water, fltrd, ug/L (61585)	lambda-Cyhalo-thrin, water, fltrd, ug/L (61595)	Cyper-methrin water, fltrd, ug/L (61586)
OCT									
16...	<.005	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009
NOV									
07...	.007	<.006	--	<.01	<.018	<.01	--	--	--
DEC									
12...	<.005	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009
17...	<.005	<.006	--	--	--	--	<.008	--	<.009
17...	<.005	<.006	--	--	--	--	<.008	--	<.009
18...	e.002	<.006	--	--	--	--	<.008	--	<.009
20...	<.005	<.006	--	--	--	--	<.008	--	<.009
21...	<.005	<.006	--	--	--	--	<.008	--	<.009
21...	<.005	<.006	--	--	--	--	<.008	--	<.009
22...	<.005	<.006	--	--	--	--	<.008	--	<.009
JAN									
09...	<.005	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009
23...	<.005	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009
FEB									
06...	<.005	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009
20...	<.005	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009
MAR									
12...	<.010	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009
28...	<.005	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009
APR									
09...	.007	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009
29...	<.005	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009
MAY									
14...	.015	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009
28...	e.004	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009
JUN									
11...	<.005	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009
25...	<.005	<.006	<.008	--	<.018	<.005	<.016	<.009	<.016
JUL									
10...	.006	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009
24...	.012	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009
AUG									
07...	<.005	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009
SEP									
04...	<.005	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009

< Actual value is known to be less than value shown.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)	Diazi-non, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Dicro-tophos, water fltrd, ug/L (38454)	Diel-drin, water, fltrd, ug/L (39381)	Dimeth-enamid ESA, water, fltrd, ug/L (61951)	Dimeth-enamid OA, water, fltrd, ug/L (62482)
OCT									
16...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
NOV									
07...	<.01	<.004	<.020	<.01	<.01	--	<.005	<.05	<.05
DEC									
12...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
17...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
17...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
18...	--	<.004	.011	--	--	<.08	<.005	<.05	<.05
20...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
21...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
21...	--	<.004	.008	--	--	<.08	<.005	--	--
22...	--	<.004	<.006	--	--	<.08	<.005	<.05	<.05
JAN									
09...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
23...	--	<.004	.020	--	--	<.08	<.005	<.05	<.05
FEB									
06...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
20...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
MAR									
12...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
28...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
APR									
09...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
29...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
MAY									
14...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
28...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
JUN									
11...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
25...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
JUL									
10...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
24...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
AUG									
07...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05
SEP									
04...	--	<.004	<.005	--	--	<.08	<.005	<.05	<.05

< Actual value is known to be less than value shown.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Dimeth-oate, water, fltrd 0.7u GF ug/L (82662)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphen-amid, water, fltrd, ug/L (04033)	Disulf-oton sulfone water, fltrd, ug/L (61640)	Disulf-oton sulf-oxide, water, fltrd, ug/L (61641)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	e-Di-metho-morph, water, fltrd, ug/L (79844)	Endo-sulfan ether, water, fltrd, ug/L (61642)
OCT									
16...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004
NOV									
07...	--	<.01	<.03	--	--	<.02	<.01	--	--
DEC									
12...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004
17...	<.006	--	--	--	--	--	--	--	--
17...	<.006	--	--	--	--	--	--	--	--
18...	<.006	--	--	--	--	--	--	--	--
20...	<.006	--	--	--	--	--	--	--	--
21...	<.006	--	--	--	--	--	--	--	--
21...	<.006	--	--	--	--	--	--	--	--
22...	<.006	--	--	--	--	--	--	--	--
JAN									
09...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004
23...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004
FEB									
06...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004
20...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004
MAR									
12...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004
28...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004
APR									
09...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004
29...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004
MAY									
14...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004
28...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004
JUN									
11...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004
25...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004
JUL									
10...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004
24...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004
AUG									
07...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004
SEP									
04...	<.006	--	--	<.02	<.002	<.02	--	<.02	<.004

< Actual value is known to be less than value shown.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Endosulfan sulfate water, fltrd, ug/L (61590)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethion monoxon water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fenamiphos sulfone water, fltrd, ug/L (61645)	Fenamiphos sulfoxide, water, fltrd, ug/L (61646)	Fenamiphos, water, fltrd, ug/L (61591)
OCT									
16...	<.006	e.002	<.009	<.03	<.004	<.005	<.008	<.03	<.03
NOV									
07...	--	<.002	<.009	--	--	<.005	--	--	--
DEC									
12...	<.006	<.002	<.009	<.03	<.004	<.005	<.008	<.03	<.03
17...	--	--	--	<.03	<.004	--	<.008	<.03	<.03
17...	--	--	--	<.03	<.004	--	<.008	<.03	<.03
18...	--	--	--	<.03	<.004	--	<.008	<.03	<.03
20...	--	--	--	<.03	<.004	--	<.008	<.03	<.03
21...	--	--	--	<.03	<.004	--	<.008	<.03	<.03
21...	--	--	--	<.03	<.004	--	<.008	<.03	<.03
22...	--	--	--	<.03	<.004	--	<.008	<.03	<.03
JAN									
09...	<.006	<.002	<.009	<.03	<.004	<.005	<.008	<.03	<.03
23...	<.006	<.002	<.009	<.03	<.004	<.005	<.008	<.03	<.03
FEB									
06...	<.006	<.002	<.009	<.03	<.004	<.005	<.008	--	<.03
20...	<.006	<.002	<.009	<.03	<.004	<.005	<.008	<.03	<.03
MAR									
12...	<.006	<.002	<.009	<.03	<.004	<.005	<.008	<.03	<.03
28...	<.006	<.002	<.009	<.03	<.004	<.005	<.008	<.03	<.03
APR									
09...	<.006	<.002	<.009	<.03	<.004	<.005	<.008	<.03	<.03
29...	<.006	<.002	<.009	<.03	<.004	<.005	<.008	<.03	<.03
MAY									
14...	<.006	<.002	<.009	<.03	<.004	<.005	<.008	<.03	<.03
28...	<.006	.004	<.009	<.03	<.004	<.005	<.031	<.03	<.03
JUN									
11...	<.006	<.002	<.009	<.03	<.004	<.005	<.008	<.03	<.03
25...	<.006	<.002	<.009	<.03	<.004	<.005	<.008	<.03	<.03
JUL									
10...	<.006	<.002	<.009	<.03	<.004	<.005	<.008	<.03	<.03
24...	<.006	<.002	<.009	<.03	<.004	<.005	<.008	<.03	<.03
AUG									
07...	<.006	<.002	<.009	<.03	<.004	<.005	<.008	<.03	<.03
SEP									
04...	<.006	<.002	<.009	<.03	<.004	<.005	<.008	<.03	<.03

< Actual value is known to be less than value shown.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fenthion sulfoxide, water, fltrd, ug/L (61647)	Fenthion, water, fltrd, ug/L (38801)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Flufenacet ESA, water, fltrd, ug/L (61952)	Flufenacet OA, water, fltrd, ug/L (62483)	Flumetralin, water, fltrd, ug/L (61592)
OCT									
16...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004
NOV									
07...	--	--	<.03	<.005	<.005	<.007	<.05	<.05	--
DEC									
12...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004
17...	--	--	--	<.005	<.005	<.007	<.05	<.05	--
17...	--	--	--	<.005	<.005	<.007	<.05	<.05	--
18...	--	--	--	<.005	<.005	<.007	<.05	<.05	--
20...	--	--	--	<.005	<.005	<.007	<.05	<.05	--
21...	--	--	--	<.005	<.005	<.007	<.05	<.05	--
21...	--	--	--	<.005	<.005	<.007	--	--	--
22...	--	--	--	<.005	<.005	<.007	<.05	<.05	--
JAN									
09...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004
23...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004
FEB									
06...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004
20...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004
MAR									
12...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004
28...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004
APR									
09...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004
29...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004
MAY									
14...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004
28...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004
JUN									
11...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004
25...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004
JUL									
10...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004
24...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004
AUG									
07...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004
SEP									
04...	<.008	<.02	--	<.005	<.005	<.007	<.05	<.05	<.004

< Actual value is known to be less than value shown.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Flumet-sulam, water, fltrd, ug/L (61694)	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)	Glufo-sinate, water, fltrd 0.7u GF ug/L (62721)	Glypho-sate, water, fltrd 0.7u GF ug/L (62722)	Hexa-zinone, water, fltrd, ug/L (04025)	Imaza-quin, water, fltrd, ug/L (50356)	Imaze-thapyr, water, fltrd, ug/L (50407)
OCT									
16...	--	--	<.002	<.003	<.1	<.1	<.013	--	--
NOV									
07...	<.01	<.03	--	<.003	<.1	<.1	--	<.02	<.02
DEC									
12...	--	--	<.002	<.003	<.1	<.1	<.013	--	--
17...	--	--	<.002	<.003	--	--	--	--	--
17...	--	--	<.002	<.003	--	--	--	--	--
18...	--	--	<.002	<.003	--	--	--	--	--
20...	--	--	<.002	<.003	--	--	--	--	--
21...	--	--	<.002	<.003	--	--	--	--	--
21...	--	--	<.002	<.003	--	--	--	--	--
22...	--	--	<.002	<.003	--	--	--	--	--
JAN									
09...	--	--	<.002	<.003	<.1	<.1	.022	--	--
23...	--	--	<.002	<.003	<.1	<.1	<.013	--	--
FEB									
06...	--	--	<.002	<.003	<.1	<.1	<.013	--	--
20...	--	--	<.002	<.003	<.1	<.1	<.013	--	--
MAR									
12...	--	--	<.002	<.003	<.1	<.1	<.013	--	--
28...	--	--	<.002	<.003	<.1	<.1	<.013	--	--
APR									
09...	--	--	<.002	<.003	<.1	<.1	<.013	--	--
29...	--	--	<.002	<.003	<.1	<.1	<.013	--	--
MAY									
14...	--	--	<.002	<.003	<.1	<.1	<.013	--	--
28...	--	--	<.002	<.003	<.1	<.1	<.013	--	--
JUN									
11...	--	--	<.002	<.003	<.1	<.1	<.013	--	--
25...	--	--	<.002	<.003	<.1	<.1	<.013	--	--
JUL									
10...	--	--	<.002	<.003	<.1	<.1	e.008	--	--
24...	--	--	<.002	<.003	<.1	<.1	e.008	--	--
AUG									
07...	--	--	<.002	<.003	<.1	.2	<.013	--	--
SEP									
04...	--	--	<.002	<.003	<.1	<.1	<.013	--	--

< Actual value is known to be less than value shown.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Imida-cloprid water, fltrd, ug/L (61695)	Ipro-dione, water, fltrd, ug/L (61593)	Isofen-phos, water, fltrd, ug/L (61594)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)
OCT									
16...	--	<1	<.003	<.004	--	<.035	<.027	--	--
NOV									
07...	<.007	--	--	<.004	<.01	<.035	<.027	<.02	<.01
DEC									
12...	--	<1	<.003	<.004	--	<.035	<.027	--	--
17...	--	<1	<.003	--	--	--	<.027	--	--
17...	--	<1	<.003	--	--	--	<.027	--	--
18...	--	M	<.003	--	--	--	<.027	--	--
20...	--	M	<.003	--	--	--	<.027	--	--
21...	--	M	<.003	--	--	--	<.027	--	--
21...	--	M	<.003	--	--	--	<.027	--	--
22...	--	M	<.003	--	--	--	<.027	--	--
JAN									
09...	--	<1	<.003	<.004	--	<.035	<.027	--	--
23...	--	<1	<.003	<.004	--	<.035	<.027	--	--
FEB									
06...	--	<1	<.003	<.004	--	<.035	<.027	--	--
20...	--	M	<.003	<.004	--	<.035	<.027	--	--
MAR									
12...	--	<1	<.003	<.004	--	<.035	<.027	--	--
28...	--	<1	<.003	<.004	--	<.035	<.027	--	--
APR									
09...	--	<1	<.003	<.004	--	<.035	<.027	--	--
29...	--	<1	<.003	<.004	--	<.035	<.027	--	--
MAY									
14...	--	<1	<.003	<.004	--	<.035	<.027	--	--
28...	--	<1	<.003	<.004	--	<.035	<.027	--	--
JUN									
11...	--	<1	<.003	<.004	--	<.035	<.027	--	--
25...	--	<1	<.003	<.004	--	<.035	<.027	--	--
JUL									
10...	--	<1	<.003	<.004	--	<.035	<.027	--	--
24...	--	<1	<.003	<.004	--	<.035	<.027	--	--
AUG									
07...	--	<1	<.003	<.004	--	<.035	<.027	--	--
SEP									
04...	--	<1	<.003	<.004	--	<.035	e.019	--	--

< Actual value is known to be less than value shown.
M Presence of material verified, but not quantified.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Meta-laxyl, water, fltrd, ug/L (50359)	Meta-laxyl, water, fltrd, ug/L (61596)	Methi-althion water, fltrd, ug/L (61598)	Methio-carb, water, fltrd 0.7u GF ug/L (38501)	Meth-omyl, water, fltrd 0.7u GF ug/L (49296)	c-Per-methric acid methyl ester, wat flt ug/L (79842)	Methyl para-oxon, water, fltrd, ug/L (61664)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	t-Per-methric acid methyl ester, wat flt ug/L (79843)
OCT									
16...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03
NOV									
07...	<.02	--	--	<.008	<.004	--	--	<.006	--
DEC									
12...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03
17...	--	<.005	<.006	--	--	--	<.03	<.006	--
17...	--	<.005	<.006	--	--	--	<.03	<.006	--
18...	--	<.005	<.006	--	--	--	<.03	<.006	--
20...	--	<.005	<.006	--	--	--	<.03	<.006	--
21...	--	<.005	<.006	--	--	--	<.03	<.006	--
21...	--	<.005	<.006	--	--	--	<.03	<.006	--
22...	--	<.005	<.006	--	--	--	<.03	<.006	--
JAN									
09...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03
23...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03
FEB									
06...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03
20...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03
MAR									
12...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03
28...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03
APR									
09...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03
29...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03
MAY									
14...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03
28...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03
JUN									
11...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03
25...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03
JUL									
10...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03
24...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03
AUG									
07...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03
SEP									
04...	--	<.005	<.006	--	--	<.04	<.03	<.006	<.03

< Actual value is known to be less than value shown.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Metolachlor ESA, water, fltrd 0.7u GF ug/L (61043)	Metolachlor OA, water, fltrd 0.7u GF ug/L (61044)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Metsulfuron, water, fltrd, ug/L (61697)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Myclobutanil water, fltrd, ug/L (61599)	N-(4-Chlorophenyl) -N'-methylurea, ug/L (61692)	Napropamide, water, fltrd 0.7u GF ug/L (82684)
OCT									
16...	.08	.06	<.013	<.006	--	<.002	<.008	--	<.007
NOV									
07...	<.05	<.05	<.009	<.006	<.03	<.002	--	<.02	<.007
DEC									
12...	<.05	<.05	<.013	<.006	--	<.002	<.008	--	e.006
17...	.07	<.05	e.002	<.006	--	--	<.008	--	--
17...	<.05	<.05	e.002	<.006	--	--	e.004	--	--
18...	<.05	<.05	e.003	<.006	--	--	.009	--	--
20...	.08	.06	e.006	<.006	--	--	.014	--	--
21...	.06	.05	e.009	<.006	--	--	.010	--	--
21...	--	--	e.010	<.006	--	--	.010	--	--
22...	.05	<.05	e.008	<.006	--	--	.011	--	--
JAN									
09...	.07	.05	<.013	<.006	--	<.002	<.008	--	<.007
23...	<.05	<.05	<.013	<.006	--	<.002	<.008	--	<.007
FEB									
06...	<.05	<.05	<.013	<.006	--	<.002	<.008	--	<.007
20...	<.05	<.05	<.013	<.006	--	<.002	<.008	--	<.007
MAR									
12...	<.05	<.05	<.013	<.006	--	<.002	<.008	--	<.007
28...	<.05	<.05	<.013	<.006	--	<.002	<.008	--	<.007
APR									
09...	.05	<.05	<.013	<.006	--	<.002	<.008	--	<.007
29...	<.05	<.05	<.013	<.006	--	<.002	<.008	--	<.007
MAY									
14...	<.05	<.05	<.013	<.006	--	<.002	<.008	--	<.007
28...	.06	<.05	e.001	<.006	--	<.002	<.008	--	<.007
JUN									
11...	.05	<.05	e.003	<.006	--	.003	<.008	--	<.007
25...	.09	.07	e.002	<.006	--	<.002	<.008	--	<.007
JUL									
10...	.10	.07	<.013	<.006	--	<.002	<.008	--	<.007
24...	.12	.09	e.003	<.006	--	<.004	<.008	--	<.007
AUG									
07...	.12	.10	<.013	<.006	--	<.002	<.008	--	<.007
SEP									
04...	.09	.08	e.009	<.006	--	<.002	<.008	--	<.007

< Actual value is known to be less than value shown.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Neburon water, fltrd 0.7u GF ug/L (49294)	Nico-sul-furon, water, fltrd, ug/L (50364)	Norflur azon, water, fltrd 0.7u GF ug/L (49293)	O-Et-O-Me-S-Pr -phos-phoro-thioate wat flt ug/L (61660)	Ory-zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	Oxy-fluor-fen, water, fltrd, ug/L (61600)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-oxon, water, fltrd, ug/L (61663)
OCT									
16...	--	--	--	<.008	--	--	<.007	<.003	<.008
NOV									
07...	<.01	<.01	<.02	--	<.02	<.01	--	<.003	--
DEC									
12...	--	--	--	<.008	--	--	<.007	<.003	<.008
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
JAN									
09...	--	--	--	<.008	--	--	<.007	<.003	<.008
23...	--	--	--	<.008	--	--	<.007	<.003	<.008
FEB									
06...	--	--	--	<.008	--	--	<.007	<.003	<.008
20...	--	--	--	<.008	--	--	<.007	<.003	<.008
MAR									
12...	--	--	--	<.008	--	--	<.007	<.003	<.008
28...	--	--	--	<.008	--	--	<.007	<.003	<.008
APR									
09...	--	--	--	<.008	--	--	<.007	<.003	<.008
29...	--	--	--	<.008	--	--	<.007	<.003	<.008
MAY									
14...	--	--	--	<.008	--	--	<.007	<.003	<.008
28...	--	--	--	<.008	--	--	<.007	<.003	<.008
JUN									
11...	--	--	--	<.008	--	--	<.007	<.003	<.008
25...	--	--	--	<.008	--	--	<.007	<.003	<.016
JUL									
10...	--	--	--	<.008	--	--	<.007	<.003	<.008
24...	--	--	--	<.008	--	--	<.007	<.003	<.008
AUG									
07...	--	--	--	<.008	--	--	<.007	<.003	<.008
SEP									
04...	--	--	--	<.008	--	--	<.007	<.003	<.008

< Actual value is known to be less than value shown.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate oxon, water, fltrd, ug/L (61666)	Phorate water fltrd 0.7u GF ug/L (82664)	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)	Phoste-bupirim water, fltrd, ug/L (61602)	Pic-loram, water, fltrd 0.7u GF ug/L (49291)
OCT									
16...	<.010	<.004	<.022	<.10	<.011	<.06	<.008	<.005	--
NOV									
07...	<.010	<.004	<.022	--	<.011	--	--	--	<.02
DEC									
12...	<.010	<.004	<.022	<.10	<.011	<.06	<.008	<.005	--
17...	--	--	<.022	<.10	<.011	<.06	<.008	--	--
17...	--	--	<.022	<.10	<.011	<.06	<.008	--	--
18...	--	--	.030	<.10	<.011	<.06	<.008	--	--
20...	--	--	e.017	<.10	<.011	<.06	<.008	--	--
21...	--	--	<.022	<.10	<.011	<.06	<.008	--	--
21...	--	--	<.022	<.10	<.011	<.06	<.008	--	--
22...	--	--	<.022	<.10	<.011	<.06	<.008	--	--
JAN									
09...	<.010	<.004	<.022	<.10	<.011	<.06	<.008	<.005	--
23...	<.010	<.004	<.022	<.10	<.011	<.06	<.008	<.005	--
FEB									
06...	<.010	<.004	<.022	<.10	<.011	<.06	<.008	<.005	--
20...	<.010	<.004	<.022	<.10	<.011	<.06	<.008	<.005	--
MAR									
12...	<.010	<.004	<.022	<.10	<.011	<.06	<.008	<.005	--
28...	<.010	<.004	.045	<.10	<.011	<.06	<.008	<.005	--
APR									
09...	<.010	<.004	<.022	<.10	<.011	<.06	<.008	<.005	--
29...	<.010	<.004	<.022	<.10	<.011	<.06	<.008	<.005	--
MAY									
14...	<.010	<.004	<.022	<.10	<.011	<.06	<.008	<.005	--
28...	<.010	<.004	<.022	<.10	<.011	<.06	<.008	<.005	--
JUN									
11...	<.010	<.004	<.022	<.10	<.011	<.06	<.008	<.005	--
25...	<.010	<.004	<.022	<.10	<.011	<.06	<.008	<.005	--
JUL									
10...	<.010	<.004	<.022	<.10	<.011	<.06	<.008	<.005	--
24...	<.010	<.004	<.022	<.10	<.011	<.06	<.008	<.005	--
AUG									
07...	<.010	<.004	<.022	<.10	<.011	<.06	<.008	<.005	--
SEP									
04...	<.010	<.004	<.022	<.10	<.011	<.06	<.008	<.005	--

< Actual value is known to be less than value shown.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Pro-fenofos water, fltrd, ug/L (61603)	Prome-ton, water, fltrd, ug/L (04037)	Prome-tryn, water, fltrd, ug/L (04036)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Propham water fltrd 0.7u GF ug/L (49236)	Propi-cona-zole, water, fltrd, ug/L (50471)
OCT									
16...	<.006	<.01	<.005	<.004	<.010	<.011	<.02	--	--
NOV									
07...	--	<.01	--	<.004	<.010	<.011	<.02	<.010	<.02
DEC									
12...	<.006	<.01	<.005	<.004	<.010	<.011	<.02	--	--
17...	--	<.01	e.005	<.004	--	--	--	--	--
17...	--	<.01	e.003	<.004	--	--	--	--	--
18...	--	M	.006	<.004	--	--	--	--	--
20...	--	<.01	<.005	<.004	--	--	--	--	--
21...	--	<.01	<.005	<.004	--	--	--	--	--
21...	--	e.01	<.005	<.004	--	--	--	--	--
22...	--	<.01	<.005	<.004	--	--	--	--	--
JAN									
09...	<.006	<.01	<.005	<.004	<.010	<.011	<.02	--	--
23...	<.006	<.01	<.005	<.004	<.010	<.011	<.02	--	--
FEB									
06...	<.006	<.01	<.005	<.004	<.010	<.011	<.02	--	--
20...	<.006	<.01	<.005	<.004	<.010	<.011	<.02	--	--
MAR									
12...	<.006	<.01	<.005	<.004	<.010	<.011	<.02	--	--
28...	<.006	<.01	<.005	<.004	<.010	<.011	<.02	--	--
APR									
09...	<.006	<.01	<.005	<.004	<.010	<.011	<.02	--	--
29...	<.006	<.01	<.005	<.004	<.010	<.011	<.02	--	--
MAY									
14...	<.006	<.01	<.005	<.004	<.010	<.011	<.02	--	--
28...	<.006	<.01	<.005	<.004	<.010	<.011	<.02	--	--
JUN									
11...	<.006	<.01	<.005	<.004	<.010	<.011	<.02	--	--
25...	<.006	<.01	<.005	<.004	<.010	<.011	e.10	--	--
JUL									
10...	<.006	<.01	<.005	<.004	<.010	<.011	.04	--	--
24...	<.006	<.01	<.005	<.004	<.010	<.011	.06	--	--
AUG									
07...	<.006	<.01	<.005	<.004	<.010	<.011	<.02	--	--
SEP									
04...	<.006	<.01	<.005	<.004	<.010	<.011	<.02	--	--

< Actual value is known to be less than value shown.
e Estimated.
M Presence of material verified, but not quantified.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Propoxur, water, fltrd 0.7u GF ug/L (38538)	Siduron water, fltrd, ug/L (38548)	Simazine, water, fltrd, ug/L (04035)	Sulfometruron, water, fltrd, ug/L (50337)	Sulfotepp, water, fltrd, ug/L (61605)	Sulprofos, water, fltrd, ug/L (38716)	Tebupirimphos oxon, water, fltrd, ug/L (61669)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Tefluthrin metabolite R119365 wat flt ug/L (61671)
OCT									
16...	--	--	e.005	--	<.003	<.02	<.006	<.02	<.02
NOV									
07...	e.004	<.02	<.005	<.009	--	--	--	<.02	--
DEC									
12...	--	--	.007	--	<.003	<.02	<.006	<.02	<.02
17...	--	--	.006	--	--	--	--	<.02	--
17...	--	--	.100	--	--	--	--	<.02	--
18...	--	--	.182	--	--	--	--	.03	--
20...	--	--	1.98	--	--	--	--	<.02	--
21...	--	--	1.89	--	--	--	--	<.02	--
21...	--	--	4.09	--	--	--	--	<.02	--
22...	--	--	3.47	--	--	--	--	<.02	--
JAN									
09...	--	--	.053	--	<.003	<.02	<.006	<.02	<.02
23...	--	--	.013	--	<.003	<.02	<.006	<.02	<.02
FEB									
06...	--	--	<.005	--	<.003	<.02	<.006	<.02	<.02
20...	--	--	<.005	--	<.003	<.02	<.006	<.02	<.02
MAR									
12...	--	--	<.005	--	<.003	<.02	<.006	<.02	<.02
28...	--	--	.014	--	<.003	<.02	<.006	<.02	<.02
APR									
09...	--	--	.011	--	<.003	<.02	<.006	<.02	--
29...	--	--	<.005	--	<.003	<.02	<.006	<.02	--
MAY									
14...	--	--	.007	--	<.003	<.02	<.006	<.02	--
28...	--	--	.006	--	<.003	<.02	<.006	<.02	--
JUN									
11...	--	--	e.004	--	<.003	<.02	<.006	<.02	--
25...	--	--	<.005	--	<.003	<.02	<.006	<.02	--
JUL									
10...	--	--	<.005	--	<.003	<.02	<.006	<.02	--
24...	--	--	.006	--	<.003	<.02	<.006	<.02	--
AUG									
07...	--	--	<.005	--	<.003	<.02	<.006	<.02	--
SEP									
04...	--	--	.008	--	<.003	<.02	<.006	<.02	--

e Estimated.
< Actual value is known to be less than value shown.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Teflu-thrin metab-olite R152913 wat flt ug/L (61672)	Teflu-thrin, water, fltrd, ug/L (61606)	Teme-phos, water, fltrd, ug/L (61607)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)	Terba-cil, water, fltrd, ug/L (04032)	Ter-bufos oxon sulfone water, fltrd, ug/L (61674)	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Ter-buthyl-azine, water, fltrd, ug/L (04022)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)
OCT									
16...	<.01	<.008	<.3	<.034	--	<.07	<.02	<.01	<.005
NOV									
07...	--	--	--	<.034	<.010	--	<.02	--	<.005
DEC									
12...	<.01	<.008	<.3	<.034	--	<.07	<.02	<.01	<.005
17...	--	--	--	--	--	<.07	<.02	<.01	--
17...	--	--	--	--	--	<.07	<.02	<.01	--
18...	--	--	--	--	--	<.07	<.02	<.01	--
20...	--	--	--	--	--	<.07	<.02	<.01	--
21...	--	--	--	--	--	<.07	<.02	<.01	--
21...	--	--	--	--	--	<.07	<.02	<.01	--
22...	--	--	--	--	--	<.07	<.02	<.01	--
JAN									
09...	<.01	<.008	<.3	<.034	--	<.07	<.02	<.01	<.005
23...	<.01	<.008	<.3	<.034	--	<.07	<.02	<.01	<.005
FEB									
06...	<.01	<.008	<.3	<.034	--	<.07	<.02	<.01	<.005
20...	<.01	<.008	<.3	<.034	--	<.07	<.02	<.01	<.005
MAR									
12...	<.01	<.008	<.3	<.034	--	<.07	<.02	<.01	<.005
28...	<.01	<.008	<.3	<.034	--	<.07	<.02	<.01	<.005
APR									
09...	--	<.008	<.3	<.034	--	<.07	<.02	<.01	<.005
29...	--	<.008	<.3	<.034	--	<.07	<.02	<.01	<.005
MAY									
14...	--	<.008	<.3	<.034	--	<.07	<.02	<.01	<.005
28...	--	<.008	<.3	<.034	--	<.07	<.02	<.01	<.005
JUN									
11...	--	<.008	<.3	<.034	--	<.07	<.02	<.01	<.005
25...	--	<.008	<.3	<.034	--	<.07	<.02	<.01	<.005
JUL									
10...	--	<.008	--	<.034	--	<.07	<.02	<.01	<.005
24...	--	<.008	<.3	<.034	--	<.07	<.02	<.01	<.005
AUG									
07...	--	<.008	<.3	<.034	--	<.07	<.02	<.01	<.005
SEP									
04...	--	<.008	<.3	<.034	--	<.07	<.02	<.01	<.005

< Actual value is known to be less than value shown.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	trans-Propi-cona-zole, water, fltrd, ug/L (79847)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tribu-phos, water, fltrd, ug/L (61610)	Tri-clopyr, water, fltrd 0.7u GF ug/L (49235)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)	z-Di-metho-morph, water, fltrd, ug/L (79845)	Di-chlor-vos, water fltrd, ug/L (38775)
OCT							
16...	<.01	<.002	<.004	--	<.009	<.05	<.01
NOV							
07...	--	<.002	--	<.02	<.009	--	--
DEC							
12...	<.01	<.002	<.004	--	<.009	<.05	<.01
17...	--	--	--	--	e.004	--	<.01
17...	--	--	--	--	e.004	--	<.01
18...	--	--	--	--	e.004	--	<.01
20...	--	--	--	--	<.009	--	<.01
21...	--	--	--	--	<.009	--	<.01
21...	--	--	--	--	<.009	--	<.01
22...	--	--	--	--	<.009	--	<.01
JAN							
09...	<.01	<.002	<.004	--	<.009	<.05	<.01
23...	<.01	<.002	<.004	--	<.009	<.05	<.01
FEB							
06...	<.01	<.002	<.004	--	<.009	<.05	<.01
20...	<.01	<.002	<.004	--	<.009	<.05	<.01
MAR							
12...	<.01	<.002	<.004	--	<.009	<.05	<.01
28...	<.01	<.002	<.004	--	<.009	<.05	<.01
APR							
09...	<.01	<.002	<.004	--	<.009	<.05	<.01
29...	<.01	<.002	<.004	--	<.009	<.05	<.01
MAY							
14...	<.01	<.002	<.004	--	<.009	<.05	<.01
28...	<.01	<.002	<.004	--	.062	<.05	<.01
JUN							
11...	<.01	<.002	<.004	--	<.009	<.05	<.01
25...	<.01	<.002	<.004	--	e.001	<.05	<.01
JUL							
10...	<.01	<.002	<.004	--	e.002	<.05	<.01
24...	<.01	<.002	<.004	--	<.009	<.05	<.01
AUG							
07...	<.01	<.002	<.004	--	<.009	<.05	<.01
SEP							
04...	<.01	<.002	<.004	--	e.005	<.05	<.01

< Actual value is known to be less than value shown.
e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	335	296	106	84	154	151	149	111	---	---	171	165
2	330	292	110	105	154	149	169	149	187	160	171	165
3	330	277	115	106	150	148	169	164	160	158	172	165
4	349	298	125	111	149	146	174	166	158	130	172	165
5	328	279	132	125	156	149	---	174	158	131	170	162
6	345	309	136	132	156	145	---	172	160	155	180	142
7	362	327	136	133	148	145	174	168	163	155	169	137
8	343	232	---	---	148	145	---	---	169	157	156	147
9	362	270	114	56	152	146	203	197	178	168	162	145
10	361	313	73	50	149	144	207	191	173	169	164	150
11	354	307	138	73	150	145	201	---	177	169	170	151
12	348	274	194	100	150	147	169	100	---	---	191	170
13	300	234	208	166	150	149	185	122	174	165	176	103
14	387	266	180	167	150	141	211	185	165	159	---	105
15	295	246	190	175	147	140	219	201	180	163	177	148
16	247	65	217	190	154	146	233	201	---	---	148	92
17	80	41	242	115	154	100	---	---	184	169	118	99
18	45	31	126	123	126	87	---	---	180	169	140	118
19	33	29	138	122	167	126	---	---	192	180	142	128
20	29	28	122	111	167	155	---	---	183	174	159	139
21	52	28	125	109	157	120	---	---	180	176	165	156
22	58	32	130	120	147	120	---	---	187	180	169	156
23	38	32	128	116	162	147	---	---	185	180	156	---
24	46	29	131	115	175	155	---	---	181	175	151	122
25	66	43	133	131	---	---	---	---	180	175	146	128
26	74	56	135	132	---	---	---	---	175	168	---	146
27	90	74	134	126	183	179	---	---	175	169	180	---
28	92	68	139	126	---	---	194	186	175	169	---	---
29	69	65	147	139	178	164	---	---	---	---	187	---
30	76	65	151	143	164	152	---	---	---	---	---	---
31	85	76	---	---	152	111	---	---	---	---	---	---
MONTH	387	28	---	---	---	---	---	---	---	---	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	83	66	205	155	253	209	---	---	---	---
2	189	122	70	54	215	148	324	253	---	---	---	---
3	---	---	57	51	192	148	334	305	370	239	---	---
4	---	---	51	48	206	182	391	320	239	155	---	---
5	---	---	52	48	242	203	324	278	260	175	---	---
6	---	---	56	50	232	204	332	277	---	---	---	---
7	---	---	68	54	204	182	324	245	---	---	---	---
8	---	---	57	55	190	174	286	241	---	---	---	---
9	---	---	60	52	209	166	307	280	375	275	---	---
10	173	138	63	52	199	169	308	272	380	291	---	---
11	169	129	65	54	201	172	325	308	301	274	352	265
12	131	66	68	55	---	---	314	---	323	292	444	294
13	83	53	67	60	---	---	376	254	385	280	368	305
14	62	49	75	64	---	---	281	255	473	361	334	241
15	63	52	95	75	---	---	---	---	504	442	287	227
16	63	50	120	79	---	---	---	---	504	358	346	279
17	78	54	126	95	---	---	---	---	358	---	343	313
18	69	60	212	108	---	---	---	---	---	---	437	299
19	71	60	191	123	---	---	---	---	---	---	372	296
20	69	51	144	126	243	176	---	---	---	---	348	296
21	65	52	166	50	206	176	---	---	---	---	351	286
22	65	51	72	54	238	202	---	---	---	---	371	321
23	69	54	170	53	256	186	---	---	---	---	399	291
24	65	56	---	---	203	189	---	---	---	---	436	295
25	80	61	---	---	273	196	---	---	---	---	409	331
26	75	65	---	---	242	232	---	---	---	---	404	302
27	72	62	---	---	290	229	---	---	---	---	408	306
28	72	61	---	---	285	255	---	---	---	---	---	---
29	80	62	---	---	328	268	---	---	---	---	---	---
30	99	75	---	---	283	194	---	---	---	---	---	---
31	---	---	232	199	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.5	17.5	14.5	12.5	12.5	11.0	11.0	9.5	14.5	12.5	15.5	12.5
2	19.0	15.0	14.0	12.0	12.5	10.5	11.0	9.5	13.0	11.0	15.5	12.0
3	20.0	15.0	14.0	12.5	12.0	10.5	11.0	9.5	13.0	10.5	15.0	12.5
4	21.0	16.5	14.5	12.0	12.0	10.5	11.0	10.0	13.0	10.5	16.0	12.5
5	22.0	17.5	14.0	12.0	11.5	10.5	12.0	10.0	12.0	9.5	16.0	12.0
6	22.5	18.0	14.0	12.0	11.5	10.5	12.0	11.0	12.0	9.0	16.5	12.5
7	23.0	18.5	14.5	13.0	12.0	10.5	11.0	10.0	12.0	9.5	16.5	13.0
8	23.5	19.0	15.5	14.5	11.5	10.5	10.5	10.0	11.5	8.5	16.5	13.0
9	23.0	19.0	16.0	14.5	11.0	10.5	10.5	10.0	11.5	8.5	17.0	13.5
10	22.0	19.5	15.5	14.5	12.0	10.5	11.5	10.5	11.5	9.0	17.5	14.0
11	21.0	18.0	16.0	14.0	11.5	10.5	12.0	11.0	11.5	10.0	18.0	15.0
12	21.0	17.0	16.0	14.5	11.5	11.0	11.5	10.5	11.5	10.5	19.5	15.5
13	21.0	17.0	16.0	14.5	11.5	10.5	12.0	11.0	14.0	11.0	19.0	16.5
14	21.5	17.5	15.5	14.0	12.5	11.5	12.0	11.5	14.5	12.5	19.5	16.5
15	20.5	17.0	14.5	13.5	12.0	11.5	13.0	12.0	14.0	12.5	19.5	16.5
16	19.5	17.0	15.0	13.5	12.5	11.5	12.0	10.5	15.5	12.5	18.0	16.0
17	19.0	17.0	15.0	13.5	12.5	11.0	11.0	10.5	14.0	12.5	17.5	14.5
18	17.5	16.5	14.0	12.5	11.5	10.0	11.5	10.5	14.5	11.0	17.0	14.0
19	17.0	16.0	14.5	12.5	10.5	9.5	11.0	10.5	13.5	12.0	17.5	14.0
20	17.0	16.0	14.0	12.5	10.5	9.5	10.5	10.0	14.0	11.0	18.5	15.0
21	17.0	16.0	14.0	12.5	11.5	10.0	11.0	10.0	14.5	11.0	19.0	15.0
22	17.0	16.0	14.5	12.5	10.5	9.5	11.5	10.0	14.5	11.5	19.5	15.5
23	16.5	15.5	14.0	12.5	10.0	8.5	13.0	11.0	14.0	11.5	18.0	16.5
24	16.0	15.0	14.0	13.0	9.0	8.0	12.5	12.0	14.0	12.5	19.0	15.0
25	16.5	15.0	14.0	13.0	9.0	8.0	12.0	11.5	15.0	13.0	19.5	15.5
26	16.5	14.5	13.0	11.5	10.0	8.5	12.5	12.0	15.0	12.0	19.5	17.0
27	16.5	14.5	12.5	11.0	11.5	9.5	13.5	12.0	15.5	13.0	18.5	15.0
28	16.5	14.5	12.5	10.5	11.5	10.5	14.0	12.0	15.0	12.0	18.5	14.0
29	16.5	14.5	12.5	11.0	11.5	10.0	14.0	12.0	---	---	20.0	15.5
30	16.0	14.0	12.0	11.0	10.5	9.5	13.0	12.5	---	---	21.0	17.0
31	15.0	13.5	---	---	11.0	9.5	13.0	12.5	---	---	21.0	18.0
MONTH	23.5	13.5	16.0	10.5	12.5	8.0	14.0	9.5	15.5	8.5	21.0	12.0

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	19.5	17.0	19.0	16.5	27.5	23.0	29.0	23.0	---	---	---	---
2	18.0	15.5	18.0	16.5	28.0	23.5	29.0	23.0	---	---	---	---
3	19.0	15.0	17.0	16.0	29.5	24.5	29.0	22.5	29.0	23.0	---	---
4	18.0	15.5	16.5	15.5	29.0	24.0	28.5	22.5	28.5	24.0	---	---
5	18.5	14.5	16.5	14.5	29.0	24.0	29.0	23.0	28.5	23.0	---	---
6	18.0	15.0	16.5	15.0	28.5	23.5	29.0	23.0	28.0	22.5	---	---
7	19.5	15.0	16.5	15.5	28.0	23.5	29.0	23.0	---	---	---	---
8	20.5	16.0	16.0	15.0	28.0	23.5	28.0	22.0	28.5	---	---	---
9	21.0	17.0	16.0	14.5	28.5	23.5	29.5	22.0	29.0	22.5	---	---
10	21.0	17.5	16.5	14.0	26.5	23.5	29.5	23.5	29.0	22.0	25.5	---
11	20.5	17.5	17.0	15.0	26.0	22.5	29.5	23.0	28.5	22.0	26.5	21.0
12	19.5	17.5	17.5	16.0	25.5	22.5	30.0	24.0	29.0	21.5	27.5	21.5
13	18.0	16.5	19.5	16.5	25.5	22.0	29.5	23.5	29.0	22.0	26.5	21.5
14	17.0	15.0	20.0	18.0	25.5	22.5	29.5	23.0	29.0	22.0	27.0	21.5
15	16.5	14.5	21.5	17.5	26.0	22.0	---	---	28.5	21.0	27.0	21.5
16	16.0	15.0	21.0	18.0	27.0	23.0	---	---	29.0	21.5	26.0	20.5
17	16.5	15.0	21.5	18.5	27.5	24.0	---	---	---	22.5	23.5	19.5
18	17.0	14.5	21.0	17.5	27.0	24.0	---	---	---	---	24.0	18.5
19	17.5	15.0	22.5	18.0	28.0	23.0	---	---	---	---	25.0	19.0
20	16.5	15.5	23.5	19.0	27.5	22.0	---	---	---	---	25.5	20.0
21	16.5	15.5	25.0	20.0	27.0	22.0	---	---	---	---	26.5	21.0
22	17.0	15.0	26.0	21.5	27.5	22.0	---	---	---	---	26.5	21.0
23	17.5	15.0	27.5	22.5	26.5	21.5	---	---	---	---	26.0	21.5
24	16.5	15.5	---	23.0	26.5	21.5	---	---	---	---	25.5	21.5
25	17.5	15.0	---	---	28.5	22.5	---	---	---	---	25.0	20.5
26	17.5	15.0	---	---	30.0	23.5	---	---	---	---	25.0	20.0
27	18.5	15.5	---	---	30.5	24.5	---	---	---	---	25.0	20.0
28	18.5	16.0	---	---	30.5	24.5	---	---	---	---	---	20.0
29	18.0	16.0	---	---	29.5	23.5	---	---	---	---	---	---
30	18.5	15.5	26.5	---	29.0	23.5	---	---	---	---	---	---
31	---	---	27.5	22.0	---	---	---	---	---	---	---	---
MONTH	21.0	14.5	---	---	30.5	21.5	---	---	---	---	---	---

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)	Suspnd. sediment, sieve diametr percent <.063mm (70331)
OCT						
16...SS	1220	e200	18.0	23	e12	89
NOV						
07...SS	1230	e228	14.0	12	e7.4	87
DEC						
12...SS	1230	e239	11.5	14	e9.0	73
17...SS	0030	e256	--	20	e14	79
17...SS	1550	e268	12.5	19	e14	82
18...SS	0900	e337	--	38	e35	82
20...SS	2150	e280	10.0	18	e14	39
21...SS	1115	e307	--	54	e45	70
21...SS	1615	e315	--	120	e102	19
22...SS	1030	e315	--	50	e43	81
JAN						
09...SS	1200	e222	10.5	13	e7.8	78
23...SS	1140	e211	11.5	13	e7.4	80
FEB						
06...SS	1300	e229	11.0	8	e4.9	83
20...SS	1220	e216	12.5	11	e6.4	70
MAR						
12...SS	1340	e212	18.5	15	e8.6	71
28...SS	1320	e223	17.5	14	e8.4	64
APR						
09...SS	1330	e260	19.5	23	e16	68
29...SS	1450	e582	17.5	25	e39	68
MAY						
14...SS	1500	e653	19.5	11	e19	70
28...SS	1250	e225	25.0	13	e7.9	57
JUN						
11...SS	1340	e180	25.5	19	e9.2	61
25...SS	1350	e161	26.5	31	e13	75
JUL						
10...SS	1340	e124	28.0	8	e2.7	87
AUG						
07...SS	1340	e93	27.5	10	e2.5	88
SEP						
04...SS	1130	e109	26.0	5	e1.5	79

SS Suspended-sediment data determined from a sample collected and processed according to National Water-Quality Assessment (NAWQA) protocol.

e Estimated.

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	Depth at sample location, feet (81903)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR					
23...*	1039	1.50	58	15.5	6.80
23...*	1043	2.30	58	15.5	20.4
23...*	1046	3.40	57	15.4	34.0
23...*	1048	3.10	57	15.4	47.6
23...*	1050	3.10	57	15.5	61.2
23...*	1054	3.30	57	15.5	74.8
23...*	1057	3.60	57	15.5	88.4
23...*	1059	3.90	57	15.5	102
23...*	1102	3.20	57	15.5	116
23...*	1107	2.30	57	15.6	129
AUG					
08...*	1034	.91	304	23.2	4.75
08...*	1036	1.30	297	22.8	14.2
08...*	1037	.96	296	22.8	23.8
08...*	1038	1.02	296	22.8	33.2
08...*	1039	1.03	296	22.7	42.8
08...*	1040	1.20	296	22.7	52.2
08...*	1041	1.46	296	22.7	61.8
08...*	1042	1.10	296	22.7	71.2
08...*	1043	.52	296	22.8	80.8
08...*	1044	.25	297	23.0	90.2

* Estimated discharge at time of cross-sectional measurement: Apr. 23, 636 ft^3/s; Aug. 8, 102 ft^3/s.

11274000 SAN JOAQUIN RIVER NEAR NEWMAN, CA

LOCATION.—Lat 37° 21'02", long 120° 58'34", in NW 1/4 SW 1/4 sec.3, T.7 S., R.9 E., Stanislaus County, Hydrologic Unit 18040002, on left bank, 600 ft downstream from bridge on Hills Ferry Road, 650 ft downstream from Merced River, and 3.5 mi northeast of Newman.

DRAINAGE AREA.—9,520 mi^2.

PERIOD OF RECORD.—April 1912 to current year. Water years 1938–43 include flows through Merced River Slough.
CHEMICAL DATA: Water year 1993.
SPECIFIC CONDUCTANCE: Water years 1989, 1992–95.
WATER TEMPERATURE: Water years 1989, 1992–95.
SEDIMENT DATA: Water year 1993.

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929. Prior to Mar. 3, 1931, gage at various sites within 240 ft of bridge. Mar. 3, 1931, to Sept. 30, 1959, water-stage recorder within 300 ft of bridge, at datum 47.31 ft higher. Oct. 1, 1959, to Aug. 9, 1960, water-stage recorder at site 70 ft upstream, at present datum.

REMARKS.—Records fair. Natural flow of stream affected by storage reservoirs, ground-water withdrawals, diversions for irrigation, and imported water; low flows consist mainly of return water from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge (river only), 36,200 ft^3/s, Jan. 28, 1997, elevation, 66.14 ft; minimum daily, 15 ft^3/s, Aug. 9, 10, 1924. Maximum discharge (including flow in Merced River Slough in water years 1938–43), 33,000 ft^3/s, Mar. 7, 1938.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Jan. 2, 1868, reached a stage of 69.0 ft, from floodmarks; flood of February 1886 reached a stage of 67.1 ft, from floodmarks; and flood of 1911 reached a stage of 66.3 ft, from floodmarks. All stages referred to current datum. Discharges unknown.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	287	657	580	1170	722	1030	803	864	430	416	370	343
2	305	626	572	1170	722	1040	777	927	469	397	386	339
3	298	602	568	1170	721	1020	749	1120	469	384	439	323
4	304	607	573	1150	754	1030	739	1370	476	380	492	292
5	304	614	584	1100	747	1080	728	1590	462	371	479	274
6	295	613	590	1000	725	1100	733	1640	443	358	446	252
7	284	617	596	921	715	1110	714	1670	431	366	422	268
8	281	673	625	874	700	1100	698	1650	396	389	426	286
9	279	855	634	835	696	1100	665	1660	418	397	428	244
10	262	995	635	825	699	1110	633	1680	444	381	424	254
11	264	992	638	840	701	1120	614	1700	428	369	398	266
12	267	965	645	1000	710	1080	676	1600	411	349	372	250
13	298	939	660	1080	716	1100	857	1240	388	353	349	258
14	313	897	682	1050	741	1080	947	1010	393	365	293	269
15	315	854	715	997	777	1090	979	825	400	365	267	283
16	375	821	771	962	809	1160	995	707	439	351	254	248
17	564	799	888	916	834	1210	1010	653	439	354	276	233
18	793	775	1100	892	846	1190	1070	626	394	352	284	228
19	899	756	e1320	863	862	1120	1120	649	367	337	306	237
20	948	728	1400	816	878	1020	1110	631	383	340	298	252
21	1010	711	1450	783	869	975	1090	580	394	349	300	272
22	1040	681	1570	766	858	952	1040	553	406	345	306	258
23	1050	676	1590	770	859	922	942	510	443	325	306	286
24	1040	672	1550	764	889	903	849	496	455	311	326	287
25	967	647	1460	742	936	892	849	471	459	333	354	297
26	892	618	1350	739	952	882	883	484	447	367	353	293
27	796	601	1270	743	993	857	873	482	423	394	335	304
28	739	600	1230	757	1020	839	876	521	386	395	341	343
29	708	595	1190	752	---	860	895	524	378	393	341	363
30	690	586	1120	743	---	855	877	446	416	392	324	370
31	668	---	1110	733	---	844	---	411	---	374	346	---
TOTAL	17535	21772	29666	27923	22451	31671	25791	29290	12687	11352	11041	8472
MEAN	566	726	957	901	802	1022	860	945	423	366	356	282
MAX	1050	995	1590	1170	1020	1210	1120	1700	476	416	492	370
MIN	262	586	568	733	696	839	614	411	367	311	254	228
AC-FT	34780	43180	58840	55390	44530	62820	51160	58100	25160	22520	21900	16800

e Estimated.

11274000 SAN JOAQUIN RIVER NEAR NEWMAN, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1937, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	290	362	796	1857	3623	3223	3395	5010	5490	1888	328	209
MAX	1422	1233	2907	8356	11840	13000	11780	14210	15700	8803	1370	442
(WY)	1919	1928	1923	1914	1916	1916	1916	1916	1922	1914	1914	1936
MIN	55.0	85.5	136	228	278	233	122	115	92.5	29.1	21.3	26.7
(WY)	1914	1932	1913	1918	1913	1913	1931	1931	1924	1924	1924	1924

SUMMARY STATISTICS	WATER YEARS 1912 - 1937	
ANNUAL MEAN	2208	
HIGHEST ANNUAL MEAN	6585	1916
LOWEST ANNUAL MEAN	196	1931
HIGHEST DAILY MEAN	20700	Jan 27 1914
LOWEST DAILY MEAN	15	Aug 9 1924
ANNUAL SEVEN-DAY MINIMUM	17	Aug 4 1924
MAXIMUM PEAK FLOW	20700	Jan 27 1914
MAXIMUM PEAK STAGE	65.30	Jan 27 1914
ANNUAL RUNOFF (AC-FT)	1599000	
10 PERCENT EXCEEDS	7040	
50 PERCENT EXCEEDS	590	
90 PERCENT EXCEEDS	112	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1943, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	447	494	1558	3378	7512	10070	7308	8025	9334	3383	686	482
MAX	708	1065	2832	5111	14350	23500	11480	15310	21010	8625	1745	768
(WY)	1939	1939	1938	1942	1938	1938	1938	1938	1938	1938	1938	1938
MIN	226	190	423	1967	2442	679	959	627	333	234	225	278
(WY)	1940	1940	1940	1939	1939	1939	1939	1939	1939	1939	1939	1939

SUMMARY STATISTICS	WATER YEARS 1938 - 1943	
ANNUAL MEAN	4366	
HIGHEST ANNUAL MEAN	8643	1938
LOWEST ANNUAL MEAN	904	1939
HIGHEST DAILY MEAN	33000	Mar 7 1938
LOWEST DAILY MEAN	170	Nov 9 1939
ANNUAL SEVEN-DAY MINIMUM	171	Nov 8 1939
MAXIMUM PEAK FLOW	33000	Mar 7 1938
MAXIMUM PEAK STAGE	65.81	Mar 7 1938
ANNUAL RUNOFF (AC-FT)	3163000	
10 PERCENT EXCEEDS	11900	
50 PERCENT EXCEEDS	1580	
90 PERCENT EXCEEDS	291	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	709	678	1196	2306	3153	3039	2867	2738	2107	971	511	609
MAX	5831	4039	10880	24920	21100	24170	18860	14050	15280	11320	2683	3786
(WY)	1984	1984	1983	1997	1983	1983	1983	1983	1983	1983	1983	1983
MIN	25.2	122	202	230	180	212	159	141	48.7	45.9	80.4	41.2
(WY)	1978	1978	1950	1991	1991	1948	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1944 - 2003	
ANNUAL TOTAL	247364		249651			
ANNUAL MEAN	678		684		1732	
HIGHEST ANNUAL MEAN					11620	1983
LOWEST ANNUAL MEAN					200	1961
HIGHEST DAILY MEAN	2200	Jan 5	1700	May 11	36000	Jan 28 1997
LOWEST DAILY MEAN	262	Oct 10	228	Sep 18	20	Oct 26 1977
ANNUAL SEVEN-DAY MINIMUM	276	Oct 6	247	Sep 16	23	Oct 7 1977
MAXIMUM PEAK FLOW			1720	May 11	36200	Jan 28 1997
MAXIMUM PEAK STAGE			52.05	May 11	66.14	Jan 28 1997
INSTANTANEOUS LOW FLOW					15	Aug 9 1924
ANNUAL RUNOFF (AC-FT)	490600		495200		1254000	
10 PERCENT EXCEEDS	1100		1110		3970	
50 PERCENT EXCEEDS	639		665		606	
90 PERCENT EXCEEDS	306		298		224	

11274500 ORESTIMBA CREEK NEAR NEWMAN, CA

LOCATION.—Lat 37° 18'56", long 121° 07'27", in NE 1/4 NE 1/4 sec.19, T.7 S., R.8 E., Stanislaus County, Hydrologic Unit 18040002, on right bank, 20 ft downstream from bridge at California Aqueduct Siphon, 3 mi downstream from Oso Creek, and 5.5 mi west of Newman.

DRAINAGE AREA.—134 mi^2.

PERIOD OF RECORD.—January 1932 to current year.

REVISED RECORDS.—WSP 1445: 1932(M), 1938(P), 1940–41(M), 1945, 1951(M). WSP 1930: Drainage area, WDR CA-95-3: 1986(M).

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 216.01 ft above NGVD of 1929. Prior to Oct. 1, 1958, at site 1,080 ft downstream at datum 24.14 ft lower. Oct. 1, 1958, to Aug. 13, 1969, at site 960 ft downstream at datum 27.14 ft lower. Aug. 13, 1969, to Feb. 6, 1984, at site 240 ft upstream, present datum.

REMARKS.—Records fair. No storage or diversion upstream from station except for minor stock ponds.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 12,000 ft^3/s, Mar. 10, 1995, gage height, 9.51 ft, from rating curve extended above 4,000 ft^3/s, on basis of critical depth measurement; no flow for all or parts of each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 500 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 16	1245	2,790	5.99	Dec. 19	2330	1,270	4.87

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	101	2.9	7.0	0.64	0.04	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	60	2.5	5.3	0.59	0.03	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	39	2.1	4.6	0.45	0.24	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	28	2.0	3.8	0.72	2.6	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	22	1.8	3.2	0.94	3.5	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	18	1.6	2.9	0.95	3.5	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	16	1.5	2.5	0.64	1.9	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	13	1.3	2.1	0.39	1.0	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	11	1.2	1.7	0.27	0.58	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	23	1.2	1.6	0.17	0.33	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	59	1.3	1.5	0.11	0.19	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	34	2.2	1.4	0.09	0.14	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	24	5.1	1.2	0.13	0.07	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	19	4.8	1.00	1.6	0.03	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	16	3.4	7.5	1.6	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	576	14	3.0	22	1.3	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	260	12	4.3	15	1.6	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	94	11	4.4	9.6	1.5	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	94	9.5	3.5	6.5	0.94	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	491	8.3	2.8	4.7	0.56	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	379	7.5	2.1	3.5	0.41	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	129	6.9	1.8	2.8	0.31	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	53	6.4	1.7	2.9	0.22	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	28	5.9	1.9	2.9	0.20	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	18	5.3	7.7	2.0	0.17	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	14	4.7	14	1.5	0.13	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	11	4.5	12	1.3	0.13	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	11	4.1	9.4	0.99	0.13	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	124	3.7	---	0.72	0.11	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	88	3.3	---	0.60	0.07	0.00	0.00	0.00	0.00	0.00
31	0.00	---	108	3.1	---	0.60	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	2478.00	593.2	103.5	124.91	17.07	14.15	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	79.9	19.1	3.70	4.03	0.57	0.46	0.000	0.000	0.000	0.000
MAX	0.00	0.00	576	101	14	22	1.6	3.5	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	3.1	1.2	0.60	0.07	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	4920	1180	205	248	34	28	0.00	0.00	0.00	0.00

11274500 ORESTIMBA CREEK NEAR NEWMAN, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.000	0.88	12.3	44.6	84.6	47.5	21.3	3.24	0.66	0.12	0.001	0.000
MAX	0.000	31.0	181	432	818	345	362	46.9	15.1	5.32	0.045	0.000
(WY)	1933	1951	1956	1997	1998	1995	1958	1983	1941	1941	1958	1932
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1933	1933	1933	1936	1935	1933	1933	1933	1932	1932	1932	1932

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1932 - 2003	
ANNUAL TOTAL	3187.03		3330.83			
ANNUAL MEAN	8.73		9.13		17.6	
HIGHEST ANNUAL MEAN					89.4	1983
LOWEST ANNUAL MEAN					0.000	1947
HIGHEST DAILY MEAN	576	Dec 16	576	Dec 16	4550	Feb 3 1998
LOWEST DAILY MEAN	0.00	Mar 2	0.00	Oct 1	0.00	May 9 1932
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 3	0.00	Oct 1	0.00	May 9 1932
MAXIMUM PEAK FLOW			2790	Dec 16	12000	Mar 10 1995
MAXIMUM PEAK STAGE			5.99	Dec 16	9.51	Mar 10 1995
ANNUAL RUNOFF (AC-FT)	6320		6610		12750	
10 PERCENT EXCEEDS	1.9		11		20	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA

LOCATION.—Lat 37° 24'49", long 121° 00'54", in Orestimba Grant, Stanislaus County, Hydrologic Unit 18040002, on right bank, at downstream side of River Road Bridge, 0.8 mi upstream of mouth, and 3.4 mi northeast of Crows Landing.

DRAINAGE AREA.—Not determined.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—April 1992 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 65 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair. Flows during summer and fall consist mainly of return water from irrigated areas. During major storm events record can be affected by backwater from the San Joaquin River.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,650 ft^3/s, Mar. 10, 1995, gage height, 18.40 ft, from rating curve extended above 2,470 ft^3/s, maximum gage height, 19.60 ft, Jan. 23, 1997 (backwater from San Joaquin River); no flow for many days during winter months for some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.62	5.2	0.91	83	28	3.4	7.2	18	3.8	19	11	7.2
2	0.80	1.3	8.6	44	28	34	7.5	13	3.8	19	9.9	6.8
3	1.4	0.32	0.67	27	34	46	8.3	13	10	19	10	2.1
4	0.79	0.38	0.09	14	36	18	6.6	10	10	33	11	1.7
5	0.60	19	0.01	5.4	31	12	5.2	12	9.4	12	9.5	0.96
6	0.50	24	0.00	1.5	44	8.7	4.7	13	6.5	15	14	1.1
7	0.98	39	0.00	0.48	40	22	4.1	14	7.4	36	20	2.2
8	2.4	106	0.00	0.00	40	19	4.4	11	9.6	19	19	1.9
9	2.1	73	0.00	0.00	39	7.8	9.3	9.6	8.6	18	14	2.3
10	1.8	22	0.00	0.12	30	5.8	5.7	8.5	12	22	9.3	2.5
11	1.9	10	0.00	17	15	11	4.7	8.2	9.1	72	6.9	3.8
12	6.6	8.5	0.00	20	36	17	6.0	9.1	9.4	35	7.1	2.9
13	15	9.0	0.00	8.3	17	7.4	9.7	8.7	7.8	21	9.4	2.9
14	18	10	0.00	3.0	8.5	6.9	8.5	8.4	4.6	26	10	3.3
15	15	9.7	0.00	0.86	12	8.0	9.0	8.7	7.1	17	14	3.3
16	5.7	3.4	133	0.01	7.3	6.3	11	11	7.8	16	14	2.0
17	8.3	0.65	278	0.00	6.5	4.7	8.1	13	9.8	16	10	3.0
18	7.6	0.36	98	0.00	4.7	5.2	9.9	13	14	18	8.7	4.6
19	14	13	42	0.00	3.4	5.1	6.6	14	9.7	16	9.1	6.2
20	21	13	303	0.00	3.2	7.6	7.3	11	11	19	7.0	4.3
21	22	12	357	0.00	26	5.1	8.0	8.0	9.1	18	9.1	8.3
22	19	5.1	136	0.00	15	5.5	9.9	12	25	19	8.0	1.7
23	15	3.0	52	0.00	32	6.5	9.4	11	24	19	8.7	0.93
24	22	2.7	26	0.00	45	3.8	15	8.5	12	19	6.8	1.4
25	28	2.4	11	4.0	32	4.1	18	8.1	8.7	13	6.2	0.91
26	33	0.50	3.5	6.8	27	4.4	12	6.5	7.3	12	5.8	1.5
27	38	0.01	0.80	7.0	18	5.1	11	9.2	15	15	2.8	2.5
28	27	0.00	0.08	1.7	6.7	6.0	11	9.0	18	19	4.4	2.2
29	28	0.84	30	0.77	---	5.1	8.3	10	20	14	4.4	2.7
30	17	5.7	75	23	---	7.1	13	11	20	15	13	1.5
31	13	---	49	8.9	---	5.9	---	6.7	---	12	8.9	---
TOTAL	387.09	400.06	1604.66	276.84	665.3	314.5	259.4	327.2	330.5	643	302.0	88.70
MEAN	12.5	13.3	51.8	8.93	23.8	10.1	8.65	10.6	11.0	20.7	9.74	2.96
MAX	38	106	357	83	45	46	18	18	25	72	20	8.3
MIN	0.50	0.00	0.00	0.00	3.2	3.4	4.1	6.5	3.8	12	2.8	0.91
AC-FT	768	794	3180	549	1320	624	515	649	656	1280	599	176

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

MEAN	29.8	31.1	26.3	101	150	84.9	53.3	50.4	25.1	28.6	22.3	14.3
MAX	121	101	54.1	596	721	318	185	243	97.3	104	62.2	42.7
(WY)	1999	1999	1997	1997	1998	1995	1998	1998	1998	1998	1998	1998
MIN	2.19	3.82	1.01	8.93	6.15	10.1	7.94	8.73	7.38	14.1	9.16	2.96
(WY)	1995	1995	1995	2003	1995	2003	2002	2002	1992	1992	2002	2003

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1992 - 2003	
ANNUAL TOTAL	5926.66		5599.25			
ANNUAL MEAN	16.2		15.3		51.6	
HIGHEST ANNUAL MEAN					134	1998
LOWEST ANNUAL MEAN					15.3	2003
HIGHEST DAILY MEAN	357	Dec 21	357	Dec 21	2250	Feb 3 1998
LOWEST DAILY MEAN	0.00	Feb 2	0.00	Nov 28	0.00	Dec 18 1992
ANNUAL SEVEN-DAY MINIMUM	0.00	Dec 6	0.00	Dec 6	0.00	Dec 18 1992
MAXIMUM PEAK FLOW			812	Dec 16	2650	Mar 10 1995
MAXIMUM PEAK STAGE			10.88	Dec 16	19.60	Jan 23 1997
ANNUAL RUNOFF (AC-FT)	11760		11110		37370	
10 PERCENT EXCEEDS	27		29		108	
50 PERCENT EXCEEDS	9.5		8.7		18	
90 PERCENT EXCEEDS	0.82		0.66		2.5	

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—April 1992 to current year.
CHEMICAL DATA: Water years 1992–95, February 1997 to September 1999, October 2000 to current year.
SPECIFIC CONDUCTANCE: April 1992 to current year.
WATER TEMPERATURE: April 1992 to current year.
SEDIMENT DATA: Water years 1992–95, February 1997 to current year.

PERIOD OF DAILY RECORD.—April 1992 to current year.
SPECIFIC CONDUCTANCE: April 1992 to current year.
WATER TEMPERATURE: April 1992 to current year.

INSTRUMENTATION.—Water-quality monitor since April 1992.

REMARKS.—Specific conductance records rated excellent except for Oct. 1–8, Oct. 30 to Nov. 19, Jan. 25 to Feb. 5, Mar. 4–13, Apr. 25 to May 14, May 30 to June 25, Aug. 10–20, Sept. 13–27, which are rated good; Feb. 6–19, Mar. 14–20, Aug. 21 to Sept. 5, Sept. 28–30, which are rated fair; and Feb. 20–26, Mar. 21 to Apr. 8, which are rated poor. Water-temperature records are rated excellent except for Mar. 9–29, which are rated good; and Mar. 30 to Apr. 8, which are rated poor. Interruptions in record were due to periods of no flow. Specific-conductance, water-temperature, and chemical values are affected by irrigation-return flow from a drainage pipe located 30 ft upstream from gage.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum recorded, 1,890 microsiemens, Sept. 13, 1992; minimum recorded, 66 microsiemens, Dec. 16, 2002.
WATER TEMPERATURE: Maximum recorded, 32.0° C, May 31, Aug. 7, 2001; minimum recorded, 2.0° C, Dec. 22, 24, 1998.

EXTREMES FOR CURRENT YEAR.—
SPECIFIC CONDUCTANCE: Maximum recorded, 1,230 microsiemens, Jan. 25; minimum recorded, 66 microsiemens, Dec. 16.
WATER TEMPERATURE: Maximum recorded, 30.5° C, July 20; minimum recorded, 6.0° C, Dec. 25.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)
OCT									
05...	1120	18	761	9.8	105	8.1	572	18.5	150
NOV									
02...	1100	25	763	9.9	98	7.8	547	15.0	120
DEC									
07...	1000	1.9	765	10.4	88	8.2	690	8.0	180
JAN									
06...	1030	2.7	--	--	--	--	729	--	--
12...	1230	36	765	11.1	97	8.0	593	9.5	130
19...	1140	49	--	--	--	--	681	--	--
FEB									
04...	1100	2.7	--	--	--	--	590	--	--
09...	1110	5.9	--	--	--	--	623	--	--
12...	0300	19	--	--	--	--	702	--	--
12...	0840	22	--	--	--	--	665	--	--
12...	1600	149	--	--	--	--	705	--	--
13...	0130	99	--	--	--	--	439	--	--
13...	2130	282	--	--	--	--	497	--	--
13...	2321	434	--	--	--	--	531	--	--
14...	0030	574	--	--	--	--	466	--	--
14...	0130	763	--	--	--	--	--	--	--
14...	0230	927	--	--	--	--	369	--	--
14...	0650	1550	--	--	--	--	232	--	--
14...	1100	1240	--	--	--	--	220	--	--
25...	1200	130	766	10.8	95	8.3	438	10.0	--
MAR									
08...	1150	16	759	10.4	--	8.5	--	12.0	250
28...	1110	10	--	--	--	8.4	576	14.5	--
APR									
10...	1150	9.0	--	--	--	8.7	968	16.5	290
26...	1100	139	--	--	--	8.0	544	19.0	--
MAY									
16...	1300	32	761	8.8	92	8.0	621	17.5	170
30...	1130	7.7	758	7.9	88	8.1	668	20.0	--
JUN									
13...	1200	4.9	758	8.0	94	8.2	708	23.0	220
28...	1220	24	758	7.1	87	8.3	528	25.5	--
JUL									
06...	1240	22	758	8.5	95	8.0	543	20.5	160
20...	1150	16	759	7.7	89	8.2	848	22.0	--
AUG									
09...	1100	28	760	--	--	8.4	545	--	160
SEP									
12...	1230	43	758	8.3	95	8.2	490	21.5	130

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Noncarb hard-ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alka-linity, wat flt Gran, field, mg/L as CaCO3 (29802)	Chlor-ide, water, fltrd, mg/L (00940)
OCT									
05...	48	31.7	17.3	2.59	2	55.9	44	102	70.6
NOV									
02...	36	26.0	14.3	2.47	2	53.1	48	88.0	73.6
DEC									
07...	62	36.5	20.9	3.78	2	67.3	45	115	92.1
JAN									
06...	--	--	--	--	--	--	--	--	--
12...	48	26.7	16.1	2.83	2	65.0	51	85.0	86.3
19...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
MAR									
08...	62	46.7	32.7	2.16	1	43.3	27	190	19.3
28...	--	--	--	--	--	--	--	102	--
APR									
10...	100	60.4	34.6	5.67	2	69.8	34	190	88.7
26...	--	--	--	--	--	--	--	95.0	--
MAY									
16...	75	36.4	19.3	2.98	2	52.8	40	95.0	67.2
30...	--	--	--	--	--	--	--	101	--
JUN									
13...	80	45.9	24.4	3.96	1	48.3	32	135	69.6
28...	--	--	--	--	--	--	--	94.0	--
JUL									
06...	58	35.4	17.6	3.01	1	43.2	36	103	57.7
20...	--	--	--	--	--	--	--	164	--
AUG									
09...	41	34.0	17.3	2.37	1	42.9	37	115	55.9
SEP									
12...	40	29.1	15.0	2.60	2	41.4	40	94.0	53.2

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT									
05...	.1	14.4	60.6	322	.45	334	.22	.47	<.02
NOV									
02...	.1	11.3	57.7	299	.45	331	.31	.52	.10
DEC									
07...	.1	14.2	79.5	384	.54	400	--	--	--
JAN									
06...	--	--	--	--	--	--	--	--	--
12...	.1	13.2	61.4	329	.47	345	.32	.37	<.02
19...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	.82	5.0	.31
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	.56	2.2	.12
13...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	.52	.52	.09
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	.20	.53	<.02
MAR									
08...	.2	8.83	134	401	.58	427	.20	.20	<.02
28...	--	--	--	--	--	--	--	--	--
APR									
10...	.2	13.9	138	572	.79	578	11	11	9.75
26...	--	--	--	--	--	--	--	--	--
MAY									
16...	.1	14.2	77.8	339	.51	374	.29	.75	.03
30...	--	--	--	--	--	--	--	--	--
JUN									
13...	.1	13.8	88.0	393	.58	424	.24	.45	<.02
28...	--	--	--	--	--	--	--	--	--
JUL									
06...	.1	14.2	61.0	308	.46	337	.28	1.1	<.02
20...	--	--	--	--	--	--	--	--	--
AUG									
09...	.1	14.0	59.4	305	.46	337	.24	.92	<.02
SEP									
12...	.1	9.81	47.6	263	.38	276	.34	.79	.04

< Actual value is known to be less than value shown.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
OCT									
05...	1.62	<.010	.08	.100	.183	--	202	<10	4.9
NOV									
02...	1.59	.027	.07	.090	.158	--	228	<10	2.4
DEC									
07...	--	--	--	--	--	--	280	e5	12.7
JAN									
06...	--	--	--	--	--	--	--	--	--
12...	1.29	.017	.04	.052	.087	--	229	14	6.2
19...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	1.52	.035	.04	.055	1.71	14.2	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	1.00	.013	.07	.089	.74	24.8	--	--	--
13...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	.69	<.010	.05	.066	.07	35.2	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
25...	.45	<.010	.03	.030	.080	--	173	--	--
MAR									
08...	.06	<.010	<.01	.009	.019	--	271	<10	4.0
28...	--	--	--	--	--	--	--	--	--
APR									
10...	7.59	.055	.07	.092	.27	--	391	<10	4.8
26...	--	--	--	--	--	--	--	--	--
MAY									
16...	2.51	.016	.10	.091	.33	--	256	<10	3.9
30...	--	--	--	--	--	--	--	--	--
JUN									
13...	3.91	.010	.12	.133	.25	--	257	<10	11.9
28...	--	--	--	--	--	--	--	--	--
JUL									
06...	2.90	.020	.24	.26	.70	--	210	42	5.0
20...	--	--	--	--	--	--	--	--	--
AUG									
09...	2.25	<.010	.09	.106	.40	--	226	<10	<2.2
SEP									
12...	1.63	.020	.08	.104	.29	--	169	<10	e1.4

< Actual value is known to be less than value shown.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Selenium, water, fltrd, ug/L (01145)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphosmethyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)
OCT									
05...	<2	--	--	--	--	--	--	--	--
NOV									
02...	<2	--	--	--	--	--	--	--	--
DEC									
07...	<2	--	--	--	--	--	--	--	--
JAN									
06...	--	<.003	<.002	<.002	<.002	<.002	<.001	e.014	<.002
12...	<2	<.003	<.002	<.002	<.002	<.002	.006	e.018	<.002
19...	--	<.003	<.002	<.002	<.002	<.002	.006	<.025	<.002
FEB									
04...	--	<.003	e.004	<.002	<.002	<.002	.006	e.008	<.002
09...	--	<.003	<.002	<.002	<.002	<.002	.005	e.007	<.002
12...	--	<.003	e.003	<.002	<.002	<.002	.004	e.008	<.002
12...	--	<.003	e.004	<.002	<.002	<.002	<.001	e.006	<.002
12...	--	<.003	<.002	<.002	<.002	<.002	.004	e.012	<.002
13...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
13...	--	<.003	<.002	<.002	<.002	<.002	<.001	e.014	<.002
13...	--	<.003	<.002	<.002	<.002	<.002	<.001	e.009	<.002
14...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
14...	--	<.003	<.002	<.002	<.002	<.002	<.001	e.009	<.002
14...	--	<.003	<.002	<.002	<.002	<.002	<.001	e.008	<.002
14...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
14...	--	<.003	<.002	<.002	<.002	<.002	<.001	e.008	<.002
25...	e1	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
MAR									
08...	<2	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
28...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
APR									
10...	e2	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
26...	--	<.003	<.002	<.002	<.002	<.002	<.005	<.001	<.002
MAY									
16...	e2	<.003	<.002	<.002	<.002	<.002	e.004	e.360	<.002
30...	--	<.003	<.002	<.002	<.002	<.002	.005	<.001	<.002
JUN									
13...	e1	<.003	e.003	<.002	<.002	<.002	.026	<.001	<.002
28...	--	<.003	e.003	<.002	<.002	<.002	.043	e.042	<.002
JUL									
06...	e2	<.003	e.004	<.002	<.002	<.002	.047	e.042	<.002
20...	--	<.003	e.005	<.002	.011	<.002	.010	e.048	<.002
AUG									
09...	<2	--	--	--	--	--	--	--	--
SEP									
12...	<2	--	--	--	--	--	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Diazinon, water, fltrd, ug/L (39572)	Dieldrin, water, fltrd, ug/L (39381)
OCT									
05...	--	--	--	--	--	--	--	--	--
NOV									
02...	--	--	--	--	--	--	--	--	--
DEC									
07...	--	--	--	--	--	--	--	--	--
JAN									
06...	<.002	<.030	<.003	<.004	<.005	.009	e.002	.006	<.001
12...	<.004	<.003	<.003	<.004	<.005	.008	<.002	.183	<.001
19...	<.002	e.021	<.005	.006	<.005	<.004	e.002	.033	<.001
FEB									
04...	<.002	<.003	<.003	.008	<.005	.008	e.002	.072	<.001
09...	<.002	<.003	<.003	.004	<.005	.007	e.002	.020	<.001
12...	<.002	<.003	<.003	e.004	<.005	.006	e.002	.018	<.001
12...	<.002	<.003	<.003	<.004	<.005	<.004	e.003	.026	<.001
12...	<.002	<.003	<.003	.004	<.005	.009	e.002	.028	<.001
13...	<.002	<.003	<.003	<.004	<.005	<.010	e.002	.015	<.001
13...	<.002	<.003	<.003	.004	<.005	.007	e.002	.067	<.001
13...	<.002	<.003	<.003	.011	<.005	<.004	e.002	.300	<.001
14...	<.002	<.003	<.003	e.003	<.005	.008	e.002	.084	<.001
14...	<.002	<.003	<.003	.008	<.005	<.004	e.002	.101	<.001
14...	<.002	<.003	<.003	.008	<.005	<.004	e.002	.059	<.001
14...	<.002	<.003	<.003	<.004	<.005	<.004	e.002	.007	<.001
14...	<.002	<.003	<.003	.006	<.005	<.004	e.002	.011	<.001
25...	<.002	<.003	<.003	<.004	<.005	<.004	<.002	<.002	<.001
MAR									
08...	<.002	<.003	<.003	.005	<.005	<.004	<.002	<.002	<.001
28...	<.002	e.272	<.010	.011	<.005	.030	<.002	.447	<.001
APR									
10...	<.002	<.010	e.180	.005	<.005	.013	<.002	.044	.006
26...	<.002	e.010	e.057	.019	<.005	.016	<.002	.008	<.001
MAY									
16...	<.002	e.045	e.008	.023	<.005	<.010	<.002	.119	<.001
30...	<.002	e.322	e.006	.022	<.005	<.010	<.002	.572	<.001
JUN									
13...	<.002	e.025	<.003	.008	<.005	<.004	<.002	.016	<.001
28...	<.002	e.017	<.003	.004	<.005	.005	<.002	.011	e.004
JUL									
06...	<.002	e.010	<.003	.179	<.005	.011	<.002	.147	.016
20...	<.002	e.012	<.003	.015	<.005	.007	<.002	.013	.014
AUG									
09...	--	--	--	--	--	--	--	--	--
SEP									
12...	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)
OCT									
05...	--	--	--	--	--	--	--	--	--
NOV									
02...	--	--	--	--	--	--	--	--	--
DEC									
07...	--	--	--	--	--	--	--	--	--
JAN									
06...	<.02	e.004	.030	<.010	<.003	<.004	<.002	<.005	<.006
12...	<.02	e.003	<.004	<.003	e.004	<.004	<.002	<.005	<.006
19...	<.02	.005	<.004	<.003	e.003	<.004	<.002	<.005	<.006
FEB									
04...	<.02	e.003	<.004	<.003	.004	<.004	<.010	<.005	<.006
09...	<.02	e.003	<.004	<.003	e.003	<.004	<.002	<.005	<.006
12...	<.02	e.004	.004	<.003	<.003	<.004	<.002	<.005	<.006
12...	<.02	e.004	<.004	<.003	.007	<.004	<.002	<.005	<.006
12...	<.02	.004	<.004	<.003	<.003	<.004	<.002	<.005	<.006
13...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
13...	<.02	e.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
13...	<.02	e.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
14...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
14...	<.02	e.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
14...	<.02	e.001	<.004	<.003	e.003	<.004	<.002	<.005	<.006
14...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
14...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
25...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
MAR									
08...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
28...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
APR									
10...	<.02	e.003	.015	<.003	<.003	<.004	<.002	<.005	<.006
26...	<.02	.076	<.004	<.003	<.003	<.004	<.002	<.005	<.006
MAY									
16...	<.02	.289	.014	<.003	<.003	<.004	<.002	<.005	<.006
30...	<.02	.047	<.004	<.003	<.003	<.004	<.002	<.005	<.006
JUN									
13...	<.02	.006	<.004	<.003	<.003	<.004	<.002	<.005	<.006
28...	<.02	.476	.021	<.003	<.003	<.004	<.002	e.005	<.006
JUL									
06...	<.02	.101	.166	.008	<.003	<.004	<.002	.245	<.006
20...	<.02	.008	.012	<.003	<.003	<.004	<.002	.017	<.006
AUG									
09...	--	--	--	--	--	--	--	--	--
SEP									
12...	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)
OCT									
05...	--	--	--	--	--	--	--	--	--
NOV									
02...	--	--	--	--	--	--	--	--	--
DEC									
07...	--	--	--	--	--	--	--	--	--
JAN									
06...	.456	<.017	<.004	.005	e.005	<.004	<.004	<.004	<.002
12...	.008	<.004	e.003	<.003	<.006	<.004	<.004	<.004	<.002
19...	.019	<.004	e.003	e.004	e.004	<.004	<.004	.012	<.002
FEB									
04...	.030	.013	<.004	<.003	e.003	<.004	<.004	<.010	<.002
09...	.012	<.004	<.004	e.002	e.003	<.004	<.004	.006	<.002
12...	.054	<.004	<.004	.007	e.003	<.004	<.004	.012	<.002
12...	.077	.309	<.004	<.007	e.004	<.004	<.004	.013	<.002
12...	.020	.059	<.004	<.003	e.004	<.004	<.004	.010	<.002
13...	.011	<.004	<.004	<.003	<.006	<.004	<.004	<.010	<.002
13...	.031	.043	<.004	<.003	e.002	<.004	<.004	.018	<.002
13...	.019	.039	<.004	<.003	e.005	<.004	<.004	.011	<.002
14...	.014	.029	<.004	<.003	e.003	<.004	<.004	<.004	<.002
14...	.008	.016	<.004	.005	e.005	<.004	<.004	.009	<.002
14...	.006	.009	<.004	.004	e.006	<.004	<.004	.010	<.002
14...	.009	<.004	<.004	<.003	e.001	<.004	<.004	<.004	<.002
14...	<.002	<.004	<.004	<.003	e.004	<.004	<.004	<.004	<.002
25...	e.003	<.004	<.004	<.003	e.002	<.004	<.004	<.004	<.002
MAR									
08...	<.002	<.004	<.004	<.003	e.002	<.004	<.004	<.004	<.002
28...	.012	.010	<.004	.027	e.005	<.004	<.004	<.004	<.002
APR									
10...	.005	<.004	<.004	<.003	e.005	<.004	.006	<.004	<.002
26...	.014	<.004	<.004	<.003	e.002	<.004	<.004	<.010	<.002
MAY									
16...	.328	.011	e.003	<.003	.010	<.004	.669	<.004	<.002
30...	.063	.158	.009	<.003	.010	<.004	2.30	<.004	<.002
JUN									
13...	.222	<.004	.045	<.003	.011	<.004	.098	<.004	<.002
28...	.098	<.004	.102	<.003	.016	<.004	.015	<.004	<.002
JUL									
06...	.734	<.010	.084	<.010	.030	<.004	.005	.209	<.002
20...	.852	<.004	.012	<.003	.015	<.004	<.004	<.030	<.002
AUG									
09...	--	--	--	--	--	--	--	--	--
SEP									
12...	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Prometon, water, fltrd, ug/L (04037)	Pronamide, water, fltrd 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)
OCT									
05...	--	--	--	--	--	--	--	--	--
NOV									
02...	--	--	--	--	--	--	--	--	--
DEC									
07...	--	--	--	--	--	--	--	--	--
JAN									
06...	M	<.003	<.007	<.004	--	.050	<.01	<.007	<.01
12...	<.02	<.003	<.007	<.004	<.01	.074	M	<.007	<.01
19...	M	<.003	<.007	<.004	<.01	.059	<.01	<.007	<.01
FEB									
04...	e.01	<.003	<.007	<.004	<.01	1.87	<.01	<.007	<.01
09...	<.02	<.003	<.007	<.004	<.01	.190	<.01	<.007	<.01
12...	M	<.003	<.007	<.004	<.01	.400	<.01	<.007	<.01
12...	<.02	<.003	<.007	<.004	<.01	.166	<.01	<.007	<.01
12...	<.02	<.003	<.007	<.004	<.01	.089	<.01	<.007	<.01
13...	<.02	<.003	<.007	<.004	<.01	.013	<.01	<.007	<.01
13...	<.02	<.003	<.007	<.004	--	.173	<.01	<.007	<.01
13...	<.02	<.003	<.007	<.004	.02	.091	<.01	<.007	<.01
14...	<.02	<.003	<.007	<.004	<.01	.070	<.01	<.007	<.01
14...	<.02	<.003	<.007	<.004	.02	.063	<.01	<.007	<.01
14...	<.02	<.003	<.007	<.004	.03	.046	<.01	<.007	<.01
14...	<.02	<.003	<.007	<.004	<.01	.019	<.01	<.007	<.01
14...	<.02	<.003	<.007	<.004	<.01	.010	<.01	<.007	<.01
25...	<.02	<.003	<.007	<.004	<.01	.012	<.01	<.007	<.01
MAR									
08...	<.02	<.003	<.007	<.004	<.01	.007	<.01	<.007	<.01
28...	<.02	<.003	<.007	<.004	<.01	.190	<.01	<.007	<.01
APR									
10...	<.02	<.003	<.007	<.004	<.01	.232	<.01	<.007	<.01
26...	<.02	<.003	<.007	<.004	<.01	.033	<.01	<.007	<.01
MAY									
16...	<.02	<.003	<.007	<.004	<.01	.025	<.01	<.007	<.01
30...	<.02	<.003	<.007	<.004	<.01	.080	<.01	<.007	<.01
JUN									
13...	<.02	<.003	<.007	<.004	<.01	.018	<.01	<.007	<.01
28...	<.02	<.003	<.007	<.004	<.06	.014	<.01	<.007	<.01
JUL									
06...	<.02	<.003	<.007	.011	.10	.023	<.01	<.007	<.01
20...	<.02	<.003	<.007	<.004	.85	.017	<.01	<.007	<.01
AUG									
09...	--	--	--	--	--	--	--	--	--
SEP									
12...	--	--	--	--	--	--	--	--	--

M Presence of material verified, not quantified.
< Actual value is known to be less than value shown.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
OCT			
05...	--	--	--
NOV			
02...	--	--	--
DEC			
07...	--	--	--
JAN			
06...	<.002	<.001	.049
12...	<.002	<.001	.009
19...	<.002	<.001	.017
FEB			
04...	<.002	<.001	.020
09...	<.002	<.001	.007
12...	<.002	<.001	.012
12...	<.002	<.001	.011
12...	<.002	<.001	.021
13...	<.002	<.001	.010
13...	<.002	<.001	.011
13...	<.002	<.001	.014
14...	<.002	<.001	.008
14...	<.002	<.001	.009
14...	<.002	<.001	.009
14...	<.002	<.001	e.003
14...	<.002	<.001	e.004
25...	<.002	<.001	e.002
MAR			
08...	<.002	<.001	e.002
28...	<.002	<.001	.041
APR			
10...	<.002	<.001	.062
26...	<.002	<.001	.017
MAY			
16...	<.002	<.001	.148
30...	.005	<.001	.069
JUN			
13...	.005	<.001	.022
28...	.006	<.001	.036
JUL			
06...	.008	<.001	.066
20...	<.002	<.001	.186
AUG			
09...	--	--	--
SEP			
12...	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)	Suspnd. sediment, sieve diametr percent <.063mm (70331)
OCT						
05...SS	1120	18	18.5	100	4.9	100
NOV						
02...SS	1100	25	15.0	72	4.9	99
DEC						
07...SS	1000	1.9	8.0	10	.05	99
JAN						
12...SS	1230	36	9.5	26	2.5	95
FEB						
25...SS	1200	130	10.0	74	26	94
MAR						
08...SS	1150	16	12.0	6	.26	92
28...SS	1110	10	14.5	47	1.3	84
APR						
10...SS	1150	9.0	16.5	180	4.4	93
26...SS	1100	139	19.0	98	37	85
MAY						
16...SS	1300	32	17.5	208	18	99
30...SS	1130	7.7	20.0	152	3.2	99
JUN						
13...SS	1200	4.9	23.0	118	1.6	99
28...SS	1220	24	25.5	250	16	96
JUL						
06...SS	1240	22	20.5	520	31	96
20...SS	1150	16	22.0	459	20	98
AUG						
09...SS	1100	28	--	360	27	99
SEP						
12...SS	1230	43	21.5	231	27	91

SS Suspended-sediment data determined from a sample collected and processed according to National Water Quality Assessment (NAWQA) protocol.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Alkalinity, wat flt Gran, field, mg/L as CaCO3 (29802)
OCT									
16...	1150	6.2	759	10.1	103	7.7	730	16.0	69.0
NOV									
07...	1130	25	758	8.6	83	7.9	668	13.5	73.0
FEB									
06...	1220	47	766	11.2	96	7.8	400	9.0	71.0
20...	1150	2.8	766	13.3	119	8.3	905	10.5	--
MAR									
12...	1300	17	760	12.7	135	8.9	823	18.0	124
28...	1240	6.7	768	11.4	112	8.2	881	15.0	--
APR									
09...	1250	16	766	8.2	86	8.3	822	18.0	127
29...	1420	5.5	761	9.1	95	7.9	709	17.5	--
MAY									
14...	1420	7.9	762	9.3	105	7.8	694	21.0	113
28...	1220	11	762	8.3	97	7.9	757	23.0	--
JUN									
11...	1300	10	760	8.0	91	7.7	661	21.5	176
25...	1320	9.5	765	9.1	107	7.9	672	23.5	--
JUL									
10...	1310	24	764	10.3	121	7.8	410	23.5	89.0
24...	1200	16	759	10.7	131	7.8	465	25.5	--
AUG									
07...	1300	25	758	8.5	99	8.1	465	22.5	90.0
SEP									
04...	1050	2.0	760	8.6	100	8.0	921	22.5	143

Date	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Particulate nitrogen, susp, water, mg/L (49570)	Phosphorus, water, unfltrd mg/L (00665)
OCT									
16...	121	50.6	.50	<.04	1.29	.008	.05	.20	.163
NOV									
07...	104	64.4	.74	<.04	1.61	.013	.05	.22	.184
FEB									
06...	45.0	37.0	.85	.16	1.14	.015	.09	.22	.192
20...	--	--	.43	<.04	2.19	.020	.05	--	.110
MAR									
12...	95.2	131	1.4	<.04	2.53	.025	e.01	.68	.23
28...	--	--	.50	<.04	4.61	.019	.07	--	.130
APR									
09...	101	121	1.1	e.02	1.55	.011	.03	.66	.31
29...	--	--	.62	<.04	2.43	.010	.08	--	.188
MAY									
14...	82.1	83.5	.60	<.04	2.26	.036	.10	.20	.22
28...	--	--	.71	<.04	3.62	.035	.12	--	.29
JUN									
11...	59.6	87.2	1.1	e.02	2.88	.081	.19	.41	.43
25...	--	--	e1.1	<.04	e6.31	e.074	e.06	--	e.46
JUL									
10...	38.4	39.7	1.7	<.04	3.16	.141	.04	.65	.57
24...	--	--	1.3	<.04	4.23	.096	.10	--	.59
AUG									
07...	48.7	47.0	1.1	<.04	1.47	.114	e.01	1.12	.46
SEP									
04...	91.3	164	.57	<.04	5.45	.022	e.10	.20	.23

< Actual value is known to be less than value shown.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Total carbon, suspnd sedimnt total, mg/L (00694)	Inor-ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	1,4-Naphth-oquin-one, water, fltrd, ug/L (61611)	1-Naph-thol, water, fltrd 0.7u GF ug/L (49295)	2-(4-t-Butyl-phenoxy)cyclo-hexanol wat flt ug/L (61637)	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)
OCT									
16...	1.6	<.1	1.6	4.5	<.05	<.09	e.01	--	--
NOV									
07...	1.5	<.1	1.5	5.8	--	--	--	<.009	.22
FEB									
06...	1.3	<.1	1.3	5.4	<.05	<.09	e.01	--	--
20...	--	--	--	--	<.05	<.09	e.01	--	--
MAR									
12...	3.2	<.1	3.2	4.5	<.05	<.09	e.01	--	--
28...	--	--	--	--	<.05	<.09	M	--	--
APR									
09...	3.9	<.1	3.9	4.6	<.05	<.09	<.01	--	--
29...	--	--	--	--	<.05	<.09	M	--	--
MAY									
14...	1.3	<.1	1.2	4.4	<.05	e.01	<.01	--	--
28...	--	--	--	--	<.05	<.09	M	--	--
JUN									
11...	2.3	<.1	2.3	4.2	<.05	e.01	.02	--	--
25...	--	--	--	--	<.05	<.09	.03	--	--
JUL									
10...	4.7	.2	4.5	3.8	<.05	<.09	<.01	--	--
24...	--	--	--	--	e.01	<.09	.06	--	--
AUG									
07...	5.0	.1	4.9	5.4	<.05	<.09	.09	--	--
SEP									
04...	1.4	<.1	1.4	2.8	<.05	<.09	.15	--	--

Date	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,5-Di-chloro-aniline water, fltrd, ug/L (61614)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	2-[(2-Et-6-Me-Ph)--amino] propan-1-ol, ug/L (61615)	2Amino-N-iso-propyl-benz-amide, wat flt ug/L (61617)	2Chloro-2',6'-diethyl acet-anilide wat flt ug/L (61618)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	2-Ethyl-6-methyl-aniline water, fltrd, ug/L (61620)
OCT									
16...	--	<.03	<.006	<.1	<.005	<.005	<.006	--	<.004
NOV									
07...	<.02	--	<.006	--	--	--	<.006	<.04	--
FEB									
06...	--	<.03	<.006	<.1	<.005	<.005	<.006	--	<.004
20...	--	<.03	<.006	<.1	<.005	<.005	<.006	--	<.004
MAR									
12...	--	<.03	<.006	<.1	<.005	<.005	<.006	--	<.004
28...	--	<.03	<.006	<.1	<.005	<.005	e.004	--	<.004
APR									
09...	--	<.03	<.006	<.1	<.005	<.005	<.006	--	<.004
29...	--	<.03	<.006	<.1	<.005	<.005	<.006	--	<.004
MAY									
14...	--	<.03	<.006	<.1	<.005	<.005	<.006	--	<.004
28...	--	<.03	<.006	<.1	<.005	<.005	<.006	--	<.004
JUN									
11...	--	<.03	<.006	<.1	<.005	<.005	<.006	--	<.004
25...	--	<.03	<.006	<.1	<.005	<.005	<.006	--	<.004
JUL									
10...	--	<.03	<.006	<.1	<.005	<.005	<.006	--	<.004
24...	--	<.03	<.006	<.1	<.005	<.005	<.006	--	<.004
AUG									
07...	--	<.03	<.006	<.1	<.005	<.005	<.006	--	<.004
SEP									
04...	--	<.03	<.006	<.1	<.005	<.005	<.006	--	<.004

< Actual value is known to be less than value shown.
e Estimated.
M Presence of material verified, not quantified.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	OIET, water, fltrd, ug/L (50355)	3-(Trifluoromethyl) aniline water, fltrd, ug/L (61630)	3,4-Dichloroaniline water fltrd, ug/L (61625)	3,5-Dichloroaniline water, fltrd, ug/L (61627)	3-Hydroxy carbofuran, wat flt 0.7u GF ug/L (49308)	3-Ketocarbofuran, water, fltrd, ug/L (50295)	3-Phenoxybenzyl alcohol water, fltrd, ug/L (61629)	4-(MeOH)-pendimethalin, wat flt ug/L (61665)	4,4'-Dichlorobenzophenone, wat flt ug/L (61631)
OCT									
16...	--	<.01	.005	<.005	--	--	<.05	<.1	e.008
NOV									
07...	<.008	--	--	--	<.006	<2	--	--	--
FEB									
06...	--	<.01	.011	<.005	--	--	<.05	<.1	<.003
20...	--	<.01	.017	<.005	--	--	<.05	<.1	e.004
MAR									
12...	--	<.01	.042	.010	--	--	<.05	<.1	e.004
28...	--	<.01	.020	<.005	--	--	<.05	<.1	<.003
APR									
09...	--	<.01	.017	<.005	--	--	--	--	<.003
29...	--	<.01	.015	<.005	--	--	<.05	<.1	e.002
MAY									
14...	--	<.01	.019	<.005	--	--	<.05	<.1	e.004
28...	--	<.01	.009	<.005	--	--	<.05	<.1	e.007
JUN									
11...	--	<.01	.014	<.005	--	--	<.05	--	e.006
25...	--	<.01	.011	<.005	--	--	<.05	<.1	e.694
JUL									
10...	--	<.01	.009	<.005	--	--	<.05	<.1	e.071
24...	--	<.01	.009	<.005	--	--	--	--	e.130
AUG									
07...	--	<.01	.009	<.005	--	--	<.05	--	e.029
SEP									
04...	--	<.01	.010	<.005	--	--	--	--	e.045

Date	4Chloro 2methyl phenol, water, fltrd, ug/L (61633)	4Chloro phenyl-methyl sulfone water, fltrd, ug/L (61634)	Acetochlor, water, fltrd, ug/L (49260)	Acifluorfen, water, fltrd 0.7u GF ug/L (49315)	Alachlor, water, fltrd, ug/L (46342)	Aldicarb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldicarb sulfoxide, wat flt 0.7u GF ug/L (49314)	Aldicarb, water, fltrd 0.7u GF ug/L (49312)	alpha-Endosulfan, water, fltrd, ug/L (34362)
OCT									
16...	<.006	<.03	<.006	--	<.004	--	--	--	<.005
NOV									
07...	--	--	<.006	<.007	<.004	<.02	<.008	<.04	--
FEB									
06...	<.006	<.03	<.006	--	<.004	--	--	--	<.005
20...	<.006	<.03	<.006	--	<.004	--	--	--	<.005
MAR									
12...	<.006	<.03	<.006	--	<.004	--	--	--	<.005
28...	<.006	<.03	<.006	--	<.004	--	--	--	<.005
APR									
09...	<.006	<.03	<.006	--	<.004	--	--	--	<.005
29...	<.006	<.03	<.006	--	<.004	--	--	--	<.005
MAY									
14...	<.006	<.03	<.006	--	<.004	--	--	--	<.005
28...	<.006	<.03	<.006	--	.010	--	--	--	<.005
JUN									
11...	<.006	<.03	<.006	--	<.007	--	--	--	<.005
25...	<.006	<.03	<.006	--	<.008	--	--	--	<.005
JUL									
10...	<.006	<.03	<.006	--	.009	--	--	--	<.005
24...	<.006	<.03	<.006	--	<.004	--	--	--	<.005
AUG									
07...	<.006	<.03	<.006	--	<.004	--	--	--	<.005
SEP									
04...	<.006	<.03	<.006	--	<.004	--	--	--	<.005

< Actual value is known to be less than value shown.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	alpha-HCH, water, fltrd, ug/L (34253)	Amino-methyl-phos-phonic acid, wat flt ug/L (62649)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl oxon, water, fltrd, ug/L (61635)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Bendio-carb, water, fltrd, ug/L (50299)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Benomyl water, fltrd, ug/L (50300)	Bensul-furon, water, fltrd, ug/L (61693)
OCT									
16...	<.005	.5	<.007	<.02	<.050	--	<.010	--	--
NOV									
07...	<.005	.2	<.007	--	e.021	<.03	<.010	<.004	<.02
FEB									
06...	<.005	.2	.011	<.12	<.050	--	<.010	--	--
20...	<.005	.6	.009	<.02	<.050	--	<.010	--	--
MAR									
12...	<.005	.7	<.010	<.02	<.050	--	<.010	--	--
28...	<.005	.6	e.006	<.02	<.050	--	<.010	--	--
APR									
09...	<.005	.7	e.006	<.02	<.050	--	<.010	--	--
29...	<.005	.6	<.007	<.02	<.050	--	<.010	--	--
MAY									
14...	<.005	.6	.007	<.02	<.050	--	<.010	--	--
28...	<.005	.3	e.005	<.03	<.050	--	<.010	--	--
JUN									
11...	<.005	.5	.010	<.02	<.050	--	<.010	--	--
25...	<.005	.7	e.009	<.02	e.007	--	<.010	--	--
JUL									
10...	<.005	.4	.010	<.02	e.009	--	<.010	--	--
24...	<.005	1.1	e.006	<.03	e.031	--	<.010	--	--
AUG									
07...	<.005	.7	<.007	<.02	<.050	--	<.010	--	--
SEP									
04...	<.005	.5	<.007	<.02	<.050	--	<.010	--	--

Date	Ben-tazon, water, fltrd 0.7u GF ug/L (38711)	beta-Endo-sulfan, water, fltrd, ug/L (34357)	Bifen-thrin, water, fltrd, ug/L (61580)	Broma-cil, water, fltrd, ug/L (04029)	Brom-oxynil, water, fltrd 0.7u GF ug/L (49311)	Butyl-ate, water, fltrd, ug/L (04028)	Caf-feine, water, fltrd, ug/L (50305)	Caf-feine-13C, surrog, wat flt percent recovry (99959)	Car-baryl, water, fltrd 0.7u GF ug/L (49310)
OCT									
16...	--	<.01	<.005	--	--	<.002	--	--	--
NOV									
07...	<.01	--	--	e.04	<.02	<.002	<.010	79.0	<.03
FEB									
06...	--	<.01	<.005	--	--	<.002	--	--	--
20...	--	<.01	<.005	--	--	<.002	--	--	--
MAR									
12...	--	<.01	<.005	--	--	<.002	--	--	--
28...	--	<.01	<.005	--	--	<.002	--	--	--
APR									
09...	--	<.01	<.005	--	--	<.002	--	--	--
29...	--	<.01	<.005	--	--	<.002	--	--	--
MAY									
14...	--	<.01	<.005	--	--	<.002	--	--	--
28...	--	<.01	<.005	--	--	<.002	--	--	--
JUN									
11...	--	<.01	<.005	--	--	<.002	--	--	--
25...	--	<.01	<.005	--	--	<.002	--	--	--
JUL									
10...	--	<.01	<.005	--	--	<.002	--	--	--
24...	--	<.01	<.005	--	--	<.002	--	--	--
AUG									
07...	--	<.01	<.005	--	--	<.002	--	--	--
SEP									
04...	--	<.01	<.005	--	--	<.002	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (49309)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Chloramben methyl ester, water, fltrd, ug/L (61188)	Chlorimuron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-triazine, wat flt ug/L (04039)	Chlorothalonil, water, fltrd 0.7u GF ug/L (49306)	Chlorpyrifos oxon, water, fltrd, ug/L (61636)	Chlorpyrifos water, fltrd, ug/L (38933)
OCT									
16...	<.041	--	<.020	--	--	--	--	<.06	e.019
NOV									
07...	<.041	<.006	<.020	<.02	<.010	<.01	<.04	--	<.005
FEB									
06...	<.041	--	<.020	--	--	--	--	<.06	<.005
20...	<.041	--	<.020	--	--	--	--	<.06	<.005
MAR									
12...	<.041	--	<.020	--	--	--	--	<.06	<.005
28...	<.041	--	e.008	--	--	--	--	<.06	e.004
APR									
09...	e.006	--	<.020	--	--	--	--	<.06	<.005
29...	<.041	--	e.006	--	--	--	--	<.06	<.005
MAY									
14...	e.055	--	e.006	--	--	--	--	<.06	.007
28...	<.041	--	<.020	--	--	--	--	<.06	.045
JUN									
11...	e.077	--	<.020	--	--	--	--	<.06	.010
25...	<.041	--	<.020	--	--	--	--	<.02	e.022
JUL									
10...	<.041	--	<.020	--	--	--	--	<.06	.030
24...	<.041	--	<.020	--	--	--	--	<.06	.016
AUG									
07...	<.041	--	<.020	--	--	--	--	<.06	.116
SEP									
04...	<.041	--	<.020	--	--	--	--	<.06	.032

Date	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	cis-Propiconazole, water, fltrd, ug/L (79846)	Clopyralid, water, fltrd 0.7u GF ug/L (49305)	Cyanazine, water, fltrd, ug/L (04041)	Cycloate, water, fltrd, ug/L (04031)	Cyfluthrin, water, fltrd, ug/L (61585)	lambda-Cyhalothrin, water, fltrd, ug/L (61595)	Cypermethrin water, fltrd, ug/L (61586)	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)
OCT									
16...	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009	--
NOV									
07...	<.006	--	<.01	<.018	<.01	--	--	--	<.01
FEB									
06...	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009	--
20...	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009	--
MAR									
12...	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009	--
28...	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009	--
APR									
09...	<.006	.024	--	<.018	<.005	<.008	<.009	<.009	--
29...	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009	--
MAY									
14...	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009	--
28...	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009	--
JUN									
11...	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009	--
25...	<.006	<.008	--	<.018	<.005	<.016	<.009	<.016	--
JUL									
10...	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009	--
24...	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009	--
AUG									
07...	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009	--
SEP									
04...	<.006	<.008	--	<.018	<.005	<.008	<.009	<.009	--

< Actual value is known to be less than value shown.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Desulfinyl fipronil, water, fltrd, ug/L (62170)	Diazinon, water, fltrd, ug/L (39572)	Dicamba water fltrd 0.7u GF ug/L (38442)	Dichlorprop, water, fltrd 0.7u GF ug/L (49302)	Dicrotophos, water fltrd, ug/L (38454)	Dieldrin, water, fltrd, ug/L (39381)	Dimethoate, water, fltrd 0.7u GF ug/L (82662)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphenamid, water, fltrd, ug/L (04033)
OCT									
16...	<.004	.011	--	--	<.08	<.005	<.006	--	--
NOV									
07...	<.004	.018	<.01	<.01	--	.007	--	<.01	<.03
FEB									
06...	<.004	.019	--	--	<.08	<.005	<.006	--	--
20...	<.004	.016	--	--	<.08	<.005	<.006	--	--
MAR									
12...	<.004	<.005	--	--	<.08	<.005	<.006	--	--
28...	<.004	e.003	--	--	<.08	<.005	<.006	--	--
APR									
09...	<.004	e.005	--	--	<.08	<.005	<.006	--	--
29...	<.004	<.005	--	--	<.08	<.005	<.006	--	--
MAY									
14...	<.004	.006	--	--	<.08	e.003	<.006	--	--
28...	<.004	.007	--	--	<.08	.008	<.006	--	--
JUN									
11...	<.004	.021	--	--	<.08	.008	<.006	--	--
25...	<.004	<.005	--	--	<.08	e.015	e.158	--	--
JUL									
10...	<.004	.005	--	--	<.08	.012	e.061	--	--
24...	<.004	.101	--	--	<.08	.016	e.109	--	--
AUG									
07...	<.004	.096	--	--	<.08	.007	e.085	--	--
SEP									
04...	<.004	<.005	--	--	<.08	.007	<.006	--	--

Date	Disulfoton sulfone water, fltrd, ug/L (61640)	Disulfoton sulfoxide, water, fltrd, ug/L (61641)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	e-Dimethomorph, water, fltrd, ug/L (79844)	Endosulfan ether, water, fltrd, ug/L (61642)	Endosulfan sulfate water, fltrd, ug/L (61590)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)
OCT									
16...	<.02	<.002	<.02	--	<.02	<.004	<.006	.010	<.009
NOV									
07...	--	--	<.02	.06	--	--	--	.006	<.009
FEB									
06...	e.01	<.002	<.02	--	<.02	<.004	<.006	<.002	<.009
20...	<.02	<.002	<.02	--	<.02	<.004	<.006	<.002	<.009
MAR									
12...	<.02	<.002	<.02	--	<.02	<.004	<.006	<.002	<.009
28...	<.02	<.002	<.02	--	<.02	<.004	<.006	.003	<.009
APR									
09...	<.02	<.002	<.02	--	<.02	<.004	<.006	<.002	<.009
29...	<.02	<.002	<.02	--	<.02	<.004	<.006	.238	<.009
MAY									
14...	<.02	<.002	<.02	--	<.02	<.004	<.006	.276	e.008
28...	<.02	<.002	<.02	--	<.02	<.004	<.006	.202	e.003
JUN									
11...	<.02	<.002	<.02	--	<.02	<.004	<.006	.029	<.009
25...	<.02	<.002	<.02	--	<.02	<.004	<.006	e.062	<.009
JUL									
10...	<.02	<.002	<.02	--	<.02	<.004	<.006	.133	e.006
24...	<.02	<.002	<.02	--	.03	<.004	<.006	.029	<.009
AUG									
07...	<.02	<.002	<.02	--	<.02	<.004	<.006	.014	<.009
SEP									
04...	<.02	<.002	<.02	--	<.02	<.004	<.006	.003	<.009

< Actual value is known to be less than value shown.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ethion monoxon water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fenami-phos sulfone water, fltrd, ug/L (61645)	Fenami-phos sulf-oxide, water, fltrd, ug/L (61646)	Fenami-phos, water, fltrd, ug/L (61591)	Fen-thion sulf-oxide, water, fltrd, ug/L (61647)	Fen-thion, water, fltrd, ug/L (38801)	Fenuron water, fltrd 0.7u GF ug/L (49297)
OCT									
16...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--
NOV									
07...	--	--	<.005	--	--	--	--	--	<.03
FEB									
06...	<.03	<.004	<.005	<.008	--	<.03	<.008	<.02	--
20...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--
MAR									
12...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--
28...	<.03	<.004	.055	<.008	<.03	<.03	<.008	<.02	--
APR									
09...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--
29...	<.03	<.004	.434	<.008	<.03	<.03	<.008	<.02	--
MAY									
14...	<.03	<.004	.369	<.008	<.03	<.03	<.008	<.02	--
28...	<.03	<.004	.015	<.031	<.03	<.03	<.008	<.02	--
JUN									
11...	<.03	<.004	.131	<.008	<.03	<.03	<.008	<.02	--
25...	<.03	<.004	e.045	<.008	<.03	<.03	<.008	<.02	--
JUL									
10...	<.03	<.004	.007	<.008	<.03	<.03	<.008	<.02	--
24...	<.03	<.004	.007	<.008	<.03	<.03	<.008	<.02	--
AUG									
07...	<.03	<.004	.006	<.008	<.03	<.03	<.008	<.02	--
SEP									
04...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--

Date	Fipro-nil sulfide water, fltrd, ug/L (62167)	Fipro-nil sulfone water, fltrd, ug/L (62168)	Fipro-nil, water, fltrd, ug/L (62166)	Flume-tralin, water, fltrd, ug/L (61592)	Flumet-sulam, water, fltrd, ug/L (61694)	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)	Glufo-sinate, water, fltrd 0.7u GF ug/L (62721)
OCT									
16...	<.005	<.005	<.007	<.004	--	--	<.002	<.003	<.1
NOV									
07...	<.005	<.005	<.007	--	<.01	<.03	--	<.003	<.1
FEB									
06...	<.005	<.005	<.007	<.004	--	--	<.002	<.003	<.1
20...	<.005	<.005	<.007	<.004	--	--	<.002	<.003	<.1
MAR									
12...	<.005	<.005	<.007	<.004	--	--	<.002	<.003	<.1
28...	<.005	<.005	<.007	<.004	--	--	<.002	<.003	<.1
APR									
09...	<.005	<.005	<.007	<.004	--	--	<.002	<.003	<.1
29...	<.005	<.005	<.007	<.004	--	--	<.002	<.003	<.1
MAY									
14...	<.005	<.005	<.007	<.004	--	--	<.002	<.003	<.1
28...	<.005	<.005	<.007	<.004	--	--	<.002	<.003	<.1
JUN									
11...	<.005	<.005	<.007	<.004	--	--	<.002	<.003	<.1
25...	<.005	<.005	<.007	<.004	--	--	<.002	<.003	<.1
JUL									
10...	<.005	<.005	<.007	<.004	--	--	<.002	<.003	<.1
24...	<.005	<.005	<.007	<.004	--	--	<.002	<.003	<.1
AUG									
07...	<.005	<.005	e.012	<.004	--	--	<.002	<.003	<.1
SEP									
04...	<.005	<.005	<.007	<.004	--	--	<.002	<.003	<.1

< Actual value is known to be less than value shown.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Glyphosate, water, fltrd 0.7u GF ug/L (62722)	Hexazinone, water, fltrd, ug/L (04025)	Imazaquin, water, fltrd, ug/L (50356)	Imazethapyr, water, fltrd, ug/L (50407)	Imidacloprid water, fltrd, ug/L (61695)	Iprodione, water, fltrd, ug/L (61593)	Isofenphos, water, fltrd, ug/L (61594)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)
OCT									
16...	<.1	<.013	--	--	--	<1	<.003	<.004	--
NOV									
07...	.2	--	<.02	<.02	<.007	--	--	<.004	<.01
FEB									
06...	.2	.018	--	--	--	<1	<.003	<.004	--
20...	.2	.015	--	--	--	<1	<.003	<.004	--
MAR									
12...	7.5	.109	--	--	--	<1	<.003	<.004	--
28...	3.0	.039	--	--	--	<1	<.003	<.004	--
APR									
09...	1.3	.046	--	--	--	<1	<.003	<.004	--
29...	.6	.032	--	--	--	M	<.003	<.004	--
MAY									
14...	1.2	.032	--	--	--	<1	<.003	<.004	--
28...	.1	.013	--	--	--	<1	<.003	<.004	--
JUN									
11...	.3	.020	--	--	--	<1	<.003	<.004	--
25...	.5	e.010	--	--	--	<1	<.003	e.042	--
JUL									
10...	.3	.022	--	--	--	<1	<.003	<.004	--
24...	.4	.017	--	--	--	<1	<.003	<.004	--
AUG									
07...	.8	.016	--	--	--	<1	<.003	<.004	--
SEP									
04...	.3	e.012	--	--	--	<1	<.003	<.004	--

Date	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Metalaxyl, water, fltrd, ug/L (50359)	Metalaxyl, water, fltrd, ug/L (61596)	Methialthion water, fltrd, ug/L (61598)	Methiocarb, water, fltrd 0.7u GF ug/L (38501)	Methomyl, water, fltrd 0.7u GF ug/L (49296)
OCT									
16...	<.035	<.027	--	--	--	<.005	<.006	--	--
NOV									
07...	<.035	<.027	<.02	<.01	<.02	--	--	<.008	e.006
FEB									
06...	<.035	<.027	--	--	--	<.005	<.006	--	--
20...	<.035	<.027	--	--	--	<.005	<.006	--	--
MAR									
12...	<.035	<.027	--	--	--	<.005	<.006	--	--
28...	<.035	e.020	--	--	--	<.005	<.006	--	--
APR									
09...	<.035	<.027	--	--	--	<.005	<.006	--	--
29...	<.035	<.027	--	--	--	<.005	<.006	--	--
MAY									
14...	e.006	<.027	--	--	--	.010	<.006	--	--
28...	<.035	<.027	--	--	--	<.005	<.006	--	--
JUN									
11...	<.035	<.027	--	--	--	.010	<.006	--	--
25...	<.035	<.027	--	--	--	e.010	<.006	--	--
JUL									
10...	<.035	<.027	--	--	--	<.005	<.006	--	--
24...	<.035	<.027	--	--	--	<.005	<.006	--	--
AUG									
07...	<.035	<.027	--	--	--	<.005	<.006	--	--
SEP									
04...	<.035	<.027	--	--	--	<.005	<.006	--	--

< Actual value is known to be less than value shown.
M Presence of material verified, but not quantified.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	c-Permethric acid methyl ester, wat flt ug/L (79842)	Methyl paraoxon, water, fltrd, ug/L (61664)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	t-Permethric acid methyl ester, wat flt ug/L (79843)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Metsulfuron, water, fltrd, ug/L (61697)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Myclobutanil water, fltrd, ug/L (61599)
OCT									
16...	<.04	<.03	--	<.03	.013	<.006	--	<.025	<.008
NOV									
07...	--	--	<.006	--	e.011	<.006	<.03	<.002	--
FEB									
06...	<.04	<.03	<.020	<.03	.026	<.006	--	<.002	<.008
20...	<.04	<.03	<.006	<.03	.040	<.006	--	<.002	<.008
MAR									
12...	<.04	<.03	<.006	<.03	.017	<.006	--	<.002	e.005
28...	<.04	<.03	<.006	<.03	e.010	e.004	--	<.002	<.008
APR									
09...	<.04	<.03	<.006	<.03	.015	e.005	--	<.002	.010
29...	<.04	<.03	<.006	<.03	.064	.024	--	<.002	<.008
MAY									
14...	<.04	<.03	<.006	<.03	.218	.018	--	<.002	<.008
28...	<.04	<.03	<.006	<.03	.668	.029	--	<.006	<.008
JUN									
11...	<.04	<.03	<.006	<.03	1.44	.020	--	.007	<.008
25...	<.04	<.03	<.011	<.03	e1.90	e.018	--	e.018	<.008
JUL									
10...	<.04	<.03	.030	<.03	.212	.006	--	.021	<.008
24...	<.04	<.03	.031	<.03	.379	.014	--	e.007	.010
AUG									
07...	<.04	<.03	<.070	<.03	.169	e.006	--	.004	.036
SEP									
04...	<.04	<.03	<.006	<.03	.035	<.006	--	<.002	.020

Date	N-(4-Chlorophenyl) -N'-methylurea, ug/L (61692)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nicosulfuron, water, fltrd, ug/L (50364)	Norflurazon, water, fltrd 0.7u GF ug/L (49293)	O-Et-O-Me-S-Pr-phosphorothioate wat flt ug/L (61660)	Oryzalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	Oxyfluorfen, water, fltrd, ug/L (61600)
OCT									
16...	--	<.007	--	--	--	<.008	--	--	<.007
NOV									
07...	<.02	<.007	<.01	<.01	e.01	--	<.02	<.01	--
FEB									
06...	--	<.007	--	--	--	<.008	--	--	<.007
20...	--	<.007	--	--	--	<.008	--	--	.010
MAR									
12...	--	<.007	--	--	--	<.008	--	--	.017
28...	--	<.007	--	--	--	<.008	--	--	.009
APR									
09...	--	<.007	--	--	--	<.008	--	--	e.008
29...	--	<.007	--	--	--	<.008	--	--	.035
MAY									
14...	--	<.007	--	--	--	<.008	--	--	.045
28...	--	e.004	--	--	--	<.008	--	--	.016
JUN									
11...	--	e.005	--	--	--	<.008	--	--	.033
25...	--	e.006	--	--	--	<.008	--	--	e.058
JUL									
10...	--	e.005	--	--	--	<.008	--	--	.043
24...	--	.007	--	--	--	<.008	--	--	.087
AUG									
07...	--	<.007	--	--	--	<.008	--	--	.024
SEP									
04...	--	<.007	--	--	--	<.008	--	--	.011

< Actual value is known to be less than value shown.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	p,p'-DDE, water, fltrd, ug/L (34653)	Paraoxon, water, fltrd, ug/L (61663)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate oxon, water, fltrd, ug/L (61666)	Phorate water fltrd 0.7u GF ug/L (82664)	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)
OCT									
16...	<.004	<.008	<.010	<.020	<.022	<.10	<.011	<.06	<.008
NOV									
07...	.005	--	<.010	<.004	<.022	--	<.011	--	--
FEB									
06...	<.005	<.008	<.010	<.004	<.022	<.10	<.011	<.06	<.008
20...	<.003	<.008	<.010	<.004	<.022	<.10	<.011	<.06	<.008
MAR									
12...	<.003	<.008	<.010	<.004	<.022	<.10	<.011	<.06	<.008
28...	<.005	<.008	<.010	<.004	<.022	<.10	<.011	<.06	<.008
APR									
09...	.004	<.008	<.010	<.004	<.022	<.10	<.011	<.06	<.008
29...	e.005	<.008	<.010	<.004	<.022	<.10	<.011	<.06	<.008
MAY									
14...	.004	<.008	<.010	<.004	e.016	<.10	<.011	<.06	<.008
28...	.004	<.008	<.010	<.004	e.018	<.10	<.011	<.06	<.008
JUN									
11...	.007	<.008	<.010	<.004	e.015	<.10	<.011	<.06	<.008
25...	e.005	<.016	<.010	<.004	e.546	<.10	<.011	<.06	<.008
JUL									
10...	.015	<.008	<.010	<.004	.051	<.10	<.011	<.06	<.008
24...	.017	<.008	<.010	<.004	.274	<.10	<.011	<.06	<.008
AUG									
07...	.015	<.008	<.010	<.004	.040	<.10	<.011	<.06	<.008
SEP									
04...	.009	<.008	<.010	<.004	.029	<.10	<.011	<.06	<.008

Date	Phosteбupirim water, fltrd, ug/L (61602)	Picloram, water, fltrd 0.7u GF ug/L (49291)	Profenofos water, fltrd, ug/L (61603)	Prometon, water, fltrd, ug/L (04037)	Prometryn, water, fltrd, ug/L (04036)	Pronamide, water, fltrd 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)
OCT									
16...	<.005	--	<.006	<.01	<.005	<.004	<.010	<.011	<.02
NOV									
07...	--	<.02	--	<.01	--	<.004	<.010	<.011	<.02
FEB									
06...	<.005	--	<.006	<.01	.006	<.004	<.010	<.011	<.02
20...	<.005	--	<.006	<.01	.007	<.004	<.010	<.011	<.02
MAR									
12...	<.005	--	<.006	<.01	.067	<.004	<.010	<.011	<.02
28...	<.005	--	<.006	<.01	.019	<.004	<.010	<.011	<.02
APR									
09...	<.005	--	<.006	<.01	.043	<.004	<.010	<.011	<.02
29...	<.005	--	<.006	<.01	.006	<.004	<.010	<.011	<.02
MAY									
14...	<.005	--	<.006	e.01	.011	<.004	<.010	<.011	<.02
28...	<.005	--	<.006	e.01	e.004	<.004	<.010	<.011	<.12
JUN									
11...	<.005	--	<.006	<.01	e.005	<.004	<.010	<.011	<.02
25...	<.005	--	<.006	<.01	e.009	<.004	<.010	<.011	e.04
JUL									
10...	<.005	--	<.006	<.01	e.005	<.004	<.010	<.011	.04
24...	<.005	--	<.006	<.01	<.005	<.004	<.010	<.011	.18
AUG									
07...	<.005	--	<.006	<.01	e.005	<.004	<.010	<.011	.16
SEP									
04...	<.005	--	<.006	<.01	<.005	<.004	<.010	<.011	.11

< Actual value is known to be less than value shown.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Propham water fltrd 0.7u GF ug/L (49236)	Propi-cona-zole, water, fltrd, ug/L (50471)	Pro-poxur, water, fltrd 0.7u GF ug/L (38538)	Siduron water, fltrd, ug/L (38548)	Sima-zine, water, fltrd, ug/L (04035)	Sulfo-met-ruron, water, fltrd, ug/L (50337)	Sulfo-tepp, water, fltrd, ug/L (61605)	Sulpro-fos, water, fltrd, ug/L (38716)	Tebu-pirim-phos oxon, water, fltrd, ug/L (61669)
OCT									
16...	--	--	--	--	<.007	--	<.003	<.02	<.006
NOV									
07...	<.010	<.02	.010	<.02	.065	<.009	--	--	--
FEB									
06...	--	--	--	--	.047	--	<.003	<.02	<.006
20...	--	--	--	--	.034	--	<.003	<.02	<.006
MAR									
12...	--	--	--	--	.081	--	<.003	<.02	<.006
28...	--	--	--	--	.038	--	<.003	<.02	<.006
APR									
09...	--	--	--	--	.067	--	<.003	<.02	<.006
29...	--	--	--	--	.027	--	<.003	<.02	<.006
MAY									
14...	--	--	--	--	.031	--	<.003	<.02	<.006
28...	--	--	--	--	.020	--	<.003	<.02	<.006
JUN									
11...	--	--	--	--	.025	--	<.003	<.02	<.006
25...	--	--	--	--	e.012	--	<.003	<.02	<.006
JUL									
10...	--	--	--	--	.011	--	<.003	<.02	<.006
24...	--	--	--	--	.026	--	<.003	<.02	<.006
AUG									
07...	--	--	--	--	.016	--	<.003	<.02	<.006
SEP									
04...	--	--	--	--	.013	--	<.003	<.02	<.006

Date	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Teflu-thrin metab-olite R119365 wat flt ug/L (61671)	Teflu-thrin metab-olite R152913 wat flt ug/L (61672)	Teflu-thrin, water, fltrd, ug/L (61606)	Teme-phos, water, fltrd, ug/L (61607)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)	Terba-cil, water, fltrd, ug/L (04032)	Ter-bufos oxon sulfone water, fltrd, ug/L (61674)	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)
OCT									
16...	--	<.02	<.01	<.008	<.3	<.034	--	<.07	<.02
NOV									
07...	<.02	--	--	--	--	<.034	<.010	--	<.02
FEB									
06...	<.02	<.02	<.01	<.008	<.3	<.034	--	<.07	<.02
20...	<.02	<.02	<.01	<.008	<.3	<.034	--	<.07	<.02
MAR									
12...	<.02	<.02	<.01	<.008	<.4	<.034	--	<.07	<.02
28...	<.02	<.02	<.01	<.008	<.3	<.034	--	<.07	<.02
APR									
09...	<.02	--	--	<.008	<.3	<.034	--	<.07	<.02
29...	<.02	--	--	<.008	<.3	<.034	--	<.07	<.02
MAY									
14...	<.02	--	--	<.008	<.3	<.034	--	<.07	<.02
28...	<.02	--	--	<.008	<.3	<.034	--	<.07	<.02
JUN									
11...	<.02	--	--	<.008	<.3	<.034	--	<.07	<.02
25...	<.02	--	--	<.008	<.3	<.034	--	<.07	<.02
JUL									
10...	<.02	--	--	<.008	--	<.034	--	<.07	<.02
24...	<.02	--	--	<.008	<.3	<.034	--	<.07	<.02
AUG									
07...	<.02	--	--	<.008	<.3	<.034	--	<.07	<.02
SEP									
04...	<.02	--	--	<.008	<.3	<.034	--	<.07	<.02

< Actual value is known to be less than value shown.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ter-buthyl-azine, water, fltrd, ug/L (04022)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	trans-Propi-cona-zole, water, fltrd, ug/L (79847)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tribu-phos, water, fltrd, ug/L (61610)	Tri-clopyr, water, fltrd 0.7u GF ug/L (49235)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)	z-Di-metho-morph, water, fltrd, ug/L (79845)	Di-chlor-vos, water fltrd, ug/L (38775)
OCT									
16...	<.01	<.005	<.01	<.002	<.004	--	e.005	<.05	<.01
NOV									
07...	--	<.005	--	<.002	--	<.02	e.002	--	--
FEB									
06...	<.01	<.005	<.01	<.002	<.004	--	.013	<.05	<.01
20...	<.01	<.005	<.01	<.002	<.004	--	.014	<.05	<.01
MAR									
12...	<.01	<.005	<.01	<.002	<.004	--	.017	<.05	<.01
28...	<.01	<.005	<.01	<.002	<.004	--	e.004	<.05	<.01
APR									
09...	<.01	<.005	.02	<.002	<.004	--	.017	<.05	<.01
29...	<.01	<.005	<.01	<.002	<.004	--	e.007	<.05	<.01
MAY									
14...	<.01	<.005	<.01	<.002	<.004	--	.014	<.05	<.01
28...	<.01	<.005	<.01	<.002	<.004	--	.074	<.05	<.01
JUN									
11...	<.01	<.005	<.01	<.002	<.004	--	.095	<.05	<.01
25...	<.01	e.004	<.01	<.002	<.004	--	e.058	<.05	<.01
JUL									
10...	<.01	<.005	<.01	<.002	<.004	--	.090	<.05	<.01
24...	<.01	<.005	<.01	<.002	<.004	--	.052	e.01	<.01
AUG									
07...	<.01	<.005	<.01	<.002	<.004	--	.040	<.05	<.01
SEP									
04...	<.01	<.005	<.01	<.002	<.004	--	e.005	<.05	<.01

< Actual value is known to be less than value shown.
e Estimated.

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	841	817	654	599	735	719	419	353	757	537	725	669
2	915	840	626	600	738	611	380	353	923	534	747	608
3	900	881	635	619	620	611	408	380	839	591	737	562
4	886	861	646	631	620	608	427	407	648	620	696	679
5	899	886	868	583	---	---	440	427	663	623	687	664
6	933	898	635	584	---	---	454	402	694	663	665	638
7	979	932	639	530	---	---	461	454	686	665	666	635
8	1080	979	545	515	---	---	---	---	670	664	712	665
9	1030	832	583	544	---	---	---	---	704	670	712	658
10	832	789	606	583	---	---	---	---	705	679	671	658
11	790	772	621	606	---	---	680	461	707	681	698	669
12	795	758	629	620	---	---	622	598	708	690	775	698
13	835	740	627	623	---	---	598	555	756	708	856	775
14	928	751	627	622	---	---	563	551	768	752	915	856
15	763	694	632	626	---	---	553	542	783	755	954	914
16	713	685	639	631	387	66	---	---	807	783	957	909
17	753	677	648	639	286	235	---	---	843	807	927	907
18	976	752	654	646	336	286	---	---	877	843	916	897
19	1080	976	657	603	379	315	---	---	846	812	973	915
20	1050	1000	743	612	436	234	---	---	846	823	981	958
21	1000	830	785	693	276	227	---	---	866	680	994	920
22	830	791	763	732	279	249	---	---	709	683	952	918
23	801	759	870	751	351	266	---	---	723	664	982	952
24	781	755	870	750	388	351	---	---	710	682	995	963
25	837	723	771	736	399	263	1230	729	734	705	973	948
26	724	593	782	762	263	261	1030	750	750	702	987	900
27	594	586	---	---	264	260	750	645	720	618	902	878
28	594	572	---	---	---	---	654	634	669	616	924	902
29	663	592	---	---	---	---	634	613	---	---	952	924
30	737	655	931	713	570	348	654	522	---	---	953	898
31	754	651	---	---	410	352	662	631	---	---	911	893
MONTH	1080	572	---	---	---	---	---	---	923	534	995	562

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	913	896	646	605	887	840	656	501	589	552	838	817
2	921	898	640	625	905	887	624	561	560	532	900	838
3	943	921	648	605	898	816	662	598	558	538	925	899
4	961	943	617	602	821	727	659	638	650	557	950	925
5	961	884	630	616	858	739	647	621	651	517	959	880
6	884	840	653	629	855	768	698	647	601	517	880	684
7	897	864	663	597	866	688	708	643	658	601	777	657
8	939	897	602	592	703	557	643	620	690	658	812	721
9	947	754	604	586	621	567	632	614	670	565	844	766
10	754	728	618	593	676	612	627	564	621	571	944	769
11	821	748	643	618	709	676	566	539	621	603	807	680
12	926	800	663	643	751	708	557	544	609	591	693	609
13	931	790	672	658	794	751	571	557	601	586	770	613
14	853	752	698	671	836	794	573	545	627	601	746	620
15	1050	784	676	639	836	815	571	545	674	627	690	546
16	1050	934	651	637	828	593	607	571	716	674	729	575
17	952	887	732	586	632	591	635	607	720	563	724	601
18	950	712	732	660	646	582	646	616	676	649	749	647
19	715	692	742	644	685	640	635	593	707	676	738	641
20	762	715	678	643	688	657	646	586	678	644	740	715
21	790	761	742	641	658	644	615	554	717	676	753	737
22	792	708	806	663	652	620	561	528	716	687	767	739
23	752	712	766	719	621	606	555	516	715	692	783	766
24	765	738	782	766	630	604	534	516	720	714	784	771
25	751	739	780	770	692	630	533	513	714	616	782	761
26	759	726	799	779	764	672	548	515	709	622	819	780
27	731	726	814	799	749	556	558	506	734	709	847	819
28	731	695	826	788	605	569	506	492	760	734	859	846
29	695	647	806	794	673	605	574	504	783	760	866	752
30	669	646	824	805	623	518	609	574	803	783	752	744
31	---	---	841	824	---	---	614	582	817	803	---	---
MONTH	1050	646	841	586	905	518	708	492	817	517	959	546

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.5	14.5	12.5	11.0	10.5	8.5	10.0	9.0	13.0	11.5	14.0	11.0
2	16.0	12.0	11.0	9.0	11.0	9.0	10.5	8.0	13.0	9.5	15.5	10.5
3	16.0	12.0	13.0	8.5	10.0	8.0	10.0	8.5	12.0	9.0	15.5	13.0
4	17.5	13.5	13.5	8.0	12.0	7.5	10.0	9.0	12.0	9.5	15.0	12.5
5	19.0	14.5	13.5	9.0	---	---	11.0	9.5	11.5	8.0	15.0	12.0
6	20.0	15.0	14.0	12.0	---	---	11.0	9.5	11.5	8.0	15.5	12.5
7	20.0	16.0	14.5	13.5	---	---	9.5	8.5	11.0	8.5	16.5	13.5
8	19.5	16.5	15.5	14.5	---	---	---	---	11.5	7.5	16.5	13.0
9	20.0	17.0	17.0	15.0	---	---	---	---	12.0	7.5	16.5	13.5
10	19.0	17.5	16.5	15.0	---	---	11.5	9.0	11.0	8.0	17.0	13.5
11	18.0	15.5	15.0	14.0	---	---	11.0	10.0	11.0	9.0	18.0	14.5
12	17.5	14.5	15.0	13.5	---	---	11.5	11.0	11.0	10.0	19.5	15.5
13	19.0	16.0	15.5	14.5	---	---	11.5	10.5	13.5	11.0	19.0	16.5
14	19.0	17.5	14.5	13.0	---	---	11.5	10.5	14.0	12.0	19.0	16.5
15	18.5	17.0	14.0	13.0	---	---	12.5	10.5	14.0	13.0	19.0	16.0
16	18.0	16.0	13.5	12.5	13.5	11.0	---	---	14.5	12.5	17.0	14.5
17	17.5	14.5	14.0	11.5	12.0	10.5	---	---	13.0	11.5	16.0	13.0
18	17.0	15.0	13.5	9.5	10.5	9.5	---	---	12.5	10.0	16.0	12.5
19	17.5	15.5	13.0	9.5	9.5	8.0	---	---	11.5	10.0	16.0	12.5
20	18.5	16.5	12.5	12.0	9.0	8.0	---	---	12.5	9.0	17.5	14.5
21	18.0	16.5	13.0	12.0	10.5	9.0	---	---	13.5	10.5	17.5	14.0
22	18.0	16.5	14.0	12.5	10.5	9.0	---	---	14.0	11.0	18.5	14.5
23	17.5	15.5	12.5	11.0	9.5	8.0	---	---	14.0	11.0	17.5	16.0
24	16.5	14.5	13.0	12.0	8.5	7.0	---	---	14.0	13.0	18.0	14.0
25	17.0	15.5	12.5	11.0	7.0	6.0	11.0	10.0	14.5	13.0	18.0	14.5
26	16.5	15.0	11.5	9.0	8.0	6.5	12.0	11.0	14.5	12.0	19.5	16.5
27	17.0	15.5	---	---	10.5	8.0	12.0	11.0	14.5	13.0	17.5	14.0
28	16.5	15.0	---	---	10.0	9.5	12.5	10.5	13.5	11.0	16.0	13.0
29	16.5	14.5	---	---	---	---	12.5	10.0	---	---	18.5	14.0
30	15.5	14.0	10.0	9.0	10.5	9.5	12.5	10.5	---	---	21.0	15.0
31	14.5	12.5	---	---	10.5	8.5	12.5	12.0	---	---	21.0	16.5
MONTH	20.0	12.0	---	---	---	---	---	---	14.5	7.5	21.0	10.5

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	18.5	15.5	19.0	16.0	24.0	20.0	25.5	21.0	27.0	23.0	24.5	22.0
2	15.5	14.0	18.5	16.5	25.0	21.0	25.5	21.0	25.5	23.5	24.5	22.5
3	16.5	13.0	17.5	16.0	27.5	21.5	26.0	20.5	26.0	22.5	25.5	23.0
4	16.0	14.0	19.0	15.0	26.0	21.5	26.5	22.0	25.5	22.0	25.0	22.0
5	16.5	12.5	19.0	14.5	25.5	22.0	26.5	21.5	25.5	21.5	24.5	21.0
6	16.0	13.0	19.0	16.0	24.5	21.0	26.0	21.0	25.0	21.5	23.0	19.5
7	18.0	13.0	19.0	17.0	25.5	21.0	27.0	22.0	26.0	21.0	21.5	18.0
8	20.5	15.0	18.5	16.0	25.5	21.0	25.5	20.0	25.0	21.0	22.0	19.0
9	20.5	15.5	18.0	14.0	26.0	20.0	25.5	20.5	25.0	21.5	21.0	18.5
10	21.5	16.0	19.5	15.0	23.5	21.5	26.5	22.5	25.0	21.0	22.0	19.0
11	18.5	15.5	22.5	16.0	23.5	20.0	27.5	23.5	25.5	21.0	22.5	19.0
12	18.0	16.0	22.0	16.5	23.0	20.5	27.5	23.5	25.5	20.0	23.0	20.0
13	17.5	15.0	24.0	17.5	22.5	19.5	27.0	22.0	24.5	20.5	22.5	20.0
14	18.0	14.0	22.0	18.5	24.5	19.0	28.5	22.5	26.0	21.0	22.5	20.5
15	17.5	12.5	21.5	17.5	24.0	18.5	28.5	23.0	25.5	20.0	22.5	20.0
16	17.5	15.0	20.5	16.5	26.5	20.5	27.0	22.0	26.5	20.0	24.0	18.5
17	17.5	15.0	20.5	17.5	27.5	21.0	28.0	23.0	26.5	21.5	21.0	17.0
18	16.5	14.0	19.0	15.5	26.0	21.0	29.5	24.0	25.5	21.5	21.5	16.5
19	18.0	14.5	19.5	16.5	23.5	20.0	30.0	25.0	26.0	22.0	24.5	16.5
20	17.0	15.5	21.0	17.5	23.0	20.5	30.5	25.0	26.0	21.5	25.0	17.5
21	17.0	15.5	24.0	19.0	23.0	20.0	30.0	25.5	24.0	22.5	23.5	19.0
22	18.0	14.0	24.5	20.5	24.0	20.0	30.0	25.0	23.5	21.5	23.5	20.0
23	19.5	14.5	26.0	22.0	23.5	20.0	30.0	25.5	25.0	20.0	23.0	19.5
24	17.0	16.0	25.0	21.5	22.5	20.0	29.5	24.5	26.5	21.5	22.0	19.5
25	17.5	15.5	22.5	20.5	25.5	21.0	29.5	24.5	27.5	22.0	21.5	18.5
26	17.5	13.5	22.5	20.0	28.5	21.5	28.0	24.5	29.0	23.5	21.0	18.0
27	18.5	15.0	24.0	19.5	28.5	22.0	29.0	24.0	25.0	21.5	23.0	18.0
28	18.5	16.0	25.5	21.5	29.0	22.5	30.0	24.5	23.0	20.5	21.0	18.0
29	17.5	14.0	26.5	22.5	26.5	21.5	29.0	24.5	22.0	19.0	20.0	18.0
30	17.5	13.5	23.5	20.5	25.5	20.5	28.5	25.0	24.5	21.0	21.0	18.0
31	---	---	25.0	20.0	---	---	26.5	24.0	24.0	21.0	---	---
MONTH	21.5	12.5	26.5	14.0	29.0	18.5	30.5	20.0	29.0	19.0	25.5	16.5

11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)	Suspnd. sediment, sieve diametr percent <.063mm (70331)
OCT						
16...SS	1150	6.2	16.0	80	1.3	99
NOV						
07...SS	1130	25	13.5	92	6.2	98
FEB						
06...SS	1220	47	9.0	70	8.9	97
20...SS	1150	2.8	10.5	11	.08	91
MAR						
12...SS	1300	17	18.0	41	1.9	83
28...SS	1240	6.7	15.0	49	.89	96
APR						
09...SS	1250	16	18.0	228	9.8	96
29...SS	1420	5.5	17.5	81	1.2	98
MAY						
14...SS	1420	7.9	21.0	85	1.8	98
28...SS	1220	11	23.0	147	4.4	97
JUN						
11...SS	1300	10	21.5	147	4.0	91
25...SS	1320	9.5	23.5	334	8.6	98
JUL						
10...SS	1310	24	23.5	489	32	99
24...SS	1200	16	25.5	606	26	96
AUG						
07...SS	1300	25	22.5	416	28	99
SEP						
04...SS	1050	2.0	22.5	165	.89	99

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	Depth at sample location, feet (81903)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR					
08...*	1548	.92	976	18.9	.80
08...*	1549	1.12	975	18.9	2.40
08...*	1550	1.13	975	18.9	4.00
08...*	1551	1.62	975	18.9	5.60
08...*	1552	1.60	974	18.9	7.20
08...*	1553	1.52	974	18.9	8.80
08...*	1554	1.46	974	18.9	10.4
08...*	1555	1.18	975	18.9	12.0
08...*	1556	.68	976	18.9	13.6
08...*	1557	.10	976	18.9	15.2
AUG					
04...*	1417	.33	578	24.4	1.00
04...*	1418	.50	579	24.4	3.00
04...*	1419	.92	579	24.4	5.00
04...*	1420	1.38	579	24.4	7.00
04...*	1421	1.12	579	24.4	9.00
04...*	1422	1.02	579	24.4	11.0
04...*	1423	1.00	579	24.4	13.0
04...*	1424	.20	579	24.4	15.0
04...*	1425	1.02	579	24.4	17.0
04...*	1426	.50	579	24.4	19.0

SS Suspended-sediment data determined from a sample collected and processed according to National Quality Assessment (NAWQA) protocol.

* Instantaneous discharge at time of cross-sectional measurement: Apr. 8, 4.9 ft^3/s; Aug. 4, 10 ft^3/s.

11274550 SAN JOAQUIN RIVER NEAR CROWS LANDING, CA

LOCATION.—Lat 37° 25'42", long 121° 00'12", in NE 1/4 NE 1/4 sec.7, T.6 S., R.9 E., Stanislaus County, Hydrologic Unit 18040002, on right bank, 50 ft downstream from bridge on Crows Landing Road, and 4.2 miles northeast of Crows Landing.

DRAINAGE AREA.—9,694 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1995 to current year.

GAGE.—Water-stage recorder with crest-stage gages. Datum of gage is NGVD of 1929.

REMARKS.—Records good. Natural flow of stream affected by storage reservoirs, ground-water withdrawals, diversions for irrigation, and imported water; low flows consist mainly of return water from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 38,000 ft^3/s, Jan. 28, 1997, gage height, 59.23 ft, from rating curve extended above 32,100 ft^3/s; minimum daily, 257 ft^3/s, Sept. 19, 2003.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	365	743	648	1330	809	1070	841	962	482	532	470	422
2	371	700	654	1300	812	1100	847	995	552	510	464	384
3	346	682	646	1280	813	1130	814	1140	516	473	540	379
4	384	693	651	1250	837	1090	832	1370	532	494	576	338
5	379	720	663	1210	841	1110	817	1610	541	467	571	301
6	359	730	671	1130	830	1130	811	1680	527	460	511	313
7	370	741	671	1040	815	1170	822	1710	530	517	507	290
8	360	857	696	982	801	1150	796	1710	524	467	498	330
9	345	954	702	940	791	1140	774	1720	534	478	531	305
10	307	1060	704	923	791	1130	741	1750	538	448	517	306
11	308	1070	709	932	782	1150	726	1760	490	503	510	337
12	319	1050	714	1040	816	1160	752	1730	496	461	469	318
13	371	1020	728	1150	810	1160	880	1400	475	424	472	293
14	404	982	750	1130	804	1170	1010	1100	472	465	373	333
15	405	942	778	1080	836	1180	1010	943	505	402	349	368
16	411	909	877	1050	855	1210	1000	812	548	426	333	295
17	572	888	1250	1010	877	1280	1060	752	540	408	315	271
18	744	866	1210	980	890	1270	1080	726	475	439	351	259
19	893	856	1340	953	904	1210	1140	738	452	429	365	257
20	956	837	1660	912	932	1120	1190	691	443	413	334	258
21	1010	820	1800	879	946	1070	1180	672	475	443	332	305
22	1060	789	1760	863	927	1030	1160	613	505	415	363	314
23	1100	767	1690	855	940	1010	1080	591	550	386	357	319
24	1110	753	1630	844	986	995	993	558	538	374	402	305
25	1090	720	1540	828	1010	968	961	548	547	367	438	332
26	1020	690	1440	819	1020	952	987	555	532	387	438	331
27	929	675	1350	823	1040	945	965	556	500	453	398	327
28	870	673	1310	821	1060	930	992	561	472	481	377	375
29	828	668	1280	812	---	906	997	556	472	487	393	415
30	804	659	1300	819	---	909	984	529	512	488	392	398
31	779	---	1240	807	---	887	---	490	---	484	412	---
TOTAL	19569	24514	33062	30792	24575	33732	28242	31528	15275	13981	13358	9778
MEAN	631	817	1067	993	878	1088	941	1017	509	451	431	326
MAX	1110	1070	1800	1330	1060	1280	1190	1760	552	532	576	422
MIN	307	659	646	807	782	887	726	490	443	367	315	257
AC-FT	38820	48620	65580	61080	48740	66910	56020	62540	30300	27730	26500	19390

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

MEAN	1172	983	1417	4311	6831	3819	2972	2752	2075	1525	719	673
MAX	2338	1228	4364	25600	23390	10130	13980	12090	11890	8176	1757	1842
(WY)	1996	1999	1997	1997	1997	1998	1998	1998	1998	1998	1998	1998
MIN	631	751	687	940	804	870	706	937	483	413	408	326
(WY)	2003	1998	2000	2001	2002	2002	2002	2002	2002	2002	2002	2003

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1996 - 2003	
ANNUAL TOTAL	264346		278406			
ANNUAL MEAN	724		763		2413	
HIGHEST ANNUAL MEAN					6775	1998
LOWEST ANNUAL MEAN					744	2002
HIGHEST DAILY MEAN	2270	Jan 5	1800	Dec 21	37600	Jan 28 1997
LOWEST DAILY MEAN	294	Sep 28	257	Sep 19	257	Sep 19 2003
ANNUAL SEVEN-DAY MINIMUM	326	Sep 22	280	Sep 16	280	Sep 16 2003
MAXIMUM PEAK FLOW			1860	Dec 21	38000	Jan 28 1997
MAXIMUM PEAK STAGE			41.52	Dec 21	59.23	Jan 28 1997
ANNUAL RUNOFF (AC-FT)	524300		552200		1748000	
10 PERCENT EXCEEDS	1200		1180		5680	
50 PERCENT EXCEEDS	693		750		922	
90 PERCENT EXCEEDS	357		360		487	

11274550 SAN JOAQUIN RIVER NEAR CROWS LANDING, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—January 1996 to current year.
CHEMICAL DATA: October 2000 to November 2001.
SPECIFIC CONDUCTANCE: January 1996 to current year.
WATER TEMPERATURE: January 1996 to current year.
SEDIMENT DATA: July 2000 to November 2001.

PERIOD OF DAILY RECORD.—January 1996 to current year.
SPECIFIC CONDUCTANCE: January 1996 to current year.
WATER TEMPERATURE: January 1996 to current year.

INSTRUMENTATION.—Water-quality monitor since January 1996.

REMARKS.— Specific conductance records rated excellent except for Oct. 1–10, Nov. 17–21, Jan. 3–8, Feb. 7–27, Mar. 23 to Apr. 8, Apr. 21 to May 14, May 31 to June 6, June 9–25, July 6–26, Aug. 14–31, Sept. 17–30, which are rated good; and July 27 to Aug. 5, Sept. 1–8, which are rated fair. Water-temperature records are rated excellent except for Oct. 1–10, Feb. 15–27, Mar. 25 to Apr. 8, which are rated good. Specific conductance and water temperature values are affected by irrigation return flow.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum recorded, 1,950 microsiemens, Mar. 30, 2002; minimum recorded, 120 microsiemens, July 11, 12, 16, 1998.
WATER TEMPERATURE: Maximum recorded, 31.5° C, July 2, 2002, July 20–22, 2003; minimum recorded, 4.0° C, Dec. 24, 1998.

EXTREMES FOR CURRENT YEAR.—
SPECIFIC CONDUCTANCE: Maximum recorded, 1,820 microsiemens, Feb. 10, 11; minimum recorded, 501 microsiemens, Oct. 23.
WATER TEMPERATURE: Maximum recorded, 31.5° C, July 20–22; minimum recorded, 7.5° C, Dec. 25, 26.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	Transparency Secchi disc, inches (00077)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)
JUL									
11...	1800	737	--	.117	.084	760	11.0	139	8.5
25...	1200	612	11.0	.117	.090	759	8.6	105	8.4
AUG									
08...	1100	644	10.0	.115	.087	759	7.5	90	8.0
22...	1030	713	10.0	--	--	757	7.1	84	8.1
SEP									
06...	1030	708	10.0	.093	.070	760	8.1	91	8.2
19...	1100	569	12.0	.101	.078	757	7.2	86	8.0

Date	Specif. conduct-ance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
JUL									
11...	1080	27.0	230	95	52.2	24.5	2.89	4	124
25...	1260	25.0	280	140	62.9	30.2	3.49	4	154
AUG									
08...	1040	24.0	220	94	51.0	22.9	3.11	3	111
22...	1020	23.5	220	88	48.7	24.0	3.47	3	108
SEP									
06...	960	20.5	230	92	52.4	23.1	2.68	3	117
19...	910	23.5	200	62	44.8	21.4	3.02	3	97.1

11274550 SAN JOAQUIN RIVER NEAR CROWS LANDING, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Sodium, percent (00932)	Alkalinity, wat flt Gran, field, mg/L as CaCO3 (29802)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)
JUL									
11...	54	136	134	.2	14.4	197	647	.91	666
25...	54	142	156	.1	13.9	239	763	1.06	776
AUG									
08...	52	128	125	.2	15.7	176	598	.85	628
22...	51	133	116	.2	15.9	164	578	.83	608
SEP									
06...	53	134	119	.2	15.3	168	594	.82	606
19...	51	138	111	.2	14.7	128	517	.75	552

Date	Residue total at 105 deg. C, suspended, mg/L (00530)	Residue volatile, suspended, mg/L (00535)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
JUL									
11...	66	10	.41	1.1	<.02	3.72	.061	.11	.122
25...	73	<10	.44	1.5	<.02	4.12	.077	.08	.096
AUG									
08...	73	<10	.69	1.5	.21	3.54	.069	.12	.148
22...	--	--	.49	.96	.04	3.69	.045	.12	.154
SEP									
06...	62	<10	.32	.87	<.02	3.59	.024	.08	.106
19...	56	<10	.37	.79	<.02	2.97	.024	.11	.135

Date	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Chlorophyll b phytoplankton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)
JUL							
11...	.24	1.7	4.5	64.7	<.1	<10	12.3
25...	.31	2.4	4.0	66.3	3.2	<10	32.4
AUG							
08...	.32	1.1	4.2	e63.8	1.4	<10	25.0
22...	.28	.8	3.9	18.8	1.4	<10	27.3
SEP							
06...	.24	1.1	3.4	20.1	1.0	e8	27.3
19...	.25	.9	3.9	30.8	1.1	<10	24.6

< Actual value is known to be less than value shown.
e Estimated.

11274550 SAN JOAQUIN RIVER NEAR CROWS LANDING, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)	Suspnd. sediment, sieve diametr percent <.063mm (70331)
JUL						
11...SS	1800	737	27.0	71	141	94
25...SS	1200	612	25.0	55	91	86
AUG						
08...SS	1100	644	24.0	75	130	94
22...SS	1030	713	23.5	68	131	88
SEP						
06...SS	1030	708	20.5	78	149	94
19...SS	1100	569	23.5	62	95	91

SS Suspended-sediment data determined from a sample collected and processed according to National Water Quality Assessment (NAWQA) protocol.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1270	1200	933	864	1330	1310	1130	1080	1670	1640	1630	1560
2	1270	1200	966	933	1350	1320	1100	1070	1710	1660	1600	1550
3	1300	1190	974	965	1360	1340	1140	1100	1710	1660	1590	1560
4	1310	1280	992	931	1360	1320	1200	1140	1710	1640	1650	1590
5	1290	1210	989	937	1320	1300	1280	1190	1650	1560	1640	1620
6	1280	1210	988	970	1330	1300	1370	1280	1660	1610	1710	1640
7	1280	1220	1080	963	1340	1320	1430	1370	1710	1650	1730	1640
8	1290	1250	1080	983	1320	1260	1500	1430	1730	1700	1730	1680
9	1320	1260	1010	851	1330	1280	1530	1500	1770	1720	1690	1650
10	1420	1300	883	842	1330	1300	1530	1510	1820	1750	1660	1560
11	1500	1400	985	883	1330	1300	1550	1470	1820	1780	1590	1530
12	1500	1370	1020	979	1330	1310	1480	1240	1790	1670	1650	1560
13	1450	1240	1010	984	1330	1310	1240	1120	1730	1670	1670	1620
14	1310	1200	1010	990	1310	1280	1210	1130	1750	1700	1660	1590
15	1350	1200	1100	1010	1280	1260	1280	1210	1730	1670	1680	1620
16	1360	1060	1130	1040	1280	765	1320	1280	1680	1640	1680	1580
17	1060	753	1110	1050	1030	771	1370	1320	1640	1620	1610	1540
18	753	562	1130	1040	1070	983	1410	1370	1620	1580	1630	1580
19	583	539	1130	1070	1110	855	1450	1400	1580	1540	1720	1620
20	558	527	1170	1050	867	732	1540	1450	1600	1510	1800	1720
21	551	506	1170	1120	845	788	1550	1520	1560	1490	1790	1700
22	518	502	1200	1170	848	830	1560	1550	1630	1560	1780	1710
23	520	501	1200	1180	911	839	1570	1550	1630	1550	1770	1730
24	544	511	1220	1180	983	909	1570	1540	1570	1520	1740	1680
25	571	533	1260	1220	1050	983	1600	1570	1560	1520	1690	1620
26	636	569	1300	1260	1080	1050	1630	1600	1570	1550	1650	1610
27	719	636	1290	1270	1100	1080	1630	1620	1610	1550	1660	1580
28	774	719	1270	1240	1120	1100	1650	1620	1660	1600	1650	1590
29	798	754	1290	1240	1170	1110	1630	1620	---	---	1630	1580
30	817	765	1320	1290	1180	1120	1630	1560	---	---	1630	1600
31	864	801	---	---	1190	1130	1670	1600	---	---	1610	1560
MONTH	1500	501	1320	842	1360	732	1670	1070	1820	1490	1800	1530

11274550 SAN JOAQUIN RIVER NEAR CROWS LANDING, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1600	1570	1120	1080	1630	1480	1220	1170	1030	998	1380	1260
2	1680	1580	1120	1030	1480	1180	1290	1220	1090	1030	1360	1300
3	1730	1660	1030	877	1370	1290	1400	1230	1110	1050	1390	1310
4	1740	1660	878	708	1380	1260	1410	1220	1140	1090	1510	1380
5	1740	1650	708	608	1370	1280	1410	1330	1170	1040	1580	1490
6	1770	1700	623	593	1420	1300	1460	1380	1220	1160	1530	1340
7	1720	1670	635	613	---	---	1470	1210	1300	1220	1580	1460
8	1720	1670	661	620	---	---	1330	1270	1300	1250	1510	1320
9	1750	1650	663	631	1470	1320	1320	1210	1250	1180	1580	1370
10	1790	1730	635	598	1480	1320	1360	1220	1250	1170	1530	1380
11	1780	1710	599	577	1400	1350	1370	1130	1190	1130	1470	1200
12	1770	1510	655	590	1460	1370	1270	1120	1290	1180	1330	1190
13	1520	1120	782	655	1470	1350	1280	1170	1310	1220	1460	1330
14	1120	1020	932	782	1480	1350	1170	991	1500	1310	1340	1160
15	1020	982	1110	932	1430	1330	1350	1010	1600	1480	1190	1040
16	1000	963	1320	1110	1480	1310	1160	1090	1550	1400	1380	1060
17	1050	979	1300	1250	1430	1310	1290	1140	1640	1430	1420	1330
18	1060	986	1360	1270	1510	1390	1270	1100	1470	1220	1480	1380
19	993	935	1330	1250	1620	1490	1120	1060	1350	1180	1510	1460
20	949	868	1280	1210	1650	1410	1130	1080	1390	1190	1470	1350
21	896	872	1240	1180	1470	1360	1080	1050	1430	1350	1350	1160
22	921	844	1310	1230	1450	1270	1080	1030	1480	1330	1220	1140
23	988	919	1430	1250	1330	1200	1050	1030	1490	1340	1260	1160
24	1140	988	1510	1420	1270	1180	1050	1030	1430	1340	1230	1190
25	1130	1060	1660	1500	1290	1230	1050	1030	1380	1210	1200	1150
26	1100	1020	1570	1480	1350	1220	1040	1020	1260	1210	1260	1120
27	1100	1020	1480	1400	1400	1330	1030	861	1370	1240	1250	1150
28	1140	1080	1460	1350	1440	1360	861	796	1410	1320	1210	1100
29	1110	1070	1400	1340	1450	1320	832	781	1350	1280	1100	997
30	1100	1070	1510	1320	1350	1210	928	832	1460	1350	997	956
31	---	---	1590	1460	---	---	998	927	1480	1340	---	---
MONTH	1790	844	1660	577	---	---	1470	781	1640	998	1580	956

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.5	17.5	14.5	13.0	12.5	10.5	10.5	9.5	14.0	12.5	15.0	13.0
2	18.0	14.5	14.0	12.0	12.5	11.0	10.5	9.5	13.0	11.5	15.5	13.0
3	19.0	15.0	13.5	12.0	12.0	11.0	10.5	9.5	12.5	10.5	15.0	13.5
4	20.0	16.5	14.0	12.0	12.0	10.5	10.5	10.0	12.5	10.5	15.5	14.0
5	21.0	17.5	14.0	12.5	11.5	10.5	11.5	10.0	11.5	10.0	15.5	13.5
6	22.0	18.0	14.0	12.5	11.0	10.5	12.0	11.0	11.5	9.5	16.0	14.0
7	22.5	19.0	14.5	13.5	12.0	10.5	11.0	10.5	11.5	9.5	16.5	14.0
8	23.0	19.5	15.5	14.5	11.5	10.5	10.5	10.0	11.5	9.5	16.5	14.5
9	23.0	20.0	16.5	15.0	11.0	10.5	10.5	10.0	11.5	9.0	17.0	14.5
10	22.0	20.0	16.0	15.0	11.5	10.5	11.5	10.5	12.0	9.5	17.5	15.0
11	21.0	18.0	15.5	14.5	11.0	10.5	12.0	11.0	12.0	10.5	18.0	16.0
12	20.5	17.0	16.0	14.5	11.5	11.0	12.0	11.5	12.0	11.0	19.0	16.5
13	20.5	17.5	16.0	14.5	11.0	11.0	12.0	11.5	13.5	11.5	19.0	17.5
14	20.5	18.0	15.5	14.5	12.0	11.0	12.0	11.5	15.0	13.5	19.0	17.5
15	20.0	17.5	14.5	14.0	12.0	11.5	13.0	12.0	15.0	14.0	19.0	17.0
16	19.5	17.0	14.5	13.5	12.5	11.5	12.0	11.0	15.5	14.0	18.0	16.0
17	19.0	16.5	14.5	13.5	12.0	11.0	11.5	11.0	14.5	13.5	16.5	15.0
18	18.5	16.5	14.0	13.0	11.0	10.5	11.5	11.0	14.0	12.0	16.0	14.5
19	18.0	16.0	14.0	12.5	10.5	9.0	11.0	10.5	13.0	12.5	16.5	14.0
20	18.0	16.0	14.0	13.0	9.5	8.5	10.5	10.5	13.5	11.5	17.5	15.5
21	18.0	16.0	14.0	12.5	10.0	9.0	10.5	10.0	14.0	12.0	18.0	15.5
22	18.0	16.0	14.5	13.0	10.0	9.0	11.0	10.5	14.5	12.5	19.0	16.5
23	17.5	16.0	14.5	13.0	9.0	8.5	12.5	11.0	14.5	12.5	18.0	17.0
24	16.5	15.0	14.0	13.5	8.5	8.0	12.5	12.5	14.0	13.5	18.5	15.5
25	16.5	15.0	14.0	13.0	8.0	7.5	12.5	12.0	14.5	13.5	19.0	16.0
26	16.5	15.0	13.0	12.0	8.5	7.5	13.0	12.0	15.0	13.0	19.5	17.5
27	17.0	15.0	12.5	11.0	10.0	8.5	13.0	12.0	15.5	13.5	17.5	15.5
28	17.0	15.0	12.0	10.5	10.5	10.0	14.0	12.5	14.5	12.5	17.0	14.0
29	17.0	15.0	12.5	11.0	10.5	10.0	14.5	12.5	---	---	19.0	15.5
30	16.0	14.5	11.5	11.0	10.0	9.5	13.5	13.0	---	---	20.5	17.0
31	15.0	13.5	---	---	10.5	9.5	13.0	13.0	---	---	21.0	18.5
MONTH	23.0	13.5	16.5	10.5	12.5	7.5	14.5	9.5	15.5	9.0	21.0	13.0

11274550 SAN JOAQUIN RIVER NEAR CROWS LANDING, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	20.0	17.5	20.0	17.5	27.0	23.0	28.0	23.5	27.5	24.0	28.0	23.5
2	17.5	16.0	19.0	17.5	27.5	23.5	27.5	23.5	27.5	24.5	28.0	24.0
3	17.5	15.0	17.5	16.5	29.0	24.5	28.0	23.5	28.0	24.0	28.5	25.0
4	17.5	15.0	18.0	16.5	28.5	24.5	27.0	23.0	28.0	24.5	28.5	24.5
5	17.5	14.5	18.0	16.0	28.5	24.5	28.0	23.0	28.0	24.0	27.0	23.0
6	17.5	14.5	18.5	16.0	28.0	24.0	28.0	23.0	27.5	24.0	25.5	22.0
7	18.5	15.0	18.0	16.5	27.0	22.5	27.5	23.5	27.0	23.0	25.5	21.0
8	20.5	16.5	17.0	16.0	27.5	23.0	27.0	22.5	27.0	23.0	25.0	21.5
9	21.5	18.0	17.5	15.0	27.5	23.5	28.0	23.0	27.0	23.0	24.0	21.0
10	21.0	18.5	18.0	15.5	27.5	23.5	28.5	24.0	27.0	23.0	24.5	21.0
11	20.5	18.0	19.0	16.5	26.5	22.5	28.0	24.0	26.5	23.0	26.0	21.0
12	19.5	17.5	19.5	17.0	26.0	22.0	29.0	24.5	27.0	22.5	26.5	22.0
13	18.5	16.5	21.0	18.0	26.0	21.5	28.5	24.0	27.0	22.5	25.5	21.5
14	18.0	16.0	21.5	19.0	26.0	21.5	28.5	24.0	27.0	23.0	26.0	22.0
15	17.5	15.0	22.0	19.0	26.5	21.5	30.0	25.0	26.5	22.0	26.0	22.0
16	17.5	16.0	21.5	19.0	27.5	23.0	29.0	24.5	27.0	22.0	25.0	21.5
17	17.5	16.0	21.5	19.0	28.5	24.5	30.0	25.0	27.5	23.0	23.0	20.0
18	18.0	15.0	20.5	17.5	27.5	24.5	30.5	26.5	27.5	23.5	23.0	18.5
19	18.5	15.5	21.5	17.5	27.5	23.0	31.0	26.5	28.0	23.5	24.5	19.5
20	18.0	16.5	23.5	19.5	27.0	22.5	31.5	27.0	28.0	23.5	25.0	20.0
21	17.5	16.0	25.0	21.0	27.0	22.5	31.5	27.5	26.5	24.0	25.5	21.0
22	18.0	15.5	26.5	22.0	26.5	22.5	31.5	27.0	26.0	23.0	26.0	22.0
23	19.0	16.0	27.5	23.5	26.0	22.0	30.0	27.0	27.0	22.0	26.0	22.0
24	18.0	16.5	27.0	23.5	25.5	21.5	30.5	26.0	28.0	23.0	25.0	22.0
25	18.0	16.0	26.0	22.5	27.0	22.5	30.5	26.5	28.0	24.5	24.5	21.0
26	18.5	15.5	25.0	21.5	29.0	24.0	30.0	25.5	29.5	25.5	24.0	20.5
27	19.0	16.5	26.5	21.5	29.5	25.5	30.0	25.5	27.5	24.5	24.5	20.5
28	19.5	17.0	28.0	23.5	29.5	25.0	30.0	26.0	26.5	23.0	24.5	21.0
29	18.5	17.0	28.0	25.0	28.5	24.5	30.5	26.5	25.5	22.0	23.5	21.0
30	19.0	16.0	26.5	22.5	28.0	23.5	29.0	27.0	26.0	22.0	24.0	20.5
31	---	---	27.0	22.0	---	---	28.0	25.0	27.0	22.5	---	---
MONTH	21.5	14.5	28.0	15.0	29.5	21.5	31.5	22.5	29.5	22.0	28.5	18.5

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	Depth at sample location, feet (81903)	Specif. conduct-ance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR					
08...*	1148	1.50	1700	17.6	8.70
08...*	1150	3.30	1700	17.5	26.1
08...*	1152	2.40	1700	17.5	43.5
08...*	1155	2.30	1700	17.6	60.9
08...*	1157	3.50	1700	17.6	78.3
08...*	1201	5.80	1710	17.6	95.7
08...*	1203	6.40	1710	17.6	113
08...*	1206	12.6	1710	17.6	130
08...*	1211	10.4	1710	17.7	148
08...*	1215	1.70	1710	17.8	165
AUG					
05...*	1152	2.32	1050	24.7	176
05...*	1154	3.05	1050	24.6	157
05...*	1155	2.87	1050	24.6	139
05...*	1156	3.20	1050	24.6	120
05...*	1157	3.36	1050	24.6	102
05...*	1158	3.16	1050	24.6	83.0
05...*	1159	2.70	1050	24.6	65.0
05...*	1200	2.55	1050	24.6	46.0
05...*	1201	2.70	1050	24.7	28.0
05...*	1202	1.70	1050	24.8	9.00

* Instantaneous discharge at time of cross-sectional measurement: Apr. 8, 804 ft^3/s; Aug. 5, 590 ft^3/s.

11274560 HARDING DRAIN AT CARPENTER ROAD, NEAR PATTERSON, CA

(Formerly published as Turlock Irrigation District Lateral No. 5 near Patterson)

LOCATION.—Lat 37° 27'52", long 121° 01'52", in SE 1/4 SE 1/4 sec.25, T.5 S., R.8 E., Stanislaus County, Hydrologic Unit 18040002, on right bank, at upstream side of abandoned bridge, upstream of bridge crossing on Carpenter Road, and 7.2 mi east of Patterson.

PERIOD OF RECORD.—April 1992 to December 1994, October 1998 to October 2001.
CHEMICAL DATA: April 1992 to November 1994, October 1998 to October 2001.
SPECIFIC CONDUCTANCE: April 1992 to December 1994.
WATER TEMPERATURE: April 1992 to December 1994.
SEDIMENT DATA: April 1992 to November 1994, October 1998 to September 1999, June to October 2001.

PERIOD OF DAILY RECORD.—May 1992 to December 1994.
SPECIFIC CONDUCTANCE: May 1992 to December 1994.
WATER TEMPERATURE: May 1992 to December 1994.

INSTRUMENTATION.—Water-quality monitor since May 1992.

REMARKS.—Flows consist of return water from irrigation areas. Discharge data furnished by Turlock Irrigation District (not reviewed by U.S. Geological Survey).

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum recorded, 3,060 microsiemens, Oct. 8, 1994; minimum recorded, 204 microsiemens, May 29, 1994.
WATER TEMPERATURE: Maximum recorded, 31.5° C, July 2, 1994; minimum recorded 7.0° C, Jan. 3, 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduct-ance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Alkalinity, wat flt Gran, field, mg/L as CaCO3 (29802)
JAN									
06...	1040	e21	--	--	--	--	930	--	--
12...	1320	e21	--	--	--	--	1100	--	--
19...	1120	e73	--	--	--	--	585	--	--
FEB									
04...	1040	e29	--	--	--	--	1070	--	--
09...	1040	e33	--	--	--	--	1180	--	--
13...	0235	e52	--	--	--	--	1440	--	--
14...	0017	e41	--	--	--	--	824	--	--
14...	0430	e61	--	--	--	--	905	--	--
14...	0800	e68	--	--	--	--	971	--	--
JUN									
28...	1300	--	758	8.2	100	8.0	475	25.0	107

Date	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)
JAN									
06...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
14...	--	6.5	3.89	7.36	1.10	2.24	2.05	3.10	21.7
14...	--	--	--	--	--	--	--	--	--
14...	5.4	7.8	4.71	8.12	1.44	2.72	e2.66	3.80	7.8
JUN									
28...	--	--	--	--	--	--	--	--	--

e Estimated.

11274560 HARDING DRAIN AT CARPENTER ROAD, NEAR PATTERSON, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphosmethyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Butylate, water, fltrd, ug/L (04028)
JAN									
06...	<.003	e.020	<.002	<.002	.142	.025	<.001	<.002	<.002
12...	<.003	e.013	<.002	<.002	<.002	.014	<.001	<.002	<.002
19...	<.003	e.009	<.002	<.002	<.002	.013	<.001	<.002	<.002
FEB									
04...	<.003	e.019	<.002	<.002	<.002	.027	<.001	<.002	<.002
09...	<.003	e.018	<.002	<.002	.106	.024	<.001	<.002	<.002
13...	<.003	e.011	<.002	<.002	<.030	.021	<.001	<.002	<.002
14...	<.003	e.013	<.002	<.002	<.002	.021	<.001	<.002	<.002
14...	<.003	e.011	<.002	<.002	<.002	.024	<.001	<.002	<.002
14...	<.003	e.010	<.002	<.002	<.002	.022	<.001	<.002	<.002
JUN									
28...	--	--	--	--	--	--	--	--	--

Date	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd ug/L (82674)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Diazinon, water, fltrd, ug/L (39572)	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)
JAN									
06...	e.017	<.003	.007	<.005	<.004	<.002	.018	<.001	<.02
12...	e.015	<.003	.007	<.005	<.004	e.002	.029	<.001	<.02
19...	e.022	<.003	.011	<.005	.010	e.002	.034	<.001	<.02
FEB									
04...	e.028	<.003	.006	<.005	<.004	<.002	.056	<.001	<.02
09...	e.016	<.003	.005	<.005	.013	<.002	.029	<.001	<.02
13...	<.009	<.003	<.008	<.005	<.004	<.002	<.060	<.001	<.02
14...	e.010	<.003	.009	<.005	.043	e.004	.069	<.001	<.02
14...	e.030	<.003	.013	<.005	.041	e.003	.060	<.001	<.02
14...	e.023	<.003	.010	<.005	.018	e.002	.046	<.001	<.02
JUN									
28...	--	--	--	--	--	--	--	--	--

Date	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)
JAN									
06...	<.002	<.004	<.003	<.003	--	<.002	<.005	<.006	.010
12...	<.005	<.004	<.003	<.003	.018	<.002	<.005	<.006	.010
19...	<.002	<.004	<.003	<.003	.007	<.002	<.005	<.006	.028
FEB									
04...	<.002	<.004	<.003	<.003	.015	<.002	<.005	<.006	.043
09...	.004	<.004	<.003	<.003	.219	<.002	<.005	<.006	.012
13...	.009	<.004	<.003	<.003	<.004	<.002	<.005	<.006	.218
14...	.004	<.004	<.003	<.003	<.020	<.002	<.005	<.006	.289
14...	<.002	<.004	<.003	<.003	e.009	<.002	<.005	<.006	.245
14...	.007	<.004	<.003	<.003	.009	<.002	<.005	<.006	.204
JUN									
28...	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11274560 HARDING DRAIN AT CARPENTER ROAD, NEAR PATTERSON, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prome-ton, water, fltrd, ug/L (04037)
JAN									
06...	<.004	<.004	<.003	<.006	<.004	<.004	.049	<.002	e.01
12...	<.004	<.004	<.003	<.006	<.004	<.004	.012	<.002	<.02
19...	<.004	<.004	<.003	<.006	<.004	<.004	.021	<.002	e.01
FEB									
04...	<.004	<.004	<.003	<.006	<.004	<.004	.021	<.002	<.02
09...	<.004	<.004	<.003	<.006	<.004	<.004	.011	<.002	<.02
13...	<.004	<.004	<.003	<.006	<.004	<.004	.017	<.002	<.02
14...	<.004	<.004	<.003	<.006	<.004	<.004	.040	<.002	<.02
14...	<.004	<.004	<.003	<.006	<.004	<.004	.050	<.002	e.01
14...	<.004	<.004	<.003	<.006	<.004	<.004	.061	<.002	e.01
JUN									
28...	--	--	--	--	--	--	--	--	--

Date	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Sima-zine, water, fltrd, ug/L (04035)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)
JAN									
06...	<.010	<.007	.013	<.01	.027	<.01	<.007	<.01	<.002
12...	<.003	<.007	<.009	<.01	.092	M	<.007	<.01	<.002
19...	<.003	<.007	<.004	<.01	.091	<.01	<.007	<.01	<.002
FEB									
04...	<.003	<.007	<.004	<.01	.030	<.01	<.007	<.01	<.002
09...	<.003	<.007	<.004	<.01	.028	<.01	<.007	<.01	<.002
13...	<.003	<.007	<.004	<.01	.048	<.01	<.007	<.01	<.002
14...	<.003	<.007	<.004	<.01	.049	<.01	<.007	<.01	<.002
14...	<.003	<.007	<.004	<.01	.044	<.01	<.007	<.01	<.002
14...	<.003	<.007	<.004	<.01	.032	<.01	<.007	<.01	<.002
JUN									
28...	--	--	--	--	--	--	--	--	--

Date	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
JAN		
06...	<.001	<.002
12...	<.001	<.006
19...	<.001	e.002
FEB		
04...	<.001	<.006
09...	<.001	.005
13...	<.001	<.002
14...	<.001	.005
14...	<.001	.004
14...	<.001	e.004
JUN		
28...	--	--

< Actual value is known to be less than value shown.
e Estimated.
M Presence of material verified, not quantified.

11274570 SAN JOAQUIN RIVER AT PATTERSON BRIDGE, NEAR PATTERSON, CA

LOCATION.—Lat 37° 29'54", long 121° 04'54", in SW 1/4 SW 1/4 sec.15, T.5 S., R.8 E., Stanislaus County, Hydrologic Unit 18040002, on left bank, 0.2 mi below bridge on Palm Avenue, and 2.3 mi northeast of Patterson.

DRAINAGE AREA.—9,760 mi^2, approximately.

PERIOD OF RECORD.—October 1988 to September 1989, January 1990 to September 1994, January 2000 to August 2001. Data for the period October 1985 to March 1987 are available in U.S. Geological Survey Open-File Report 88-479. Data for the period April 1987 to September 1988 are available in U.S. Geological Survey Open-File Report 91-74.
CHEMICAL DATA: October 1992 to September 1994, January 2000 to August 2001.
SPECIFIC CONDUCTANCE: October 1988 to September 1989, January 1990 to September 1994.
WATER TEMPERATURE: October 1988 to September 1989, January 1990 to September 1994.
SEDIMENT DATA: October 1992 to September 1994.

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: October 1988 to September 1989, January 1990 to September 1994.
WATER TEMPERATURE: October 1988 to September 1989, January 1990 to September 1994.

REMARKS.—Discharge data provided by California Department of Water Resources (not reviewed by U.S. Geological Survey).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphosmethyl, water, fltrd 0.7u GF ug/L (82686)
JAN										
27...	1340	e1760	1030	<.003	<.002	<.002	<.002	<.002	e.004	<.001

Date	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Diazinon, water, fltrd, ug/L (39572)
JAN									
27...	<.002	<.002	<.010	<.003	.007	<.005	.091	e.002	.022

Date	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)
JAN									
27...	<.001	<.02	.009	<.004	<.003	<.003	<.004	e.064	<.005

Date	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)
JAN									
27...	<.006	.008	<.004	<.004	<.003	<.006	<.004	<.004	.016

e Estimated.
< Actual value is known to be less than value shown.

11274570 SAN JOAQUIN RIVER AT PATTERSON BRIDGE, NEAR PATTERSON, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Phorate water fltrd 0.7u GF ug/L (82664)	Prome-ton, water, fltrd, ug/L (04037)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Sima-zine, water, fltrd, ug/L (04035)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)
JAN									
27...	<.002	<.02	<.003	<.007	<.004	<.01	.163	<.01	<.007

Date	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
JAN				
27...	<.01	<.002	<.001	e.003

< Actual value is known to be less than value shown.
e Estimated.

11274630 DEL PUERTO CREEK NEAR PATTERSON, CA

LOCATION.—Lat 37° 29'12", long 121° 12'29", in SE 1/4 NW 1/4 sec.21, T.5 S., R.7 E., Stanislaus County, Hydrologic Unit 18040002, on left bank, 1.0 mi upstream from California Aqueduct crossing, and 4.4 mi west of Patterson.

DRAINAGE AREA.—72.6 mi^2.

PERIOD OF RECORD.—October 1958 to May 1965 (maximums only), June 1965 to current year.

REVISED RECORDS.—WSP 1930: 1959–60(M), drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 200 ft above NGVD of 1929, from topographic map. Prior to June 1965, crest-stage gage at site 1.0 mi downstream at different datum.

REMARKS.—Records good except those below 0.1 ft^3/s, which are poor. Some stock ponds and small diversions upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,270 ft^3/s, Feb. 3, 1998, gage height, 14.92 ft, from rating curve extended above 3,400 ft^3/s, on basis of computation of peak flow through culvert; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 16	1315	490	4.52	Dec. 29	0445	95	2.84
Dec. 19	2200	739	5.36				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	39	3.5	3.4	1.9	1.6	0.15	0.02	0.00	0.00
2	0.00	0.00	0.00	26	3.2	2.9	2.0	1.5	0.13	0.01	0.00	0.00
3	0.00	0.00	0.00	18	2.9	2.8	1.8	2.6	0.10	0.01	0.00	0.00
4	0.00	0.00	0.00	13	3.0	2.7	2.2	4.6	0.09	0.00	0.00	0.00
5	0.00	0.00	0.00	10	2.9	2.6	2.5	3.5	0.09	0.00	0.00	0.00
6	0.00	0.00	0.00	8.0	2.9	2.4	2.3	2.6	0.08	0.00	0.00	0.00
7	0.00	0.00	0.00	6.6	2.9	2.4	2.0	2.1	0.08	0.00	0.00	0.00
8	0.00	0.00	0.00	6.0	2.7	2.3	1.6	1.8	0.07	0.00	0.00	0.00
9	0.00	0.00	0.00	5.8	2.7	2.2	1.7	1.6	0.07	0.00	0.00	0.00
10	0.00	0.00	0.00	9.2	2.8	2.3	1.6	1.5	0.06	0.00	0.00	0.00
11	0.00	0.00	0.00	12	2.7	2.2	1.5	1.4	0.06	0.00	0.00	0.00
12	0.00	0.00	0.00	7.7	3.8	2.1	1.5	1.3	0.06	0.00	0.00	0.00
13	0.00	0.00	0.00	6.2	7.6	2.0	2.4	1.1	0.06	0.00	0.00	0.00
14	0.00	0.00	0.00	5.8	4.5	1.9	3.1	0.96	0.06	0.00	0.00	0.00
15	0.00	0.00	0.00	5.5	3.5	13	2.5	0.78	0.06	0.00	0.00	0.00
16	0.00	0.00	100	5.0	4.2	10	2.2	0.78	0.06	0.00	0.00	0.00
17	0.00	0.00	31	4.8	4.4	6.6	2.4	0.76	0.05	0.00	0.00	0.00
18	0.00	0.00	6.5	4.5	3.5	4.0	2.2	0.63	0.05	0.00	0.00	0.00
19	0.00	0.00	81	4.4	3.2	3.1	1.8	0.50	0.04	0.00	0.00	0.00
20	0.00	0.00	220	4.2	3.2	2.8	1.6	0.41	0.04	0.00	0.00	0.00
21	0.00	0.00	123	4.1	2.7	2.6	1.6	0.35	0.04	0.00	0.00	0.00
22	0.00	0.00	55	4.1	2.7	2.4	1.8	0.31	0.04	0.00	0.00	0.00
23	0.00	0.00	30	3.9	2.6	3.1	1.6	0.26	0.04	0.00	0.00	0.00
24	0.00	0.00	18	4.0	2.7	3.5	1.5	0.23	0.04	0.00	0.00	0.00
25	0.00	0.00	12	3.9	8.0	2.6	1.5	0.22	0.03	0.00	0.00	0.00
26	0.00	0.00	8.8	3.9	5.3	2.3	1.6	0.23	0.03	0.00	0.00	0.00
27	0.00	0.00	6.6	3.9	4.5	2.1	1.6	0.19	0.03	0.00	0.00	0.00
28	0.00	0.00	7.4	3.8	4.0	1.9	1.6	0.16	0.02	0.00	0.00	0.00
29	0.00	0.00	67	3.5	---	1.7	1.6	0.15	0.02	0.00	0.00	0.00
30	0.00	0.00	41	3.5	---	1.8	1.8	0.16	0.02	0.00	0.00	0.00
31	0.00	---	44	3.5	---	1.8	---	0.16	---	0.00	0.00	---
TOTAL	0.00	0.00	851.30	243.8	102.6	99.5	57.0	34.44	1.77	0.04	0.00	0.00
MEAN	0.000	0.000	27.5	7.86	3.66	3.21	1.90	1.11	0.059	0.001	0.000	0.000
MAX	0.00	0.00	220	39	8.0	13	3.1	4.6	0.15	0.02	0.00	0.00
MIN	0.00	0.00	0.00	3.5	2.6	1.7	1.5	0.15	0.02	0.00	0.00	0.00
AC-FT	0.00	0.00	1690	484	204	197	113	68	3.5	0.08	0.00	0.00

11274630 DEL PUERTO CREEK NEAR PATTERSON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.13	0.96	4.12	18.4	33.6	24.4	9.04	3.88	1.79	0.34	0.092	0.18
MAX	2.15	9.38	31.8	130	340	218	54.1	31.5	31.3	5.56	2.06	4.48
(WY)	1984	1983	1984	1997	1998	1983	1983	1983	1983	1983	1983	1990
MIN	0.000	0.000	0.000	0.000	0.000	0.062	0.002	0.000	0.000	0.000	0.000	0.000
(WY)	1966	1967	1969	1977	1977	1977	1990	1992	1966	1965	1965	1965

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1965 - 2003	
ANNUAL TOTAL	1233.75		1390.45			
ANNUAL MEAN	3.38		3.81		7.94	
HIGHEST ANNUAL MEAN					47.7	1983
LOWEST ANNUAL MEAN					0.030	1977
HIGHEST DAILY MEAN	220	Dec 20	220	Dec 20	1870	Feb 3 1998
LOWEST DAILY MEAN	0.00	Jun 13	0.00	Oct 1	0.00	Jul 1 1965
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 13	0.00	Oct 1	0.00	Jul 1 1965
MAXIMUM PEAK FLOW			739	Dec 19	5270	Feb 3 1998
MAXIMUM PEAK STAGE			5.36	Dec 19	14.92	Feb 3 1998
ANNUAL RUNOFF (AC-FT)	2450		2760		5750	
10 PERCENT EXCEEDS	3.5		5.4		14	
50 PERCENT EXCEEDS	0.00		0.06		0.14	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

11274653 DEL PUERTO CREEK AT VINEYARD ROAD, NEAR PATTERSON, CA

LOCATION.—Lat 37°31'15", long 121°08'55", Stanislaus County, Hydrologic Unit 18040002, at upstream side of Vineyard Road, northwest of Loquat Avenue, and 2.5 north of Patterson.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—October 1992 to September 1995, January 2000 to August 2001.
CHEMICAL DATA: October 1992 to September 1995, January 2000 to August 2001.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
JAN										
06...	1240	4.7	1480	--	--	--	--	--	--	--
12...	1000	1.8	1270	--	--	--	--	--	--	--
19...	1400	6.4	1360	--	--	--	--	--	--	--
24...	1700	16	1210	--	--	--	--	--	--	--
FEB										
12...	0100	38	300	--	--	--	--	--	--	--
12...	0700	11	931	--	--	--	--	--	--	--
12...	1400	--	656	.40	.71	<.02	.68	<.010	.04	.059
13...	0200	25	808	--	--	--	--	--	--	--
13...	2030	--	534	.44	.44	.04	.79	<.010	.06	.070
14...	0100	--	374	--	--	--	--	--	--	--
14...	0600	--	350	--	--	--	--	--	--	--

Date	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphosmethyl, water, fltrd 0.7u GF ug/L (82686)
JAN									
06...	--	--	<.003	<.002	<.002	<.002	<.002	.006	<.001
12...	--	--	<.003	e.013	<.002	<.002	<.002	e.274	<.001
19...	--	--	<.003	<.002	<.002	<.002	<.002	.006	<.001
24...	--	--	<.003	<.002	<.002	<.002	<.002	.008	<.001
FEB									
12...	--	--	<.003	<.002	<.002	<.002	<.002	.011	<.001
12...	--	--	<.003	<.002	<.002	<.002	<.002	.007	e.008
12...	.139	10.2	<.003	<.002	<.002	<.002	<.002	<.004	<.001
13...	--	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001
13...	.06	9.0	<.003	<.002	<.002	<.002	<.002	<.001	<.001
14...	--	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001
14...	--	--	<.003	<.002	<.002	<.002	<.002	<.005	<.001

Date	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Diazinon, water, fltrd, ug/L (39572)
JAN									
06...	<.002	<.002	e.022	<.003	<.004	<.005	.009	<.002	.385
12...	<.002	<.002	e.043	<.003	<.008	<.005	.013	<.002	1.06
19...	<.002	<.002	e.019	<.003	.005	<.005	.013	e.002	.182
24...	<.002	<.002	e.021	<.003	.007	<.005	<.004	e.002	.075
FEB									
12...	<.002	<.002	e.215	<.003	.009	<.005	.011	.006	.834
12...	<.002	<.002	e.022	<.003	.009	<.005	<.004	.004	.236
12...	<.002	<.002	<.003	<.003	<.004	<.005	.013	<.002	e.017
13...	<.002	<.002	e.004	<.003	<.004	<.005	<.004	e.001	.009
13...	<.002	<.002	e.005	<.003	e.003	<.005	<.004	e.001	.021
14...	<.002	<.002	<.003	<.003	<.004	<.005	.007	<.002	<.002
14...	<.002	<.002	<.003	<.003	<.004	<.005	<.004	e.002	<.002

< Actual value is known to be less than value shown.
e Estimated.

11274653 DEL PUERTO CREEK AT VINEYARD ROAD, NEAR PATTERSON, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)
JAN									
06...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
12...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
19...	<.001	<.02	.009	<.004	<.003	<.003	<.004	<.002	<.005
24...	<.001	<.02	e.003	<.004	<.003	<.003	<.004	<.002	<.005
FEB									
12...	<.001	<.02	.009	<.004	<.003	<.003	<.004	<.002	<.010
12...	.006	<.02	e.003	<.004	<.003	<.003	<.004	<.002	<.005
12...	<.010	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
13...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
13...	<.001	<.02	e.001	<.004	<.003	<.003	<.004	<.002	<.005
14...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
14...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005

Date	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)
JAN									
06...	<.006	.014	.014	<.004	<.003	e.001	<.004	<.004	<.004
12...	<.006	.019	.020	<.004	<.003	<.006	<.004	<.004	<.009
19...	<.006	.007	<.004	<.004	<.003	e.002	<.004	<.004	.008
24...	<.006	.090	<.004	<.004	<.003	<.006	<.004	<.004	<.013
FEB									
12...	<.006	1.77	.672	<.004	.021	e.006	<.004	<.004	<.022
12...	<.006	.510	.114	<.004	.007	.008	<.004	<.004	.014
12...	<.006	.013	.007	<.004	<.003	<.006	<.004	<.004	<.004
13...	<.006	.016	.005	<.004	.005	<.006	<.004	<.004	<.004
13...	<.006	.129	.028	<.004	<.003	<.006	<.004	<.004	<.004
14...	<.006	.015	<.004	<.004	<.003	<.006	<.004	<.004	<.004
14...	<.006	.007	<.004	<.004	<.003	<.006	<.004	<.004	<.004

Date	Phorate water fltrd 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	Pronamide, water, fltrd 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd ug/L (82685)	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)
JAN									
06...	<.002	<.02	<.003	<.007	<.004	--	.156	<.01	<.007
12...	<.002	<.02	<.003	<.007	<.004	--	e38.8	<.01	<.007
19...	<.002	<.02	<.003	<.007	<.004	<.01	.431	<.01	<.007
24...	<.002	<.02	<.003	<.007	<.004	<.01	3.41	<.01	<.007
FEB									
12...	<.002	<.02	<.003	<.007	<.004	<.03	3.45	<.01	<.007
12...	<.002	<.02	<.003	<.007	<.004	<.01	3.03	<.01	<.007
12...	<.002	<.02	<.003	<.007	<.004	<.01	.155	<.01	<.007
13...	<.002	<.02	<.003	<.007	<.004	<.01	.125	<.01	<.007
13...	<.002	<.02	<.003	<.007	<.004	--	.319	<.01	<.007
14...	<.002	<.02	<.003	<.007	<.004	<.01	.045	<.01	<.007
14...	<.002	<.02	<.003	<.007	<.004	<.01	.022	<.01	<.007

< Actual value is known to be less than values shown.
e Estimated.

11274653 DEL PUERTO CREEK AT VINEYARD ROAD, NEAR PATTERSON, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
JAN				
06...	<.01	<.002	<.001	e.002
12...	<.01	<.002	<.001	.009
19...	<.01	<.002	<.001	.005
24...	<.01	<.002	<.001	.008
FEB				
12...	<.01	<.002	<.001	.036
12...	<.01	<.002	<.001	.035
12...	<.01	<.002	<.001	.004
13...	<.01	<.002	<.001	e.003
13...	<.01	<.002	<.001	e.004
14...	<.01	<.002	<.001	e.002
14...	<.01	<.002	<.001	e.002

< Actual value is known to be less than value shown.
e Estimated.

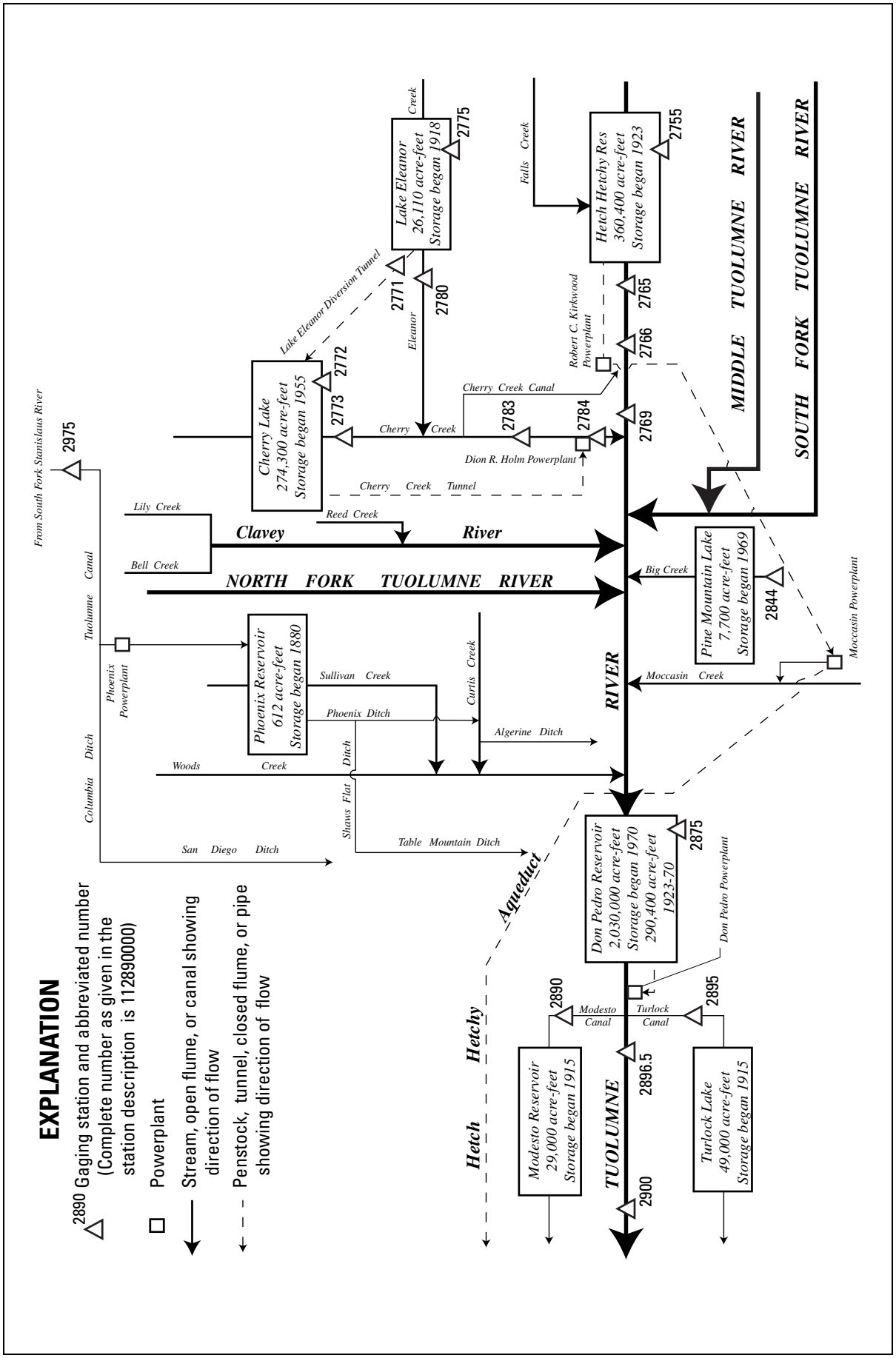


Figure 29. Diversions and storage in Tuolumne River Basin.

11275500 HETCH HETCHY RESERVOIR AT HETCH HETCHY, CA

LOCATION.—Lat 37° 56'52", long 119° 47'13", in NW 1/4 NW 1/4 sec.16, T.1 N., R.20 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, near center of O'Shaughnessy Dam on Tuolumne River at Hetch Hetchy, and 1.5 mi downstream from Falls Creek.

DRAINAGE AREA.—455 mi^2.

PERIOD OF RECORD.—May 1923 to current year. Prior to October 1930 monthend contents published in WSP 1315-A.

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder installed March 1995. Datum of gage is 1.84 ft above NGVD of 1929. Prior to Oct. 1, 1927, nonrecording gage at same site and datum. Oct. 1, 1927, to July 9, 1972, water-stage recorder at same site and datum. Prior to October 1974, datum published as at mean sea level.

REMARKS.—Reservoir is formed by concrete gravity-type dam, completed to crest gage height 3,726.5 ft in 1923 and raised to 3,812.0 ft in 1937. Storage began Apr. 6, 1923. Ten-foot drum gates were installed on spillway in 1949. Capacity, 360,400 acre-ft, between gage heights 3,512.0 ft, bottom outlet, and 3,806.0 ft, top of drum-type spillway gates. Water is diverted from reservoir through tunnel to Robert C. Kirkwood Powerplant 15 mi downstream. Flow is diverted from powerplant tailrace in a closed conduit through Hetch Hetchy Aqueduct to Moccasin Powerplant with flows in excess of aqueduct capacity being spilled to the river. At Moccasin Creek Diversion Dam, water re-enters Hetch Hetchy Aqueduct and flows into Crystal Springs Reservoir, which supplies city of San Francisco. Surplus water is spilled into Don Pedro Reservoir (station 11287500) at Red Mountain Bar. Flow downriver is for State Department of Fish and Game and Raker Act requirements. Hetch Hetchy Reservoir is the main storage unit of Hetch Hetchy water-supply system for San Francisco. Records, including extremes for current year, represent contents at 2400 hours. See schematic diagram of Tuolumne River Basin.

EXTREMES (AT 0800) FOR PERIOD OF RECORD.—Maximum contents, 369,100 acre-ft, Dec. 3, 1950, gage height, 3,810.4 ft; no contents at times in 1929–31.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 361,500 acre-ft, June 7, 16, 17, gage height, 3,806.57 ft, June 7, 17; minimum, 228,400 acre-ft, May 11, gage height, 3,733.76 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table provided by San Francisco Public Utilities Commission, dated May 20, 1971)

3,512	0	3,540	8,700	3,640	97,000	3,740	238,900
3,513	51	3,560	22,900	3,660	119,900	3,760	273,700
3,515	154	3,580	39,500	3,680	146,200	3,780	310,400
3,520	410	3,600	57,400	3,700	175,000	3,800	348,600
3,530	3,300	3,620	76,500	3,720	206,000	3,810.4	369,100

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e267500	240900	243700	238200	238700	234000	242700	236200	e360200	360100	345900	315900
2	e266600	240200	243200	238500	239100	233700	243600	235100	360000	360200	345700	314800
3	e265700	239600	242900	238800	238900	233300	244200	234200	360900	360200	345300	314000
4	e264800	238900	242400	239200	239200	233400	244400	233900	361200	360300	344600	313100
5	e263100	238300	241900	239400	239000	233100	244000	233000	360500	360400	343900	311800
6	e262200	237600	241500	239800	239000	232900	243600	232200	361300	360300	343100	310700
7	e261300	237000	241000	240000	238800	232800	243200	231500	361500	359800	342200	309600
8	e260400	242400	240500	240300	238600	232800	243300	231000	361400	359300	341300	308400
9	259300	246700	240000	240500	238500	232800	243800	230100	361300	358700	340300	307400
10	258000	247600	239400	241100	238300	232700	244500	229100	360800	358200	339400	306300
11	257200	248100	238900	241300	238100	232700	245300	228400	361000	357700	338400	305200
12	256500	248500	238400	241500	237900	232800	246400	228500	360700	357200	337400	304200
13	255700	248900	238100	241300	238000	233100	249000	230100	360800	356600	336300	303100
14	254900	249100	238100	241000	238000	233600	250100	233500	361300	355900	335300	302000
15	254100	249000	238000	240600	238100	235400	250600	236900	361400	355100	334300	302000
16	253200	248600	238700	240200	238400	236100	249800	240800	361500	354300	333200	e300000
17	252300	248400	239000	239800	238400	236600	249000	244400	361500	353400	332200	e298800
18	251300	248100	239000	239800	238300	236800	248000	248600	361400	352600	331100	e297700
19	250400	247700	239000	239900	238100	236900	247000	253100	361400	352100	329900	e296600
20	249600	247500	238900	239600	238000	236700	246100	258600	361200	351800	328800	e295500
21	248800	247400	238900	239300	237700	236500	245300	266000	360900	351300	327700	e294400
22	247900	247300	238800	239000	237800	236600	244200	276000	360700	350600	326700	e293100
23	247100	247100	238600	238800	237800	237000	243000	287600	360300	350100	326300	e292200
24	246200	246800	238400	238600	237100	237300	242400	293500	360000	349700	e324700	e291300
25	245600	246500	238300	238700	236600	237400	241800	e312300	359700	349100	e323600	e290200
26	245100	246000	238100	239000	236000	238300	240900	e322800	359300	348500	e322400	e288900
27	244400	245500	238000	238800	235400	239200	240000	e334100	359200	347900	e321300	e287800
28	243800	245100	238000	238700	234700	239500	239400	e343900	359100	347400	e320200	e286900
29	243000	244600	238100	238700	---	239700	238600	e354100	359400	347000	319600	e285800
30	242200	244200	238000	238500	---	240300	237500	e360400	359600	346500	317900	e284200
31	241600	---	238300	238500	---	241400	---	e361000	---	346100	316900	---
MAX	267500	249100	243700	241500	239200	241400	250600	361000	361500	360400	345900	315900
MIN	241600	237000	238000	238200	234700	232700	237500	228400	359100	346100	316900	284200
a	3741.56	3743.11	3739.62	3739.76	3737.52	3741.45	3739.15		3805.59	3798.74	3783.48	
b	-26800	+2600	-5900	+200	-3800	+6700	-3900	+201400	-1400	-13500	-29200	-32700

CAL YR 2002 b +46000
WTR YR 2003 b +15800

e Estimated.
a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.

11276500 TUOLUMNE RIVER NEAR HETCH HETCHY, CA

LOCATION.—Lat 37° 56'15", long 119° 47'50", in SW 1/4 SE 1/4 sec.17, T.1 N., R.20 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, on left bank 0.9 mi downstream from O'Shaughnessy Dam at Hetch Hetchy, and 2.5 mi downstream from Falls Creek.

DRAINAGE AREA.—457 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1910 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "at Hetch Hetchy damsite, near Sequoia" 1910–14 and as "below Hetch Hetchy damsite, near Sequoia" 1915–18.

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder, crest-stage gage with concrete control since May 5, 1970. Elevation of gage is 3,480 ft above NGVD of 1929, from topographic map. Prior to Jan. 1, 1915, water-stage recorder at site 1 mi upstream, at damsite, at different datum. Jan. 1, 1915, to Sept. 3, 1968, water-stage recorder, at same site and datum. Oct. 1, 1968, to May 4, 1970, nonrecording gage at site 0.5 mi upstream at different datum.

REMARKS.—Records good. Flow regulated by Hetch Hetchy Reservoir (station 11275500) 0.9 mi upstream beginning in April 1923. Flow diverted upstream from station through tunnel to Robert C. Kirkwood Powerplant and Hetch Hetchy Aqueduct beginning Apr. 26, 1967. See schematic diagram of Tuolumne River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 16,400 ft^3/s, Jan. 3, 1997, gage height, 15.08 ft; no flow at times in 1968–70.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	57	52	58	57	63	56	153	6950	163	129	113
2	71	60	51	57	61	64	63	168	5710	134	133	103
3	68	64	56	57	62	58	62	168	5680	128	132	103
4	69	64	56	57	62	53	62	172	5820	132	131	103
5	70	64	56	57	61	51	62	167	5500	133	130	102
6	75	64	56	57	61	46	61	166	4330	131	131	102
7	78	64	56	56	61	46	60	166	4330	120	131	102
8	78	70	55	56	61	46	60	169	4160	131	130	102
9	75	66	55	56	61	46	61	167	4270	136	129	102
10	69	65	56	58	61	46	63	165	3870	135	127	102
11	66	65	57	57	61	46	65	163	3050	134	130	102
12	65	65	57	57	61	46	65	162	2840	134	135	102
13	65	65	58	56	62	46	84	163	2300	133	135	101
14	65	65	59	56	61	46	84	164	1980	132	135	101
15	65	65	56	56	61	50	139	166	2240	131	135	96
16	66	65	65	56	62	47	158	168	2190	129	134	90
17	65	65	64	56	62	47	152	172	2110	128	135	86
18	63	65	59	56	61	47	142	175	1700	126	138	83
19	63	65	58	56	61	47	136	177	1410	127	140	83
20	63	65	58	56	61	46	139	180	1080	131	140	83
21	63	65	58	55	59	46	140	185	774	135	140	83
22	63	62	58	55	58	46	139	191	477	141	137	83
23	65	60	57	55	58	47	137	198	309	143	129	83
24	65	60	57	55	58	47	132	206	242	142	128	83
25	66	60	57	56	58	46	133	215	212	142	127	83
26	63	60	57	56	58	47	130	223	200	140	127	84
27	60	60	57	55	62	47	127	981	196	140	127	85
28	59	60	57	55	63	46	130	3020	195	140	127	85
29	57	60	60	55	---	47	128	4140	195	139	127	85
30	57	59	60	55	---	46	127	4890	195	132	126	85
31	57	---	63	55	---	46	---	6440	---	125	127	---
TOTAL	2054	1894	1781	1738	1695	1498	3097	24040	74515	4167	4082	2800
MEAN	66.3	63.1	57.5	56.1	60.5	48.3	103	775	2484	134	132	93.3
MAX	80	70	65	58	63	64	158	6440	6950	163	140	113
MIN	57	57	51	55	57	46	56	153	195	120	126	83
AC-FT	4070	3760	3530	3450	3360	2970	6140	47680	147800	8270	8100	5550

11276500 TUOLUMNE RIVER NEAR HETCH HETCHY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 1966, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	534	516	544	528	519	620	971	2005	3149	1396	636	548
MAX	813	780	2281	1221	1556	1078	2803	5336	7859	4624	1320	1143
(WY)	1949	1939	1951	1965	1965	1916	1952	1919	1911	1911	1939	1939
MIN	13.8	1.52	1.83	2.51	34.2	11.2	507	493	480	279	27.1	5.83
(WY)	1925	1924	1924	1924	1924	1925	1937	1961	1924	1919	1924	1923

SUMMARY STATISTICS	WATER YEARS 1911 - 1966		
ANNUAL MEAN	997		
HIGHEST ANNUAL MEAN	1724		1911
LOWEST ANNUAL MEAN	516		1924
HIGHEST DAILY MEAN	11400	Jun 18	1911
LOWEST DAILY MEAN	1.3	Nov 2	1923
ANNUAL SEVEN-DAY MINIMUM	1.4	Nov 1	1923
MAXIMUM PEAK FLOW	12900	Jun 1	1943
MAXIMUM PEAK STAGE	13.90	Jun 1	1943
ANNUAL RUNOFF (AC-FT)	722600		
10 PERCENT EXCEEDS	2230		
50 PERCENT EXCEEDS	721		
90 PERCENT EXCEEDS	115		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	51.7	62.9	76.7	119	73.4	79.2	216	1049	1744	815	161	77.6
MAX	164	561	618	2105	305	489	1371	3327	5885	5149	1263	125
(WY)	1987	1987	1997	1997	1974	1983	1986	1969	1983	1983	1983	1989
MIN	31.1	33.6	34.1	33.5	31.7	29.9	33.6	49.0	71.2	68.2	66.7	31.6
(WY)	1969	1991	1991	1977	1971	1974	1981	1990	1977	1968	1974	1970

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1968 - 2003	
ANNUAL TOTAL	44625		123361			
ANNUAL MEAN	122		338		378	
HIGHEST ANNUAL MEAN					1433	1983
LOWEST ANNUAL MEAN					49.5	1977
HIGHEST DAILY MEAN	1040	Jun 14	6950	Jun 1	13800	Jan 3 1997
LOWEST DAILY MEAN	51	Dec 2	46	Mar 6	0.00	Oct 3 1968
ANNUAL SEVEN-DAY MINIMUM	55	Dec 1	46	Mar 6	0.00	Feb 20 1970
MAXIMUM PEAK FLOW			7220	Jun 2	16400	Jan 3 1997
MAXIMUM PEAK STAGE			11.96	Jun 2	15.08	Jan 3 1997
ANNUAL RUNOFF (AC-FT)	88510		244700		273700	
10 PERCENT EXCEEDS	165		195		911	
50 PERCENT EXCEEDS	105		66		66	
90 PERCENT EXCEEDS	58		55		35	

11276500 TUOLUMNE RIVER NEAR HETCH HETCHY, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1987 to current year.
WATER TEMPERATURE: Water years 1987 to current year.

PERIOD OF DAILY RECORD.—August 1987 to current year.
WATER TEMPERATURE: August 1987 to current year.

INSTRUMENTATION.—Water-temperature recorder since August 1987.

REMARKS.—Water-temperature records rated excellent except for June 17 to Aug. 9, and Aug. 26 to Sept. 30, which are rated good. Water-temperature recorder installed Aug. 13, 1987, located 0.6 mi upstream from gaging station on left bank at road bridge. Water temperature can be affected by releases from O'Shaughnessy Dam. Interruptions in record were due to malfunction of the recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum recorded, 19.5° C, July 12, 1996, June 30, 2000; minimum recorded, 4.0° C, Mar. 25, 1991.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 15.0° C, July 4–6; minimum recorded, 6.5° C, several days in February to April, but may have been lower during periods of missing record.

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.5	10.5	11.5	10.5	11.5	11.0	---	---	8.5	7.5	8.0	7.0
2	11.5	10.0	11.5	10.5	11.5	10.5	---	---	8.0	7.5	8.0	6.5
3	11.5	10.0	11.5	10.5	11.5	10.5	---	---	8.5	7.5	7.5	7.0
4	12.0	10.5	11.5	10.5	11.5	10.5	---	---	---	---	8.0	7.0
5	12.0	10.5	11.5	10.5	11.5	11.0	---	---	---	---	8.5	7.0
6	12.0	10.5	11.5	10.5	11.5	11.0	---	---	---	---	8.5	7.0
7	12.0	11.0	11.5	11.0	11.5	10.5	---	---	---	---	8.5	7.0
8	12.0	10.5	11.5	11.0	11.0	10.5	---	---	---	---	8.5	7.0
9	12.0	11.0	11.5	11.0	11.0	10.5	---	---	---	---	8.5	7.0
10	12.0	11.0	11.5	11.0	11.0	10.5	---	---	8.5	7.0	8.5	7.0
11	12.0	11.0	11.5	10.5	11.0	10.5	---	---	9.0	7.5	9.0	7.0
12	12.0	11.0	12.0	11.0	11.5	10.5	---	---	---	---	9.0	7.5
13	12.0	11.0	11.5	11.0	11.0	10.5	---	---	---	---	8.5	7.5
14	12.0	11.0	11.5	11.0	11.5	10.5	---	---	---	---	8.5	7.5
15	12.0	11.0	11.5	10.5	11.0	10.5	---	---	8.0	7.5	8.5	7.0
16	12.0	11.0	11.5	11.0	11.0	10.0	---	---	---	---	8.0	7.0
17	12.0	11.0	11.5	11.0	10.5	9.5	---	---	8.5	7.5	8.0	7.0
18	12.0	11.0	11.5	10.5	---	---	9.0	8.5	8.5	7.0	8.5	6.5
19	12.0	11.0	11.5	11.0	---	---	---	---	8.0	7.0	8.5	6.5
20	12.0	10.5	12.0	11.0	---	---	9.0	8.0	8.5	7.0	8.5	7.5
21	12.0	11.0	11.5	11.0	---	---	9.0	8.0	8.5	7.0	9.0	7.0
22	12.0	11.0	11.5	11.0	---	---	9.0	8.0	8.5	7.0	9.0	7.0
23	11.5	11.0	11.5	11.0	---	---	9.0	8.0	8.5	7.0	8.0	7.5
24	11.5	10.5	11.5	11.0	---	---	9.0	8.0	8.0	7.5	9.0	7.5
25	11.5	11.0	11.0	10.5	---	---	9.5	8.0	8.0	7.5	9.0	7.5
26	11.0	10.5	11.5	10.5	---	---	---	---	8.0	7.5	8.5	7.5
27	12.0	10.5	11.5	11.0	---	---	9.0	8.0	7.5	7.0	9.0	7.0
28	11.5	11.0	11.5	10.5	---	---	8.5	8.0	8.0	6.5	9.0	7.0
29	11.5	10.5	11.5	11.0	---	---	---	---	---	---	9.0	7.5
30	11.5	10.5	11.5	11.0	---	---	---	---	---	---	9.5	7.5
31	11.5	10.5	---	---	---	---	---	---	---	---	9.5	7.5
MONTH	12.0	10.0	12.0	10.5	---	---	---	---	---	---	9.5	6.5

11276500 TUOLUMNE RIVER NEAR HETCH HETCHY, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	7.0	8.5	7.5	9.0	9.0	13.5	11.5	13.5	13.0	12.5	11.0
2	7.5	6.5	8.0	8.0	9.5	9.0	14.0	12.0	13.5	13.0	12.5	11.0
3	8.5	6.5	8.0	8.0	9.5	9.0	14.5	12.5	13.5	12.5	12.5	11.5
4	7.5	7.0	8.0	7.5	10.0	9.5	15.0	12.5	14.0	12.5	12.5	11.5
5	8.5	6.5	9.0	7.5	10.0	9.5	15.0	13.0	13.5	12.5	12.5	11.5
6	8.5	7.0	8.5	7.5	10.0	9.5	15.0	13.5	13.0	12.0	12.5	11.0
7	9.0	7.0	8.0	8.0	10.5	10.0	14.5	13.0	13.0	12.0	12.5	11.0
8	9.0	7.5	8.0	7.0	10.5	10.0	14.0	12.5	13.0	12.0	12.0	11.0
9	9.0	7.5	8.5	7.5	11.0	10.0	14.0	12.5	13.0	11.5	12.0	11.0
10	9.0	7.5	8.5	7.5	10.5	10.0	14.5	13.0	13.0	11.5	12.0	11.0
11	9.0	7.5	9.0	7.5	10.5	10.0	14.5	13.0	13.0	11.5	12.5	11.0
12	8.0	7.5	9.0	8.0	11.0	10.5	14.0	13.0	12.5	11.5	12.5	11.0
13	7.5	6.5	9.5	8.0	10.5	10.5	14.5	13.0	12.5	11.0	12.5	11.0
14	8.5	6.5	8.5	8.0	11.0	10.5	14.5	13.0	12.5	11.5	12.5	11.0
15	8.0	7.0	9.0	8.0	12.0	11.0	14.5	13.0	12.5	11.5	12.5	11.0
16	8.0	7.5	9.0	8.0	12.0	11.5	14.5	13.0	12.5	11.5	12.0	11.0
17	8.0	7.5	9.5	8.0	12.5	12.0	14.5	13.5	12.5	11.5	12.0	10.5
18	8.0	7.0	9.0	8.0	12.5	12.0	14.5	13.5	12.5	11.5	12.0	11.0
19	8.5	7.0	9.0	8.0	13.0	12.5	14.5	13.5	12.5	11.0	12.0	11.0
20	8.0	7.5	9.5	8.0	13.5	12.5	14.5	13.5	12.5	11.0	12.5	11.0
21	7.5	7.0	9.5	8.5	13.5	12.5	14.5	13.5	12.5	11.5	12.5	11.0
22	7.5	7.0	9.5	8.5	13.5	12.5	14.0	13.5	12.5	11.5	12.5	11.0
23	8.5	7.5	9.5	8.5	13.0	12.0	14.5	13.5	12.5	11.0	12.5	11.0
24	8.0	7.5	9.5	8.5	13.0	12.0	14.0	13.0	12.0	11.0	12.5	11.0
25	8.0	7.5	9.5	8.5	13.0	12.5	14.0	13.0	12.0	11.0	13.0	11.0
26	8.5	7.5	9.5	8.5	13.5	12.0	14.0	13.0	12.5	11.5	12.0	11.0
27	8.0	7.5	9.5	9.0	14.0	12.0	14.0	13.0	12.0	11.5	12.0	11.0
28	8.5	7.0	9.0	8.5	14.0	12.5	14.0	13.0	12.0	11.0	12.5	11.0
29	8.0	7.5	9.0	8.5	13.5	12.5	14.0	13.0	12.0	11.0	12.5	11.0
30	8.5	7.0	9.0	9.0	13.5	12.0	14.0	13.0	12.0	11.0	13.0	11.5
31	---	---	9.0	9.0	---	---	14.0	13.0	12.0	11.0	---	---
MONTH	9.0	6.5	9.5	7.0	14.0	9.0	15.0	11.5	14.0	11.0	13.0	10.5

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Depth at sample location, feet (81903)	Temperature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
AUG				
27...*	1405	.30	12.1	2.50
27...*	1407	.70	12.0	7.50
27...*	1409	.82	12.0	12.5
27...*	1411	.82	12.0	17.5
27...*	1413	1.25	11.9	22.5
27...*	1414	2.18	11.9	27.5
27...*	1415	.60	11.9	32.5
27...*	1417	2.38	11.9	37.5
27...*	1419	2.41	12.0	42.5
27...*	1421	1.70	12.0	47.5
SEP				
18...*	1415	.55	12.2	2.20
18...*	1416	1.29	12.2	6.60
18...*	1417	1.76	12.2	11.0
18...*	1418	1.24	12.1	15.4
18...*	1419	2.14	12.1	19.8
18...*	1420	2.00	12.1	24.2
18...*	1421	1.87	12.2	28.6
18...*	1423	2.11	12.2	33.0
18...*	1424	2.45	12.2	37.4
18...*	1425	.70	12.2	41.8

* Instantaneous discharge at time of cross-sectional measurement: Aug. 27, 126 ft^3/s; Sept. 18, 84 ft^3/s.

11276600 TUOLUMNE RIVER ABOVE EARLY INTAKE, NEAR MATHER, CA

LOCATION.—Lat 37° 52'46", long 119° 56'46", in SE 1/4 SW 1/4 sec.1, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on left bank, 0.5 mi upstream from Early Intake, 2.4 mi upstream from Cherry Creek, and 5.0 mi west of Mather.

DRAINAGE AREA.—484 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1970 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 2,420 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good. Flow regulated by Hetch Hetchy Reservoir (station 11275500) 12 mi upstream. Flow diverted upstream from station through tunnel to Robert C. Kirkwood Powerplant and Hetch Hetchy Aqueduct. See schematic diagram of Tuolumne River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 17,700 ft^3/s, Jan. 3, 1997, gage height, 22.98 ft; minimum daily, 25 ft^3/s, Oct. 11, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of June 1, 1943, reached a stage of 22.1 ft, discharge, 12,900 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	55	62	119	68	81	62	220	7460	181	118	114
2	75	55	53	101	71	79	94	243	6390	131	129	102
3	67	60	55	109	72	79	104	256	5600	125	125	104
4	66	61	58	104	71	71	112	373	6140	123	123	104
5	66	61	58	97	71	69	111	289	5580	123	122	103
6	69	61	58	92	71	65	106	258	4600	128	121	102
7	75	66	58	87	70	59	106	249	4160	115	123	102
8	75	124	58	84	70	58	107	293	4210	116	122	102
9	75	116	58	84	70	58	103	308	4160	127	120	103
10	70	79	58	112	70	57	98	278	3890	126	119	102
11	66	72	59	115	70	57	96	256	3030	125	118	102
12	63	69	59	96	70	58	95	239	2730	124	125	102
13	63	68	63	90	77	57	309	228	2320	123	125	102
14	63	67	74	85	81	57	403	222	1870	122	125	102
15	62	67	97	81	76	142	282	221	2120	121	125	100
16	63	66	169	77	91	117	297	217	2070	120	125	93
17	64	66	147	75	89	87	274	216	2050	119	125	88
18	62	66	110	76	82	78	283	216	1690	117	126	83
19	61	66	87	75	80	73	233	215	1370	117	130	82
20	61	66	86	74	78	71	220	215	1060	119	130	82
21	61	66	88	73	77	69	222	217	758	125	131	82
22	61	66	87	72	73	67	232	220	506	127	130	81
23	61	62	78	72	71	67	222	224	310	134	122	81
24	63	61	73	72	71	72	211	229	259	134	117	81
25	63	61	69	71	76	68	300	235	204	133	118	81
26	63	60	68	71	75	66	267	241	194	132	117	82
27	59	61	71	71	78	66	223	579	190	131	117	84
28	58	61	80	70	82	64	246	2670	189	131	116	84
29	56	61	113	69	---	62	250	3860	188	131	116	83
30	55	62	106	68	---	61	231	4610	188	129	116	83
31	55	---	146	68	---	60	---	6510	---	119	116	---
TOTAL	2005	2032	2506	2610	2101	2195	5899	24607	75486	3928	3792	2796
MEAN	64.7	67.7	80.8	84.2	75.0	70.8	197	794	2516	127	122	93.2
MAX	84	124	169	119	91	142	403	6510	7460	181	131	114
MIN	55	55	53	68	68	57	62	215	188	115	116	81
AC-FT	3980	4030	4970	5180	4170	4350	11700	48810	149700	7790	7520	5550

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2003, BY WATER YEAR (WY)

MEAN	54.1	75.2	109	184	146	158	268	1059	1748	836	173	85.6
MAX	142	552	801	2501	375	814	1564	3339	6142	5424	1319	132
(WY)	1987	1987	1997	1997	1998	1983	1983	1982	1983	1995	1983	1989
MIN	33.3	36.6	38.7	39.7	38.5	38.5	39.7	55.8	78.0	74.3	73.7	56.7
(WY)	1989	1991	1991	1977	1977	1977	1977	1992	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1971 - 2003	
ANNUAL TOTAL	50597		129957			
ANNUAL MEAN	139		356		408	
HIGHEST ANNUAL MEAN					1584	1983
LOWEST ANNUAL MEAN					53.5	1977
HIGHEST DAILY MEAN	997	Jun 15	7460	Jun 1	14500	Jan 3 1997
LOWEST DAILY MEAN	53	Dec 2	53	Dec 2	25	Oct 11 1988
ANNUAL SEVEN-DAY MINIMUM	56	Oct 27	56	Oct 27	27	Oct 11 1988
MAXIMUM PEAK FLOW			9390	Jun 2	17700	Jan 3 1997
MAXIMUM PEAK STAGE			21.00	Jun 2	22.98	Jan 3 1997
ANNUAL RUNOFF (AC-FT)	100400		257800		295900	
10 PERCENT EXCEEDS	194		285		952	
50 PERCENT EXCEEDS	109		96		85	
90 PERCENT EXCEEDS	62		61		42	

11276600 TUOLUMNE RIVER ABOVE EARLY INTAKE, NEAR MATHER, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1987 to current year.
WATER TEMPERATURE: Water years 1987 to current year.

PERIOD OF DAILY RECORD.—August 1987 to current year.
WATER TEMPERATURE: August 1987 to current year.

INSTRUMENTATION.—Water-temperature recorder since Aug. 12, 1987.

REMARKS.—Water-temperature records rated excellent except for May 26 to June 11, July 10–25, Aug. 25–29, which are rated good; and June 12 to July 9, which are rated fair. Temperature recorder located 600 ft upstream from gaging station on right bank. Water temperature is affected by regulation from O'Shaughnessy Dam.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum recorded, 25.5° C, June 1, 1992; minimum recorded, 0.0° C, Dec. 24, 25, 1990.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 23.0° C, July 21, 22; minimum recorded, 4.5° C, Dec. 19, 20, 23–25.

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.0	13.5	10.5	9.0	8.5	7.0	6.0	5.5	9.5	8.0	9.0	7.5
2	14.5	12.5	10.0	8.5	7.5	7.0	7.0	6.0	8.5	7.5	9.5	7.0
3	14.0	11.5	10.5	8.5	7.5	6.5	7.0	6.5	8.0	6.5	9.0	8.0
4	14.5	12.0	10.0	8.5	7.0	6.5	7.5	7.0	7.5	6.0	9.5	8.0
5	14.5	12.0	10.0	8.0	8.0	6.5	7.0	6.5	7.0	5.5	10.0	7.5
6	15.0	12.5	9.5	8.0	8.0	7.0	7.0	6.0	6.5	5.0	10.5	7.5
7	15.5	13.0	10.0	9.0	7.5	7.0	6.5	6.0	7.0	5.5	10.5	8.0
8	15.5	13.5	10.5	10.0	7.5	6.0	7.0	6.0	6.5	5.0	11.0	8.0
9	16.0	13.5	11.5	10.5	8.0	6.5	7.5	7.0	6.5	5.0	11.5	8.0
10	15.5	14.0	11.0	10.5	8.5	7.0	8.0	7.5	7.0	5.0	11.5	8.5
11	15.5	13.5	11.0	10.0	7.5	6.5	8.0	7.5	7.5	6.0	12.5	9.0
12	15.0	13.0	11.0	9.5	7.0	6.0	8.0	7.5	7.5	6.5	13.0	9.5
13	15.0	13.0	11.0	10.0	7.5	6.5	8.0	7.0	9.0	7.5	13.5	10.5
14	15.0	13.0	10.5	9.5	8.0	7.5	8.0	7.0	9.5	8.5	13.5	11.5
15	15.0	12.5	10.5	9.0	9.0	8.0	7.0	6.0	10.0	8.5	13.0	11.0
16	14.0	12.5	10.0	9.0	9.0	8.5	6.5	6.0	10.0	8.5	11.0	9.5
17	14.0	12.0	9.5	8.5	8.5	7.0	7.0	6.0	9.5	8.0	10.5	9.0
18	14.0	12.0	9.0	8.0	7.0	5.5	7.0	6.0	9.0	7.0	11.0	8.0
19	14.0	12.0	9.0	8.0	6.0	4.5	7.0	6.0	7.5	6.5	11.0	8.0
20	13.5	11.5	9.0	8.0	6.0	4.5	7.0	6.5	8.0	6.0	12.5	9.5
21	13.5	11.5	9.5	8.5	6.5	5.5	8.0	7.0	8.0	6.0	12.5	9.5
22	13.0	11.5	10.5	9.0	5.5	5.0	8.5	7.0	8.5	6.5	13.5	10.0
23	13.0	11.0	10.0	9.0	5.0	4.5	9.0	8.0	9.0	6.5	12.0	11.0
24	12.5	11.0	9.5	8.5	5.5	4.5	9.0	8.0	9.0	8.0	13.5	11.0
25	13.0	11.0	9.5	8.0	5.5	4.5	9.0	8.0	9.5	8.5	14.0	11.0
26	12.0	10.5	8.5	8.0	6.5	5.0	9.5	8.0	10.0	8.5	14.0	11.5
27	12.0	10.0	8.0	7.0	7.0	6.0	9.5	9.0	9.0	8.5	14.0	10.5
28	12.0	10.0	7.5	6.5	7.5	6.0	9.0	8.5	9.0	7.5	14.5	10.5
29	11.5	10.0	7.5	6.5	6.5	6.0	9.0	7.5	---	---	15.0	11.0
30	11.5	9.5	8.5	7.0	6.0	5.5	9.0	7.5	---	---	15.5	11.5
31	11.0	9.0	---	---	7.0	6.0	9.0	8.0	---	---	15.0	12.0
MONTH	16.0	9.0	11.5	6.5	9.0	4.5	9.5	5.5	10.0	5.0	15.5	7.0

11276600 TUOLUMNE RIVER ABOVE EARLY INTAKE, NEAR MATHER, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.5	11.5	11.5	9.5	11.5	10.5	19.5	16.5	19.5	18.0	19.5	16.5
2	11.5	9.0	11.0	10.5	12.0	10.5	20.5	16.0	19.0	17.5	20.0	16.5
3	11.0	8.5	11.0	10.0	12.0	10.5	21.0	16.5	20.5	16.5	20.5	17.5
4	9.0	7.5	11.5	10.0	12.5	10.5	21.5	17.0	21.0	17.0	21.0	18.0
5	10.0	7.5	12.5	10.0	12.5	11.0	21.5	17.5	20.0	17.5	20.5	18.0
6	10.5	7.5	12.5	10.5	12.5	11.0	22.0	17.5	20.0	17.0	20.5	17.5
7	12.5	8.5	11.0	10.5	13.0	11.0	22.0	17.5	20.5	17.0	19.5	17.5
8	13.5	9.5	10.5	9.0	13.0	11.5	22.0	18.0	20.5	17.0	19.0	16.5
9	14.5	10.5	10.0	8.0	13.5	11.5	22.0	18.0	20.5	17.0	17.5	16.0
10	14.5	11.5	11.5	8.5	13.0	11.5	22.0	18.0	20.5	17.0	18.0	15.0
11	13.0	12.0	13.5	10.0	13.5	11.5	22.0	18.0	20.5	17.0	18.5	15.5
12	12.5	11.5	14.5	11.0	13.5	11.5	22.0	18.5	20.0	17.0	18.5	15.5
13	11.5	8.5	15.5	12.0	13.5	11.5	22.5	18.5	20.0	16.5	19.0	16.0
14	9.0	7.5	13.5	12.5	14.5	11.5	22.5	18.0	20.0	16.5	19.5	16.5
15	9.5	8.0	14.5	11.5	14.5	12.0	22.0	18.5	20.0	16.5	19.0	16.5
16	9.5	9.0	14.5	12.0	15.0	12.5	22.5	18.5	20.0	16.5	18.5	16.0
17	9.5	9.0	15.0	12.0	15.5	13.0	22.5	19.0	20.0	16.0	18.0	15.5
18	10.5	8.5	15.5	12.0	15.0	13.0	22.5	19.5	20.0	16.5	18.0	15.0
19	11.5	8.5	16.0	12.5	15.5	13.0	22.0	19.5	20.0	16.5	18.0	15.0
20	11.0	9.5	16.0	13.0	15.5	13.5	22.5	19.0	20.0	16.5	18.0	15.5
21	10.5	9.0	17.0	13.0	16.0	14.0	23.0	19.5	19.5	17.0	18.5	15.5
22	9.5	8.5	17.0	13.5	16.0	14.5	23.0	19.5	19.5	17.0	18.5	15.5
23	11.0	8.0	17.0	14.0	17.5	15.0	22.0	20.0	19.5	16.0	18.5	16.0
24	11.0	9.5	17.0	14.0	18.0	15.0	22.5	19.0	19.5	16.0	18.5	16.0
25	10.0	9.0	16.5	14.0	18.5	15.0	22.5	18.5	19.5	16.0	18.0	15.5
26	10.5	8.5	16.5	13.5	19.5	16.0	22.5	18.5	19.5	16.5	18.5	15.5
27	11.5	9.5	16.5	12.0	20.0	16.5	22.5	19.0	19.5	16.5	17.5	15.5
28	11.5	9.5	12.0	10.5	20.5	17.0	22.0	19.0	19.5	16.5	17.5	15.0
29	10.5	9.5	11.5	10.0	20.5	17.0	22.0	19.0	19.0	16.0	17.5	15.0
30	11.5	9.0	11.5	10.0	20.0	17.0	21.5	19.0	19.0	16.0	17.5	15.0
31	---	---	11.5	10.0	---	---	20.5	18.5	19.0	16.0	---	---
MONTH	14.5	7.5	17.0	8.0	20.5	10.5	23.0	16.0	21.0	16.0	21.0	15.0

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	Depth at sample location, feet (81903)	Temperature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
AUG				
28...*	0935	.73	16.8	3.20
28...*	0937	.52	16.8	9.60
28...*	0939	.52	16.8	16.0
28...*	0941	1.78	16.8	22.4
28...*	0943	1.80	16.8	28.8
28...*	0945	1.85	16.8	35.2
28...*	0946	1.85	16.8	41.6
28...*	0947	1.46	16.8	48.0
28...*	0948	2.49	16.8	54.4
28...*	0949	.92	16.8	60.8
SEP				
19...*	1136	.63	16.6	3.00
19...*	1137	.91	16.6	9.10
19...*	1138	.55	16.7	15.2
19...*	1139	1.20	16.6	21.3
19...*	1140	1.61	16.6	27.4
19...*	1141	1.59	16.7	33.5
19...*	1143	1.71	16.7	39.6
19...*	1144	1.41	16.7	45.7
19...*	1145	2.19	16.7	51.8
19...*	1146	.83	16.7	57.9

* Instantaneous discharge at time of cross-sectional measurement: Aug. 28, 115 ft^3/s; Sept. 19, 82 ft^3/s.

11276900 TUOLUMNE RIVER BELOW EARLY INTAKE, NEAR MATHER, CA

LOCATION.—Lat 37° 52'54", long 119° 58'09", in NW 1/4 SW 1/4 sec.2, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on left bank, 0.6 mi upstream from Cherry Creek, 0.7 mi downstream from Robert C. Kirkwood Powerplant and Hetch Hetchy Aqueduct, and 6.3 mi west of Mather.

DRAINAGE AREA.—487 mi^2.

PERIOD OF RECORD.—October 1966 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 2,200 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good. Flow regulated by Hetch Hetchy Reservoir (station 11275500) 13 mi upstream and Robert C. Kirkwood Powerplant beginning Apr. 26, 1967. Water is diverted to Hetch Hetchy Aqueduct from the tailrace of the powerplant through a closed conduit. Flow in excess of aqueduct capacity is diverted to river. See schematic diagram of Tuolumne River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 18,200 ft^3/s, Jan. 3, 1997, gage height, 12.33 ft; minimum daily, 12 ft^3/s, Nov. 28–30, 1976.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	56	57	121	65	78	59	1030	7770	272	130	123
2	80	56	49	102	69	74	88	1070	6720	235	143	100
3	71	61	50	109	70	111	102	1090	6190	257	137	100
4	69	62	54	106	70	42	261	1190	6720	214	135	100
5	69	62	54	98	69	55	372	1120	6250	132	134	100
6	71	72	54	93	69	61	392	1100	5220	151	135	98
7	77	66	54	88	67	55	419	1090	4880	284	140	99
8	76	123	53	85	67	54	419	1070	4950	190	141	98
9	77	119	53	84	67	54	410	1100	4870	146	137	99
10	72	76	53	108	66	54	398	1110	4600	147	134	98
11	67	69	54	115	66	53	391	1100	3690	137	133	98
12	64	66	55	95	66	53	415	1090	3340	134	139	98
13	64	65	58	89	73	52	431	1080	2970	133	139	97
14	64	64	69	85	77	52	789	1080	2580	133	138	98
15	64	64	89	81	72	133	648	1080	2770	130	138	97
16	64	64	164	78	85	114	1120	947	2730	129	140	90
17	65	63	146	76	84	83	1110	1030	2710	128	141	83
18	62	63	111	75	76	74	1110	984	2430	126	142	79
19	62	62	90	75	75	69	1060	1050	2170	125	146	77
20	61	62	90	73	75	66	1050	1070	1890	128	144	78
21	61	62	92	72	73	64	1050	1080	1600	134	142	78
22	62	61	91	71	69	63	1060	1080	1390	136	142	77
23	61	58	82	71	68	64	1040	1090	1180	144	134	77
24	64	57	77	71	69	69	1030	1090	1070	145	128	77
25	64	57	73	70	75	65	1120	1110	873	144	129	77
26	64	56	71	69	71	64	1090	1120	871	143	129	78
27	61	57	73	69	73	63	1060	1390	838	142	128	81
28	60	57	82	68	79	60	1070	3310	812	142	127	81
29	57	57	116	67	---	59	1080	4510	635	142	127	80
30	57	57	109	66	---	58	1060	5230	624	141	126	81
31	56	---	145	65	---	56	---	7040	---	133	124	---
TOTAL	2055	1974	2468	2595	2005	2072	21704	49531	95343	4877	4202	2697
MEAN	66.3	65.8	79.6	83.7	71.6	66.8	723	1598	3178	157	136	89.9
MAX	89	123	164	121	85	133	1120	7040	7770	284	146	123
MIN	56	56	49	65	65	42	59	947	624	125	124	77
AC-FT	4080	3920	4900	5150	3980	4110	43050	98240	189100	9670	8330	5350

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

MEAN	81.2	102	155	277	299	368	505	1347	2017	954	230	119
MAX	247	313	1169	2917	1039	990	1694	3727	6260	5530	1726	370
(WY)	1984	1984	1997	1997	1996	1996	1983	1986	1983	1983	1983	1983
MIN	30.0	34.8	29.4	31.1	34.8	37.5	33.7	52.0	36.9	29.9	31.1	28.7
(WY)	1989	1988	1977	1977	1977	1977	1977	1992	1976	1976	1976	1976

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1968 - 2003	
ANNUAL TOTAL	112440		191523			
ANNUAL MEAN	308		525		538	
HIGHEST ANNUAL MEAN					1778	1983
LOWEST ANNUAL MEAN					49.2	1977
HIGHEST DAILY MEAN	1670	Jun 15	7770	Jun 1	14400	Jan 3 1997
LOWEST DAILY MEAN	49	Dec 2	42	Mar 4	12	Nov 28 1976
ANNUAL SEVEN-DAY MINIMUM	53	Dec 2	53	Dec 2	13	Nov 24 1976
MAXIMUM PEAK FLOW			8490	May 31	18200	Jan 3 1997
MAXIMUM PEAK STAGE			9.87	May 31	12.33	Jan 3 1997
ANNUAL RUNOFF (AC-FT)	223000		379900		389800	
10 PERCENT EXCEEDS	836		1110		1290	
50 PERCENT EXCEEDS	133		97		133	
90 PERCENT EXCEEDS	62		58		47	

11277100 LAKE ELEANOR DIVERSION TUNNEL TO CHERRY LAKE, NEAR HETCH HETCHY, CA

LOCATION.—Lat 37° 58'47", long 119° 52'51", in SW 1/4 SW 1/4 sec.34, T.2 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, on west side of Lake Eleanor, 0.5 mi northwest of Eleanor Dam, and 6.0 mi northwest of Hetch Hetchy.

PERIOD OF RECORD.—July 1996 to August 1996, October 1996 to September 1999, November 2000 to September 2001, October 2002 to September 2003.

GAGE.—Ultrasonic-velocity meter system. Elevation of gage is 4,670 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Instrumentation damaged by forest fire on Aug. 26, 1996. Flow is gravity flow or regulated by pump station at Cherry Lake (station 11277200). Diversion from Lake Eleanor (station 11277500) to Cherry Lake began in March 1960. See schematic diagram of Tuolumne River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 816 ft^3/s, Feb. 17, 2001; no flow at times each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.00	e0.00	310	138	184	117	352	329	240	e0.00	e0.00	e0.00
2	e0.00	e0.00	307	138	187	119	349	330	175	e0.00	e0.00	e0.00
3	e0.00	e0.00	306	138	187	118	348	329	123	e0.00	144	e0.00
4	e0.00	e0.00	303	140	187	118	334	331	e0.00	e0.00	e0.00	e0.00
5	e0.00	e0.00	299	141	180	121	352	332	e0.00	e0.00	e0.00	e0.00
6	e0.00	e0.00	296	142	280	122	346	333	e0.00	e0.00	e0.00	e0.00
7	e0.00	e0.00	293	e137	280	123	343	333	e0.00	134	e0.00	e0.00
8	e0.00	e0.00	290	e280	278	124	340	333	e0.00	e0.00	e0.00	e0.00
9	e0.00	402	287	e280	275	124	337	334	e0.00	e0.00	e0.00	e0.00
10	e0.00	396	287	e280	269	124	332	335	e0.00	e0.00	e0.00	e0.00
11	e0.00	394	204	e280	270	125	331	338	e0.00	e0.00	e0.00	e0.00
12	e0.00	388	280	e280	271	127	326	338	e0.00	e0.00	e0.00	e0.00
13	e0.00	385	281	e280	261	126	311	341	e0.00	e0.00	e0.00	e0.00
14	e0.00	383	278	e137	185	127	323	337	e0.00	e0.00	e0.00	e0.00
15	e0.00	379	275	e137	211	129	321	339	e0.00	e0.00	e0.00	e0.00
16	e0.00	376	271	140	214	132	320	342	e0.00	e0.00	106	e0.00
17	e0.00	372	267	e137	216	132	320	342	e0.00	e0.00	149	e0.00
18	e0.00	369	265	e137	219	134	320	341	e0.00	e0.00	e0.00	e0.00
19	e0.00	367	264	78	172	253	323	342	e0.00	e0.00	e0.00	e0.00
20	e0.00	363	261	80	116	312	322	335	e0.00	140	e0.00	e0.00
21	e0.00	358	265	79	117	308	322	327	148	e0.00	e0.00	e0.00
22	e0.00	355	261	81	117	304	322	323	226	e0.00	e0.00	e0.00
23	e0.00	352	250	78	117	298	323	320	224	e0.00	110	e0.00
24	e0.00	347	242	75	115	299	323	319	225	e0.00	152	e0.00
25	e0.00	330	238	73	116	298	325	311	224	e0.00	e0.00	e0.00
26	e0.00	322	163	72	116	294	326	303	223	e0.00	e0.00	e0.00
27	e0.00	332	e137	73	116	336	326	e0.00	221	145	e0.00	e0.00
28	e0.00	326	136	77	118	353	326	e0.00	218	e0.00	e0.00	e0.00
29	e0.00	319	136	e137	---	357	328	166	214	e0.00	e0.00	e0.00
30	e0.00	314	136	185	---	365	329	264	97	e0.00	e0.00	e0.00
31	e0.00	---	137	184	---	358	---	250	---	e0.00	e0.00	---
TOTAL	0.00	7929.00	7725	4614	5374	6377	9900	9297.00	2558.00	419.00	661.00	0.00
MEAN	0.000	264	249	149	192	206	330	300	85.3	13.5	21.3	0.000
MAX	0.00	402	310	280	280	365	352	342	240	145	152	0.00
MIN	0.00	0.00	136	72	115	117	311	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	15730	15320	9150	10660	12650	19640	18440	5070	831	1310	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

MEAN	26.6	105	183	85.3	175	277	400	371	125	63.0	28.8	4.25
MAX	160	264	348	333	308	434	504	550	224	179	123	21.2
(WY)	1999	2003	2002	2002	1998	1998	1998	1998	1998	1999	1998	2001
MIN	0.000	0.000	0.000	0.000	0.000	0.000	330	300	35.7	0.000	0.000	0.000
(WY)	1997	1997	2000	1997	1997	2000	2003	2003	2001	2001	1997	1997

SUMMARY STATISTICS	FOR 2003 WATER YEAR		WATER YEARS 1996 - 2003	
ANNUAL TOTAL	54854.00			
ANNUAL MEAN	150		171	
HIGHEST ANNUAL MEAN			221	1998
LOWEST ANNUAL MEAN			121	1997
HIGHEST DAILY MEAN	402	Nov 9	816	Feb 17 2001
LOWEST DAILY MEAN	0.00	Oct 1	0.00	Oct 1 1996
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 1	0.00	Oct 1 1996
ANNUAL RUNOFF (AC-FT)	108800		123600	
10 PERCENT EXCEEDS	337		413	
50 PERCENT EXCEEDS	134		136	
90 PERCENT EXCEEDS	0.00		0.00	

e Estimated.

11277200 CHERRY LAKE NEAR HETCH HETCHY, CA

LOCATION.—Lat 37° 58'33", long 119° 54'47", in SE 1/4 NW 1/4 sec.5, T.1 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on upstream face of Cherry Valley Dam on Cherry Creek, 4.2 mi upstream from Eleanor Creek, 7 mi north of Early Intake, and 7.3 mi northwest of Hetch Hetchy.

DRAINAGE AREA.—117 mi^2.

PERIOD OF RECORD.—August 1956 to current year. Prior to October 1959, published as "Lake Lloyd near Hetch Hetchy."

GAGE.—Water-stage recorder. Datum of gage is 2.42 ft above NGVD of 1929. Prior to October 1974, datum published as at mean sea level.

REMARKS.—Reservoir is formed by a rockfill dam completed in 1956. Storage began in December 1955. Capacity, 274,300 acre-ft, between gage heights 4,430 ft, bottom of sluice gates, and 4,703 ft, top of flashboard gates on concrete spillway. No dead storage. Installation of flashboard gates on top of concrete spillway completed in 1979. Water is released down Cherry Creek for power development and domestic supply as part of Hetch Hetchy system of city and county of San Francisco. Unmeasured diversion from Lake Eleanor (station 11277500) into Cherry Lake began Mar. 6, 1960. Diversion from Cherry Lake through tunnel to Dion R. Holm Powerplant near mouth of Cherry Creek began Aug. 1, 1960. Records, including extremes, represent contents at 2400 hours. See schematic diagram of Tuolumne River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 274,300 acre-ft, June 25–28, 1986, gage height, 4,703.0 ft; minimum since reservoir first filled, 7,660 acre-ft, Jan. 24, 1960, gage height, 4,502.1 ft. Reservoir drained for inspection in 1961, 1964, and 1989.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 274,000 acre-ft, June 8, 9, 12, maximum gage height, 4,702.88 ft, June 12; minimum, 172,800 acre-ft, Mar. 13, gage height, 4,641.93 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table provided by San Francisco Public Utilities Commission, dated May 15, 1971)

4,440	0	4,490	3,020	4,560	60,800	4,660	201,100
4,450	75	4,500	6,030	4,580	85,100	4,680	234,100
4,460	250	4,510	11,700	4,600	111,800	4,700	268,800
4,470	675	4,520	19,700	4,620	139,900	4,705	277,900
4,480	1,530	4,540	38,900	4,640	169,700		

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	218300	203500	214200	211400	191500	180400	190200	203300	262900	273300	e263500	251200
2	217600	202900	213800	210900	191500	180300	191300	203100	267300	273100	e263700	250500
3	217000	202400	213200	210500	191000	179500	191800	203300	270100	273000	e264100	249600
4	216300	201600	213300	210400	190400	178500	193000	203300	271600	273000	e263900	248800
5	215900	200800	213100	210500	189900	177600	194400	203100	272100	272800	e263400	248400
6	215500	199800	213000	209900	189700	176600	195600	203000	273700	272600	e262800	248100
7	214800	199600	213000	209500	189400	175600	196600	202900	273800	272700	e262100	247700
8	214100	207200	213200	e209400	189500	174900	197900	202800	273800	272400	e261400	247100
9	213300	209800	213000	e209000	189700	174500	198900	202500	273700	271800	e261200	246000
10	212600	211000	212700	e208500	189400	173600	200000	202200	273500	271300	e261100	245100
11	212000	211600	212200	e208000	189000	173000	201100	202200	273800	270700	e260700	244100
12	211700	211500	211900	e207400	188300	172800	202800	202800	273500	270400	e261100	243100
13	211400	211500	212100	e206800	188100	173100	205400	204100	273400	270800	259500	242300
14	210900	211700	212800	e206300	187300	173300	206300	206100	273600	270500	258800	242300
15	210500	211900	213500	e205600	186800	175300	207100	208000	273700	e269900	258200	241200
16	210100	212100	214100	204600	186900	175600	206800	210000	273700	e269200	258100	240200
17	209800	212400	214300	203900	186400	175300	206500	212000	273800	e268800	258400	239200
18	209400	212200	214200	203000	185600	175100	206200	214100	273700	e268100	257800	238200
19	209200	212000	214400	202200	184700	175100	205900	216200	273500	e267600	257200	237200
20	209100	212000	214400	201200	183600	175600	205600	218700	273100	e267800	256500	237100
21	208600	212100	214300	200200	182600	176100	205400	221800	272900	e267600	255900	237000
22	208300	212200	214300	199300	182100	177000	205000	225400	272900	e267000	255300	236100
23	207900	212300	213900	198300	181900	178600	204600	229300	272700	e266400	255200	235100
24	207500	212800	213400	197500	181600	179300	204800	233500	272500	e265800	255400	234100
25	206900	212700	213400	196600	181300	180100	204800	237300	272300	e265300	254900	233100
26	206600	212900	213000	196200	181000	181800	204700	240500	272100	e265000	254300	232100
27	206200	213100	212600	195400	180700	183100	204400	244100	272100	e265300	253600	232000
28	205600	213600	212400	194400	180400	184000	204300	248100	272500	e265000	253000	232000
29	205500	213700	212300	193400	---	185400	204200	252700	273400	e264600	252300	231000
30	205000	214000	211800	192500	---	187200	203700	257500	273400	e264400	251900	230000
31	204400	---	211400	191900	---	188700	---	261200	---	e263700	251500	---
MAX	218300	214000	214400	211400	191500	188700	207100	261200	273800	273300	264100	251200
MIN	204400	199600	211400	191900	180400	172800	190200	202200	262900	263700	251500	230000
a	4662.04	4667.90	4666.35	4654.23	4646.92	4652.23	4661.62	4695.67	4702.51	---	4690.15	4677.53
b	-14600	+9600	-2600	-19500	-11500	+8300	+15000	+57500	+12200	-9700	-12200	-21500

CAL YR 2002 b -6900
WTR YR 2003 b +11000

e Estimated.
a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.

11277300 CHERRY CREEK BELOW CHERRY VALLEY DAM, NEAR HETCH HETCHY, CA

LOCATION.—Lat 37° 58'04", long 119° 54'59", in SE 1/4 SW 1/4 sec.5, T.1 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on right bank, 0.7 mi downstream from Cherry Valley Dam, 3.5 mi upstream from Eleanor Creek, 6.7 mi north of Early Intake, and 7.2 mi west of Hetch Hetchy.

DRAINAGE AREA.—118 mi^2.

PERIOD OF RECORD.—November 1956 to current year.

GAGE.—Water-stage recorder. Datum of gage is 4,337.08 ft above NGVD of 1929 (levels by city and county of San Francisco).

REMARKS.—Records good except for estimated daily discharges, which are fair. Flow regulated by Cherry Lake (station 11277200) 0.7 mi upstream. Diversion between Lake Eleanor (station 11277500) and Cherry Lake began Mar. 6, 1960. Diversion from Cherry Lake to Dion R. Holm Powerplant began Aug. 1, 1960. See schematic diagram of Tuolumne River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,120 ft^3/s, May 16, 1996, from rating curve extended above 4,000 ft^3/s, gage height, 11.15 ft; minimum daily, 0.77 ft^3/s, Dec. 1–4, 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	5.3	5.5	6.7	6.9	5.4	5.8	7.2	6.0	e11	e11	16
2	4.1	5.3	5.5	6.7	6.3	5.2	5.8	7.2	5.9	e7.2	e12	16
3	4.9	5.1	5.5	6.8	5.8	5.2	5.9	7.6	5.8	e6.6	e12	16
4	4.9	5.2	5.5	6.8	5.8	5.2	6.1	8.7	7.4	e9.5	e12	16
5	4.9	5.5	5.4	6.8	5.8	5.2	6.1	7.7	666	e14	e12	16
6	4.9	5.5	5.3	6.9	5.7	5.2	6.2	7.6	1040	e13	e12	16
7	4.9	6.4	5.4	6.9	5.7	5.1	6.2	7.5	637	e15	e12	16
8	4.9	12	5.3	6.9	5.6	5.0	6.4	7.8	769	e17	e12	16
9	4.9	8.2	5.3	7.2	5.6	4.9	6.3	7.8	889	e17	e12	16
10	4.9	6.1	5.3	8.2	5.5	4.9	6.1	7.6	791	e17	e12	16
11	4.9	5.8	5.3	8.1	5.5	4.9	6.1	7.3	301	e15	e12	15
12	5.0	5.6	5.3	7.9	5.5	4.9	6.3	7.2	470	e12	e12	15
13	5.0	5.5	5.8	7.7	6.0	4.9	9.0	6.9	268	e13	12	14
14	5.0	5.5	6.2	7.6	5.8	5.0	8.9	6.9	105	e12	12	14
15	5.0	5.5	6.6	7.6	5.7	6.8	8.2	6.8	135	e12	12	14
16	5.0	5.5	8.8	7.6	6.1	5.7	7.7	6.7	254	e12	12	14
17	5.0	5.5	7.6	7.6	5.8	5.5	7.6	6.5	195	e12	12	14
18	5.1	5.5	6.7	7.6	5.8	5.5	6.9	6.2	163	e12	12	14
19	5.0	5.5	6.6	7.6	5.8	5.5	7.2	6.2	73	e12	15	14
20	5.1	5.4	6.3	7.5	5.7	5.4	7.0	6.2	13	e12	17	14
21	5.1	5.4	6.2	7.4	5.6	5.4	7.1	6.0	e6.6	e12	17	14
22	5.1	5.4	6.2	7.4	5.5	5.4	7.0	5.8	e6.5	e12	17	14
23	5.1	5.3	6.3	7.5	5.5	5.5	6.8	5.8	e6.4	e12	16	14
24	5.2	5.4	6.5	7.5	5.6	5.1	7.1	5.8	e5.9	e12	16	14
25	5.2	5.5	6.5	7.4	5.6	5.1	7.6	5.9	e5.8	e12	16	14
26	5.2	5.5	6.4	7.3	5.5	5.4	7.6	6.1	e6.2	e12	16	13
27	5.2	5.5	6.4	7.2	5.5	5.4	7.2	6.2	e6.2	e12	16	13
28	5.2	5.5	6.6	7.2	5.5	5.3	7.3	6.5	e6.5	e12	16	13
29	5.3	5.5	6.6	7.2	---	5.3	7.2	6.5	e7.0	e12	16	13
30	5.3	5.5	6.5	7.1	---	5.3	7.2	6.5	e46	e12	16	9.9
31	5.3	---	6.9	7.0	---	5.5	---	6.3	---	e12	16	---
TOTAL	158.4	174.4	190.3	226.9	160.7	164.1	207.9	211.0	6897.2	383.3	425	433.9
MEAN	5.11	5.81	6.14	7.32	5.74	5.29	6.93	6.81	230	12.4	13.7	14.5
MAX	7.8	12	8.8	8.2	6.9	6.8	9.0	8.7	1040	17	17	16
MIN	4.1	5.1	5.3	6.7	5.5	4.9	5.8	5.8	5.8	6.6	11	9.9
AC-FT	314	346	377	450	319	325	412	419	13680	760	843	861

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

MEAN	9.64	11.7	10.9	19.2	11.6	14.7	13.4	36.4	129	97.6	26.9	21.3
MAX	166	135	155	352	134	171	167	359	1198	993	176	139
(WY)	1978	1977	1977	1997	1977	1969	1969	1978	1983	1983	1977	1977
MIN	3.19	3.99	4.82	4.71	4.51	4.45	4.58	4.40	4.46	10.9	12.0	10.6
(WY)	1999	1970	1970	1961	1961	1972	1990	1973	1973	1978	1961	1976

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1961 - 2003	
ANNUAL TOTAL	4548.9		9633.1			
ANNUAL MEAN	12.5		26.4		33.6	
HIGHEST ANNUAL MEAN					195	1983
LOWEST ANNUAL MEAN					7.08	1961
HIGHEST DAILY MEAN	435	Jun 5	1040	Jun 6	2830	Jul 7 1995
LOWEST DAILY MEAN	4.1	Oct 2	4.1	Oct 2	0.77	Dec 1 1988
ANNUAL SEVEN-DAY MINIMUM	4.8	Oct 2	4.8	Oct 2	0.79	Nov 28 1988
MAXIMUM PEAK FLOW			1490	Jun 6	5120	May 16 1996
MAXIMUM PEAK STAGE			8.14	Jun 6	11.15	May 16 1996
ANNUAL RUNOFF (AC-FT)	9020		19110		24340	
10 PERCENT EXCEEDS	15		16		17	
50 PERCENT EXCEEDS	5.8		6.7		7.3	
90 PERCENT EXCEEDS	5.1		5.2		5.0	

e Estimated.

11277500 LAKE ELEANOR NEAR HETCH HETCHY, CA

LOCATION.—Lat 37° 58'27", long 119° 52'48", in SE 1/4 NW 1/4 sec.3, T.1 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, 710 ft from left bank on upstream side of dam on Eleanor Creek, 1.7 mi upstream from Miguel Creek, and 5.5 mi northwest of Hetch Hetchy.

DRAINAGE AREA.—78.1 mi^2.

PERIOD OF RECORD.—June 1918 to current year. Prior to October 1930, published in WSP 1315-A. Published as "near Sequoia" 1919–20.

REVISED RECORDS.—WSP 1445: 1938(M). WSP 1930: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 2.39 ft above NGVD of 1929. Prior to Oct. 1, 1927, nonrecording gage on upstream side of dam at same site and datum.

REMARKS.—Reservoir is formed by multiple-arch dam completed in 1918; storage began June 23, 1918. Capacity, 26,110 acre-ft, between gage heights 4,620.9 ft, natural outlet of old lake, and 4,660.0 ft, top of 5-ft flashboards. Records, including extremes, represent usable contents at 2400 hours. See schematic diagram of Tuolumne River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 31,000 acre-ft, Dec. 11, 1937, from capacity table then in use, gage height, 4,663.4 ft, maximum gage height, 4,663.87 ft, Jan. 1, 1997; no usable contents at times in many years.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 27,400 acre-ft, June 17, 21, maximum gage height, 4,661.34 ft, June 21; minimum, 2,740 acre-ft, Jan. 16, 17, gage height, 4,630.52 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table provided by San Francisco Public Utilities Commission, dated May 1941)

4,608	0	4,620	36	4,628	1,480	4,646	13,500
4,610	6	4,622	49	4,630	2,450	4,650	17,000
4,612	12	4,624	92	4,632	3,580	4,655	21,500
4,614	18	4,625	211	4,635	5,270	4,660	26,100
4,616	24	4,626	550	4,638	7,330	4,663	29,100
4,618	27	4,627	996	4,642	10,300		

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22100	21200	12600	3230	6570	3460	8000	9490	25600	25600	23500	20800
2	22100	21200	12100	3230	6660	3420	8080	9450	25700	25700	23400	20700
3	22000	21200	11500	3320	6640	3370	8380	9670	25800	25700	23100	20700
4	22000	21100	11000	3410	6540	3340	8290	10000	25800	25600	23000	20600
5	22000	21100	10400	3500	6410	3300	8080	10100	25800	25700	23000	20600
6	21900	21100	9800	3610	6060	3240	7840	10300	25700	25600	23000	20500
7	21900	21200	9220	3520	5640	3210	7630	10400	25700	25400	23000	20500
8	21900	25500	8640	3370	5220	3200	7610	10500	25600	25300	23000	20400
9	21800	26000	8130	3280	4830	3220	7740	10400	25600	25300	23000	20400
10	21800	25200	7610	3340	4440	3270	7910	10300	25800	25300	22900	20300
11	21800	24600	7220	3240	4020	3390	8080	10400	26300	25300	22900	20300
12	21700	24100	6660	3100	3610	3640	8400	10800	26900	25200	22900	20200
13	21700	23600	6250	2970	3520	4010	9240	11700	27000	25000	22800	20200
14	21700	23000	6140	2840	3590	4560	9560	12800	27000	24900	22800	e20200
15	21600	22400	5960	2780	3530	6310	9670	14000	27200	24800	22800	e20100
16	21600	21800	5990	2740	3520	6930	9650	15200	27300	24800	22500	e20000
17	21600	21100	5880	2770	3410	7220	9630	16300	27300	24800	22200	e20000
18	21600	20500	5660	3040	3210	7400	9530	17400	27300	24800	22000	e20000
19	21500	19900	5450	3310	3140	7250	9470	18500	27200	24600	22000	20000
20	21500	19200	5200	3580	3150	7020	9460	19700	27300	24300	22000	19900
21	21500	18600	4980	3810	3150	6800	9470	21200	27300	24200	21900	19900
22	21400	18000	4700	4010	3150	6690	9340	22800	27100	24200	21900	19900
23	21400	17400	4400	4280	3170	6880	9200	24500	26900	24200	21600	19800
24	21400	16800	4070	4580	3230	7040	9450	25700	26700	24100	21300	19800
25	21400	16300	3730	4870	3330	7100	9760	25900	26400	24100	21100	19800
26	21300	15700	3390	5170	3400	7540	9820	25800	26200	23900	21100	19700
27	21300	15000	3240	5570	3460	7870	9800	26100	25900	23600	21000	19700
28	21300	14500	3240	5940	3470	7880	9880	26300	25700	23500	21000	19700
29	21300	13900	3260	6160	---	7770	9840	26000	25400	23500	20900	19700
30	21200	13200	3240	6200	---	7750	9660	25800	25500	23500	20900	19700
31	21200	---	3270	6360	---	7870	---	25500	---	23500	20800	---
MAX	22100	26000	12600	6360	6660	7880	9880	26300	27300	25700	23500	20800
MIN	21200	13200	3240	2740	3140	3200	7610	9450	25400	23500	20800	19700
a	4654.68	4645.65	4631.45	4636.59	4631.82	4638.79	4641.20	4659.33	4659.26	4657.16	4654.27	4652.96
b	-1000	-8000	-9930	+3090	-2890	+4400	+1790	+15840	0	-2000	-2700	-1100

CAL YR 2002 b -10730
WTR YR 2003 b -2500

e Estimated.
a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.

11278000 ELEANOR CREEK NEAR HETCH HETCHY, CA

LOCATION.—Lat 37° 58'09", long 119° 52'52", in NW 1/4 SW 1/4 sec.3, T.1 N., R.19 E., Tuolumne County, Hydrologic Unit 18040009, Yosemite National Park, on right bank, 0.5 mi downstream from Lake Eleanor Dam, 1.1 mi upstream from Miguel Creek, and 5.5 mi northwest of Hetch Hetchy.

DRAINAGE AREA.—78.4 mi^2.

PERIOD OF RECORD.—October 1909 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "near Sequoia" 1910–18.

REVISED RECORDS.—WSP 1315-A: 1923(M). WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 4,500 ft above NGVD of 1929, from topographic map. November 1909 to November 1915, nonrecording gage and water-stage recorder at site 1 mi upstream at different datum. Prior to Jan. 2, 1997, datum of gage 10 ft lower.

REMARKS.—Records fair. Flow regulated by Lake Eleanor (station 11277500) 0.5 mi upstream beginning in 1918. Since March 1960, water is diverted at Lake Eleanor via Lake Eleanor diversion tunnel (station 11277100) to Cherry Lake (station 11277200). See schematic diagram of Tuolumne River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 19,500 ft^3/s, Jan. 2, 1997, gage height, 26.74 ft, from rating curve extended above 2,600 ft^3/s, on basis of slope-area measurements at gage heights 9.94 and 12.24 ft, datum then in use; no flow at times in 1910, 1930–31, 1933, 1956.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	7.2	4.6	4.3	4.8	7.1	9.8	22	657	25	18	22
2	13	5.4	4.5	4.4	4.9	8.2	10	22	655	25	19	22
3	13	5.8	4.4	4.8	4.8	8.1	10	23	769	25	18	22
4	13	5.9	4.4	4.8	4.8	8.2	10	24	789	25	18	22
5	13	5.9	4.5	4.7	4.8	8.1	10	23	816	25	18	22
6	13	5.8	4.4	4.6	4.7	8.1	10	22	775	25	18	22
7	13	6.3	4.3	4.5	4.6	8.3	10	22	720	25	18	22
8	13	44	4.3	4.4	4.6	8.4	9.9	23	664	25	18	22
9	13	1390	4.2	4.6	4.5	8.4	9.9	23	665	25	18	22
10	13	509	4.2	6.4	4.5	8.4	9.7	23	497	25	18	22
11	13	149	4.1	4.9	4.4	8.4	9.5	22	170	25	18	22
12	13	94	4.0	4.5	4.4	8.4	9.7	22	101	25	18	22
13	13	65	4.5	4.3	4.6	8.6	14	23	321	25	18	22
14	13	40	5.2	4.1	4.4	8.8	13	23	332	25	18	22
15	13	23	5.6	4.0	4.3	12	16	23	285	25	19	15
16	13	9.3	9.5	3.9	4.7	9.9	19	24	290	25	19	11
17	12	5.4	6.0	3.9	4.5	9.6	21	24	368	25	19	11
18	12	5.3	5.0	3.9	4.4	9.6	23	24	362	25	19	11
19	13	5.2	4.8	3.9	4.4	9.5	22	24	348	25	19	11
20	13	5.2	4.6	3.8	4.3	9.4	22	24	202	25	19	11
21	13	5.1	4.5	3.9	4.3	9.4	22	24	60	25	19	11
22	12	5.0	4.4	3.9	4.3	9.4	22	27	34	24	20	11
23	12	5.0	4.3	3.9	4.3	9.4	22	78	28	24	21	11
24	13	4.8	4.2	3.9	4.3	9.4	22	317	27	21	22	11
25	13	4.9	4.1	3.9	4.3	9.4	23	888	26	19	22	11
26	11	5.0	4.0	3.9	4.2	9.6	23	881	26	19	22	11
27	10	4.9	4.2	3.9	4.3	9.6	22	918	26	19	22	11
28	10	4.8	4.5	4.4	4.2	11	23	1240	26	19	22	11
29	10	4.8	4.5	4.9	---	10	22	1370	25	19	22	11
30	11	4.7	4.3	4.9	---	9.8	22	1120	25	19	22	8.3
31	11	---	4.7	4.8	---	9.7	---	926	---	19	22	---
TOTAL	384	2435.7	144.8	135.0	125.6	282.2	491.5	8249	10089	727	603	485.3
MEAN	12.4	81.2	4.67	4.35	4.49	9.10	16.4	266	336	23.5	19.5	16.2
MAX	13	1390	9.5	6.4	4.9	12	23	1370	816	25	22	22
MIN	10	4.7	4.0	3.8	4.2	7.1	9.5	22	25	19	18	8.3
AC-FT	762	4830	287	268	249	560	975	16360	20010	1440	1200	963

11278000 ELEANOR CREEK NEAR HETCH HETCHY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 1917, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	25.2	62.5	97.2	208	175	320	610	742	640	190	25.7	8.81
MAX	157	287	358	485	307	516	806	945	1207	484	65.4	25.8
(WY)	1917	1910	1910	1914	1911	1916	1916	1914	1911	1911	1911	1913
MIN	.081	.19	12.4	33.6	66.6	116	264	536	230	36.5	6.06	2.10
(WY)	1916	1916	1912	1913	1912	1912	1912	1913	1910	1910	1910	1915

SUMMARY STATISTICS	WATER YEARS 1910 - 1917	
ANNUAL MEAN	259	
HIGHEST ANNUAL MEAN	386	1911
LOWEST ANNUAL MEAN	144	1913
HIGHEST DAILY MEAN	5000	Jan 30 1911
LOWEST DAILY MEAN	.00	Sep 8 1910
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 8 1910
ANNUAL RUNOFF (AC-FT)	187300	
10 PERCENT EXCEEDS	770	
50 PERCENT EXCEEDS	109	
90 PERCENT EXCEEDS	5.0	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 1959, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	76.0	75.5	105	94.5	134	224	460	696	409	144	98.9	103
MAX	145	931	826	490	454	708	794	1330	981	471	204	179
(WY)	1929	1951	1951	1956	1945	1928	1936	1952	1922	1958	1958	1933
MIN	3.68	1.65	1.74	2.50	6.64	1.70	44.5	138	46.0	20.7	16.4	4.16
(WY)	1932	1928	1932	1957	1930	1920	1924	1931	1924	1959	1959	1931

SUMMARY STATISTICS	WATER YEARS 1920 - 1959	
ANNUAL MEAN	218	
HIGHEST ANNUAL MEAN	356	1938
LOWEST ANNUAL MEAN	86.2	1924
HIGHEST DAILY MEAN	8270	Nov 19 1950
LOWEST DAILY MEAN	.00	Oct 15 1930
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 15 1930
MAXIMUM PEAK FLOW	11700	Nov 19 1950
MAXIMUM PEAK STAGE	14.95	Nov 19 1950
ANNUAL RUNOFF (AC-FT)	158200	
10 PERCENT EXCEEDS	584	
50 PERCENT EXCEEDS	113	
90 PERCENT EXCEEDS	8.5	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	17.4	37.0	30.8	69.1	57.5	25.2	90.0	293	334	110	25.3	25.1
MAX	333	565	314	1416	586	198	916	1029	1605	677	176	137
(WY)	1983	1984	1984	1997	1986	1986	1982	1995	1983	1983	1983	1982
MIN	0.15	2.55	4.30	4.27	3.76	4.15	4.44	4.81	4.72	12.0	2.43	0.40
(WY)	1967	1978	1964	1978	1974	1972	1973	1972	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1961 - 2003	
ANNUAL TOTAL	14437.8		24152.1			
ANNUAL MEAN	39.6		66.2		92.8	
HIGHEST ANNUAL MEAN					320	1983
LOWEST ANNUAL MEAN					4.73	1977
HIGHEST DAILY MEAN	1390	Nov 9	1390	Nov 9	15100	Jan 2 1997
LOWEST DAILY MEAN	4.0	Dec 12	3.8	Jan 20	0.10	Oct 9 1966
ANNUAL SEVEN-DAY MINIMUM	4.2	Dec 6	3.9	Jan 16	0.10	Oct 24 1966
MAXIMUM PEAK FLOW			1900	Nov 9	19500	Jan 2 1997
MAXIMUM PEAK STAGE			14.75	Nov 9	26.74	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	28640		47910		67230	
10 PERCENT EXCEEDS	64		42		275	
50 PERCENT EXCEEDS	13		13		8.4	
90 PERCENT EXCEEDS	4.7		4.3		4.6	

11278300 CHERRY CREEK NEAR EARLY INTAKE, CA

LOCATION.—Lat 37° 53'40", long 119° 57'42", in NW 1/4 SE 1/4 sec.35, T.1 N., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on right bank, 1.2 mi upstream from mouth, 1.3 mi north of Early Intake, and 10.3 mi southwest of Hetch Hetchy.

DRAINAGE AREA.—226 mi^2.

PERIOD OF RECORD.—May 1956 to current year.

GAGE.—Water-stage recorder. Datum of gage is 2,272.00 ft above NGVD of 1929 (levels by city and county of San Francisco).

REMARKS.—Records good. Flow regulated by Cherry Lake (station 11277200) 10 mi upstream and Lake Eleanor (station 11277500) 9.8 mi upstream. Diversion from Cherry Lake to Dion R. Holm Powerplant began Aug. 1, 1960. Water is returned to creek 1.2 mi below station. See schematic diagram of Tuolumne River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 33,200 ft^3/s, Jan. 2, 1997, gage height, 18.46 ft, from rating curve extended above 4,600 ft^3/s; minimum daily, 0.30 ft^3/s, Apr. 5, 6, 1964.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	16	13	41	41	37	39	102	645	55	39	43
2	19	12	13	38	41	38	50	97	593	45	43	42
3	17	11	13	43	37	37	51	111	696	44	39	43
4	18	11	13	48	35	38	55	200	729	44	38	42
5	18	12	13	49	34	37	53	137	1290	52	37	42
6	18	12	13	49	33	36	55	113	1790	51	37	42
7	18	15	13	49	32	34	57	106	1320	50	37	42
8	18	69	13	51	31	34	69	134	1370	52	37	42
9	18	1310	13	52	30	33	73	132	1510	53	36	42
10	18	527	13	81	30	32	67	129	1300	52	36	42
11	18	159	13	81	30	32	58	116	595	53	36	42
12	18	98	12	63	29	31	56	103	508	48	35	42
13	18	77	16	58	38	31	179	96	599	47	35	42
14	18	58	29	55	42	31	182	92	452	47	35	42
15	18	41	41	51	38	90	139	91	408	47	34	41
16	17	26	66	49	44	78	127	86	552	46	36	30
17	18	17	63	48	46	56	131	83	540	46	36	29
18	17	14	38	50	40	50	145	80	527	46	36	29
19	18	14	31	50	39	46	125	78	428	46	36	29
20	18	14	32	49	37	44	115	76	275	46	39	29
21	18	14	32	47	35	42	113	74	81	45	40	28
22	17	14	29	46	33	41	113	72	66	45	40	28
23	18	14	27	47	33	42	110	101	53	44	41	28
24	18	14	26	49	32	46	108	258	51	44	42	28
25	18	14	25	47	36	43	158	814	49	38	43	28
26	18	13	25	46	38	42	150	845	47	37	43	28
27	16	13	27	46	39	44	119	859	46	37	43	28
28	15	13	32	46	38	41	121	1240	46	37	43	28
29	15	13	45	43	---	40	127	1400	45	37	43	28
30	15	13	38	42	---	38	115	1140	70	37	43	28
31	16	---	47	41	---	37	---	917	---	39	43	---
TOTAL	553	2648	824	1555	1011	1301	3060	9882	16681	1410	1201	1057
MEAN	17.8	88.3	26.6	50.2	36.1	42.0	102	319	556	45.5	38.7	35.2
MAX	29	1310	66	81	46	90	182	1400	1790	55	43	43
MIN	15	11	12	38	29	31	39	72	45	37	34	28
AC-FT	1100	5250	1630	3080	2010	2580	6070	19600	33090	2800	2380	2100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

MEAN	23.9	51.2	59.6	149	139	115	163	353	466	201	41.6	38.5
MAX	341	610	390	2566	922	399	1298	1342	2845	1699	229	164
(WY)	1983	1984	1965	1997	1986	1983	1982	1982	1983	1983	1983	1978
MIN	2.95	4.85	3.07	3.27	2.70	2.71	2.12	2.16	2.88	9.55	10.3	11.0
(WY)	1961	1961	1977	1977	1977	1977	1977	1977	1977	1977	1963	1962

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1961 - 2003	
ANNUAL TOTAL	26804		41183			
ANNUAL MEAN	73.4		113		150	
HIGHEST ANNUAL MEAN					634	1983
LOWEST ANNUAL MEAN					8.08	1977
HIGHEST DAILY MEAN	1310	Nov 9	1790	Jun 6	25200	Jan 2 1997
LOWEST DAILY MEAN	11	Nov 3	11	Nov 3	0.30	Apr 5 1964
ANNUAL SEVEN-DAY MINIMUM	13	Nov 1	13	Nov 1	1.4	Oct 6 1970
MAXIMUM PEAK FLOW			2160	Jun 6	33200	Jan 2 1997
MAXIMUM PEAK STAGE			7.11	Jun 6	18.46	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	53170		81690		108600	
10 PERCENT EXCEEDS	113		147		381	
50 PERCENT EXCEEDS	41		42		33	
90 PERCENT EXCEEDS	16		16		11	

11278400 CHERRY CREEK BELOW DION R. HOLM POWERPLANT, NEAR MATHER, CA

LOCATION.—Lat 37° 53'24", long 119° 58'08", in NE 1/4 NW 1/4 sec.2, T.1 S., R.18 E., Tuolumne County, Hydrologic Unit 18040009, Stanislaus National Forest, on left bank, 600 ft upstream from mouth, 0.5 mi downstream from powerplant, 0.8 mi northwest of Early Intake, and 6.2 mi west of Mather.

DRAINAGE AREA.—234 mi^2.

PERIOD OF RECORD.—March 1963 to current year. Prior to October 1965, published as "below Cherry Powerhouse, near Mather."

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 2,133.50 ft above NGVD of 1929 (levels by city and county of San Francisco).

REMARKS.—Records poor. Flow regulated by Cherry Lake (station 11277200) 11 mi upstream and Lake Eleanor (station 11277500) 10 mi upstream. Flow diverted, at times, into Cherry Creek Canal (station 11278200) 2 mi upstream from station for domestic use and to supplement flow to Hetch Hetchy Aqueduct. See schematic diagram of Tuolumne River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 33,500 ft^3/s, Jan. 2, 1997, gage height unknown, on basis of combined peak flow for Cherry Creek near Early Intake (station 11278300) and Dion R. Holm Powerplant, maximum gage height, 25.4 ft, Jan. 3, 1997, from floodmark caused by backwater from Tuolumne River; minimum daily, 1.6 ft^3/s, June 4, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	353	589	351	483	1020	334	455	1200	1800	e350	429	226
2	350	338	688	770	612	476	502	1200	1730	427	224	445
3	384	333	775	746	920	847	480	1220	1800	393	67	479
4	402	467	417	624	856	966	317	1330	1830	331	421	483
5	213	509	594	481	e630	939	82	1250	2360	369	431	298
6	256	587	542	880	e600	974	94	1230	2870	363	427	215
7	441	626	380	890	e620	1030	325	1220	2350	322	414	262
8	498	657	292	935	e440	842	381	1250	2420	394	389	416
9	521	1700	526	1030	e340	690	624	1250	2560	471	211	677
10	463	975	658	1040	e610	970	603	1240	2340	464	62	591
11	366	670	596	730	e630	953	661	1230	1670	451	406	636
12	171	966	627	614	e820	702	507	1220	1580	385	392	670
13	227	830	498	1090	1070	673	317	1200	1680	75	399	475
14	289	686	471	1100	1090	688	898	1200	1530	452	400	75
15	295	578	313	1070	941	624	711	1200	1490	454	405	652
16	251	485	683	1050	713	600	1230	1190	1620	460	213	623
17	198	458	628	1030	844	826	1240	1180	1620	438	60	629
18	241	705	679	1060	1030	668	1260	1180	1610	457	406	614
19	102	703	612	969	1020	658	1230	1180	1510	426	409	608
20	121	644	566	1030	1060	541	1230	1170	1360	79	414	57
21	257	606	692	1060	1020	527	1220	1170	1160	416	415	57
22	239	658	582	1050	677	408	1210	1170	983	424	411	577
23	244	533	750	1060	508	257	1210	1200	1080	483	220	584
24	275	299	801	1040	628	566	1220	1360	886	529	69	633
25	351	588	521	1050	637	521	1270	1910	886	501	397	630
26	228	373	754	710	619	459	1270	1930	915	224	410	614
27	251	388	653	1050	568	529	1230	1930	745	65	444	57
28	312	203	653	1150	535	455	1230	2270	e520	404	429	57
29	131	398	575	1140	---	222	1090	2450	e170	418	432	631
30	307	341	761	1130	---	174	1220	2210	e490	426	256	626
31	342	---	717	1140	---	415	---	2030	---	419	258	---
TOTAL	9079	17893	18355	29202	21058	19534	25317	43970	45565	11870	10320	13597
MEAN	293	596	592	942	752	630	844	1418	1519	383	333	453
MAX	521	1700	801	1150	1090	1030	1270	2450	2870	529	444	677
MIN	102	203	292	481	340	174	82	1170	170	65	60	57
AC-FT	18010	35490	36410	57920	41770	38750	50220	87210	90380	23540	20470	26970

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2003, BY WATER YEAR (WY)

MEAN	403	419	473	645	685	737	834	1084	1164	751	520	467
MAX	962	1445	1394	3266	1528	1351	2199	2310	3728	2643	1161	898
(WY)	1983	1984	1984	1997	1986	1997	1982	1996	1983	1983	1983	2000
MIN	12.7	14.9	5.56	4.22	3.84	3.71	2.63	2.67	4.08	11.3	25.8	20.4
(WY)	1994	1994	1977	1977	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1963 - 2003	
ANNUAL TOTAL	222392		265760			
ANNUAL MEAN	609		728		681	
HIGHEST ANNUAL MEAN					1437	1983
LOWEST ANNUAL MEAN					47.9	1977
HIGHEST DAILY MEAN	1790	Jun 6	2870	Jun 6	25500	Jan 2 1997
LOWEST DAILY MEAN	36	Sep 29	57	Sep 20	1.6	Jun 4 1977
ANNUAL SEVEN-DAY MINIMUM	160	Sep 24	200	Oct 17	2.1	Apr 21 1977
MAXIMUM PEAK FLOW			4380	Jun 6	33500	Jan 2 1997
MAXIMUM PEAK STAGE			11.43	Jun 6	25.40	Jan 3 1997
ANNUAL RUNOFF (AC-FT)	441100		527100		493700	
10 PERCENT EXCEEDS	1160		1240		1270	
50 PERCENT EXCEEDS	458		612		614	
90 PERCENT EXCEEDS	236		248		56	

e Estimated.

11284400 BIG CREEK ABOVE WHITES GULCH, NEAR GROVELAND, CA

LOCATION.—Lat 37° 50'31", long 120° 11'02", in SW 1/4 NE 1/4 sec.23, T.1 S., R.16 E., Tuolumne County, Hydrologic Unit 18040009, on right bank, 500 ft upstream from Whites Gulch, and 2.5 mi east of Groveland.

DRAINAGE AREA.—16.4 mi^2.

PERIOD OF RECORD.—May 1969 to current year.

REVISED RECORDS.—WDR CA-85-3: 1980–84(P).

GAGE.—Water-stage recorder. Datum of gage is 2,561.79 ft above NGVD of 1929 (levels by Boise–Cascade Corp.).

REMARKS.—Records good except flows below 1 ft^3/s, which are fair, and flows below 0.10 ft^3/s, which are poor. No storage or diversion from station. See schematic diagram of Tuolumne River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,620 ft^3/s, Feb. 17, 1986, gage height, 7.03 ft, from rating curve extended above 1,100 ft^3/s, on basis of slope-area measurement at gage height 6.51 ft; no flow for many days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Jan. 6, 1965, reached a stage of 6.4 ft, from floodmarks, discharge, 1,850 ft^3/s.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 150 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 13	1545	437	4.69

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.02	16	0.99	2.1	1.3	4.5	0.41	0.00	0.00	0.00
2	0.00	0.00	0.02	8.6	0.98	1.8	4.0	4.5	0.37	0.00	0.00	0.00
3	0.00	0.00	0.02	6.0	0.92	1.8	6.2	12	0.33	0.00	0.00	0.00
4	0.00	0.00	0.02	4.6	0.88	1.7	6.3	35	0.28	0.00	0.00	0.00
5	0.00	0.00	0.02	3.4	0.89	1.6	8.2	18	0.23	0.00	0.00	0.00
6	0.00	0.00	0.02	2.8	0.87	1.5	5.9	12	0.20	0.00	0.00	0.00
7	0.00	0.00	0.02	2.2	0.87	1.4	4.3	9.4	0.17	0.00	0.00	0.00
8	0.00	0.26	0.02	2.0	0.81	1.3	3.5	8.7	0.15	0.00	0.00	0.00
9	0.00	2.0	0.02	1.8	0.81	1.3	2.8	8.6	0.12	0.00	0.00	0.00
10	0.00	0.18	0.02	5.7	0.84	1.2	2.4	6.6	0.11	0.00	0.00	0.00
11	0.00	0.06	0.02	6.2	0.87	1.2	2.1	5.5	0.10	0.00	0.00	0.00
12	0.00	0.04	0.02	4.0	0.94	1.2	2.8	4.6	0.10	0.00	0.00	0.00
13	0.00	0.03	0.03	3.1	5.1	1.1	172	4.0	0.10	0.00	0.00	0.00
14	0.00	0.03	0.34	2.6	6.2	1.2	73	3.6	0.10	0.00	0.00	0.00
15	0.00	0.02	2.1	2.2	3.2	47	26	3.2	0.08	0.00	0.00	0.00
16	0.00	0.02	35	2.0	6.2	20	15	2.7	0.06	0.00	0.00	0.00
17	0.00	0.02	38	1.8	4.8	8.9	14	2.4	0.05	0.00	0.00	0.00
18	0.00	0.02	15	1.6	3.2	5.9	16	2.1	0.04	0.00	0.00	0.00
19	0.00	0.02	5.6	1.5	2.9	4.2	10	1.8	0.03	0.00	0.00	0.00
20	0.00	0.02	10	1.4	3.1	3.1	7.7	1.6	0.03	0.00	0.00	0.00
21	0.00	0.02	21	1.3	2.5	2.5	7.3	1.4	0.03	0.00	0.00	0.00
22	0.00	0.02	13	1.3	2.2	2.2	7.0	1.3	0.02	0.00	0.00	0.00
23	0.00	0.02	6.0	1.2	2.1	2.4	5.7	1.2	0.02	0.00	0.00	0.00
24	0.00	0.02	3.7	1.2	2.0	2.9	5.8	1.0	0.02	0.00	0.00	0.00
25	0.00	0.02	2.6	1.1	2.2	1.9	7.3	0.94	0.01	0.00	0.00	0.00
26	0.00	0.02	2.1	1.1	2.3	1.8	6.7	0.85	0.01	0.00	0.00	0.00
27	0.00	0.02	1.8	1.1	2.2	1.8	5.1	0.78	0.01	0.00	0.00	0.00
28	0.00	0.02	4.0	1.0	2.4	1.5	8.2	0.71	0.01	0.00	0.00	0.00
29	0.00	0.02	61	1.0	---	1.3	6.9	0.62	0.00	0.00	0.00	0.00
30	0.00	0.02	26	0.99	---	1.2	5.3	0.54	0.00	0.00	0.00	0.00
31	0.00	---	27	0.99	---	1.1	---	0.47	---	0.00	0.00	---
TOTAL	0.00	2.92	274.51	91.78	63.27	130.1	448.8	160.61	3.19	0.00	0.00	0.00
MEAN	0.000	0.097	8.86	2.96	2.26	4.20	15.0	5.18	0.11	0.000	0.000	0.000
MAX	0.00	2.0	61	16	6.2	47	172	35	0.41	0.00	0.00	0.00
MIN	0.00	0.00	0.02	0.99	0.81	1.1	1.3	0.47	0.00	0.00	0.00	0.00
AC-FT	0.00	5.8	544	182	125	258	890	319	6.3	0.00	0.00	0.00

11284400 BIG CREEK ABOVE WHITES GULCH, NEAR GROVELAND, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.082	2.92	10.1	26.5	33.3	24.3	11.1	3.87	1.13	0.26	0.039	0.022
MAX	1.05	43.2	103	184	173	126	74.1	26.2	7.61	2.42	0.82	0.42
(WY)	1983	1983	1997	1997	1986	1983	1982	1983	1998	1983	1983	1983
MIN	0.000	0.000	0.000	0.000	0.000	0.038	0.014	0.018	0.000	0.000	0.000	0.000
(WY)	1971	1977	1977	1991	1991	1977	1977	1977	1977	1972	1971	1969

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1969 - 2003	
ANNUAL TOTAL	1077.15		1175.18			
ANNUAL MEAN	2.95		3.22		9.35	
HIGHEST ANNUAL MEAN					38.2	1983
LOWEST ANNUAL MEAN					0.011	1977
HIGHEST DAILY MEAN	95	Mar 23	172	Apr 13	1370	Jan 2 1997
LOWEST DAILY MEAN	0.00	Jun 30	0.00	Oct 1	0.00	Aug 27 1969
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 30	0.00	Oct 1	0.00	Aug 27 1969
MAXIMUM PEAK FLOW			437	Apr 13	2620	Feb 17 1986
MAXIMUM PEAK STAGE			4.69	Apr 13	7.03	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	2140		2330		6770	
10 PERCENT EXCEEDS	5.7		6.6		15	
50 PERCENT EXCEEDS	0.06		0.10		0.37	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

11287500 DON PEDRO RESERVOIR NEAR LA GRANGE, CA

LOCATION.—Lat 37° 42'06", long 120° 25'16", in NE 1/4 SW 1/4 sec.3, T.3 S., R.14 E., Tuolumne County, Hydrologic Unit 18040009, on left end of New Don Pedro Dam on Tuolumne River, 500 ft downstream from Mexican Gulch, and 3.4 mi northeast of La Grange.

DRAINAGE AREA.—1,533 mi^2.

PERIOD OF RECORD.—September 1923 to current year. Year-end contents only 1923–24, and October 1924 to September 1930 monthend contents, published in WSP 1315-A.

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Turlock Irrigation District). Prior to Feb. 1, 1941, nonrecording gage at site 1.5 mi upstream at same datum. Feb. 2, 1941, to Nov. 3, 1970, water-stage recorder at site 1.5 mi upstream at same datum. Nov. 4, 1970, to Apr. 26, 1972, nonrecording gage at same site and datum.

REMARKS.—Reservoir is formed by earthfill dam completed June 23, 1971. Storage began Nov. 3, 1970. Total capacity, 2,030,000 acre-ft, at elevation 830.0 ft, top of uncontrolled spillway, of which 309,000 acre-ft below elevation 600.0 ft, mutually agreed-upon minimum, is not available for release. Water passes through powerplant at dam and down Tuolumne River to La Grange Dam, 2.5 mi downstream, where it is diverted into Turlock and Modesto Canals (stations 11289500 and 11289000) for irrigation. This reservoir is operated jointly by Turlock and Modesto Irrigation Districts. Prior to June 1971, reservoir was formed by a concrete gravity-type dam completed Jan. 1, 1923, capacity, 290,400 acre-ft. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Tuolumne River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 2,044,000 acre-ft, Jan. 2, 1997, elevation, 831.11 ft; minimum, 29,200 acre-ft, Sept. 1–3, 5, 1934, minimum elevation, 475.0 ft, Sept. 1, 2, 1934. Minimum since reservoir first filled, 302,600 acre-ft, Oct. 14, 15, 1977, elevation, 598.2 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 1,864,000 acre-ft, June 21, 22, maximum elevation, 816.75 ft, June 22; minimum, 1,212,000 acre-ft, Nov. 4–6, minimum elevation, 753.83 ft, Nov. 6.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Modesto and Turlock Irrigation Districts, dated August 1970)

550	158,700	620	384,100	710	869,700	800	1,669,000
570	212,900	650	517,400	740	1,095,000	830	2,030,000
590	274,800	680	679,000	770	1,359,000		

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1252000	1214000	1247000	1302000	1377000	e1415000	1433000	1513000	1692000	1838000	e1691000	e1568000
2	1251000	1214000	1247000	1304000	1379000	e1416000	1433000	1517000	1709000	1835000	e1691000	e1564000
3	1249000	1213000	1247000	1306000	1381000	e1416000	1433000	1523000	1723000	1834000	e1684000	e1562000
4	1247000	1212000	1247000	1308000	1382000	e1415000	1435000	1532000	1738000	1833000	e1679000	e1560000
5	1245000	1212000	1247000	1309000	1383000	e1415000	1437000	1538000	1753000	1833000	e1672000	e1559000
6	1243000	1212000	1248000	1311000	1385000	e1414000	1439000	1543000	1767000	1830000	e1666000	1556000
7	1241000	1213000	1249000	1313000	1386000	e1414000	1439000	1547000	1779000	1825000	e1666000	1555000
8	1239000	1218000	1249000	1315000	e1387000	e1413000	1440000	1552000	1791000	1817000	e1661000	1551000
9	1238000	1226000	1249000	1317000	e1388000	e1412000	1441000	1555000	1802000	1811000	e1657000	1549000
10	1237000	1229000	1250000	1321000	e1388000	e1411000	1443000	1559000	1810000	1809000	e1651000	1546000
11	1235000	1231000	1251000	1324000	e1390000	e1410000	1444000	1563000	1817000	1806000	e1647000	1544000
12	1234000	1233000	1252000	1325000	e1391000	e1409000	1446000	1565000	1828000	1800000	e1643000	1542000
13	1232000	1235000	1253000	1327000	1394000	1410000	1455000	1569000	1835000	1794000	e1638000	1540000
14	1231000	1236000	1254000	1329000	1398000	1410000	1461000	1574000	1840000	1788000	e1635000	1537000
15	1230000	1237000	1255000	1332000	1400000	1414000	1464000	1578000	1845000	1782000	e1631000	1535000
16	1230000	1238000	1263000	1335000	1403000	1417000	1467000	1582000	1850000	1776000	e1626000	1534000
17	1230000	1239000	1269000	1337000	1405000	1417000	1469000	1585000	1855000	1770000	e1621000	1533000
18	1229000	1240000	1271000	1340000	e1405000	1418000	1472000	1589000	1860000	1765000	e1616000	1532000
19	1229000	1240000	1274000	1342000	e1407000	1420000	1474000	1593000	1863000	1758000	e1612000	1530000
20	1228000	1242000	1277000	1344000	e1409000	1422000	1477000	1596000	1863000	1752000	e1607000	1528000
21	1227000	1242000	1279000	1347000	e1411000	1423000	1478000	1599000	1864000	1747000	e1604000	1525000
22	1225000	1243000	1281000	1350000	e1413000	1425000	1479000	1601000	1864000	1742000	e1601000	1522000
23	1223000	1245000	1283000	1352000	e1414000	1427000	1481000	1605000	1862000	1738000	e1596000	1522000
24	1223000	1245000	1284000	1355000	1414000	1429000	1484000	1610000	1860000	e1734000	e1592000	1521000
25	1222000	1245000	1285000	1358000	1414000	1431000	1486000	1615000	1856000	e1729000	e1589000	1521000
26	1221000	1246000	1287000	1359000	1415000	1432000	1490000	1619000	1855000	e1722000	e1585000	1520000
27	1220000	1247000	1288000	1363000	e1414000	1433000	1495000	1623000	1853000	e1713000	e1583000	1520000
28	1219000	1247000	1290000	1366000	e1414000	1434000	1501000	1633000	1850000	e1711000	e1581000	1518000
29	1218000	1247000	1294000	1369000	---	1434000	1505000	1646000	1846000	e1707000	e1578000	1517000
30	1216000	1247000	1296000	1372000	---	1434000	1510000	1660000	1843000	e1703000	e1576000	1515000
31	1215000	---	1300000	1375000	---	1434000	---	1675000	---	e1698000	e1572000	---
MAX	1252000	1247000	1300000	1375000	1415000	1434000	1510000	1675000	1864000	1838000	1691000	1568000
MIN	1215000	1212000	1247000	1302000	1377000	1409000	1433000	1513000	1692000	1698000	1572000	1515000
a	754.24	757.89	763.69	771.63	---	777.64	785.22	800.57	814.99	---	---	785.72
b	-39000	+32000	+53000	+75000	+39000	+20000	+76000	+165000	+168000	-145000	-126000	-57000

CAL YEAR 2002 b +40000
WTR YEAR 2003 b +261000

e Estimated.
a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11289000 MODESTO CANAL NEAR LA GRANGE, CA

LOCATION.—Lat 37° 40'21", long 120° 28'26", in NE 1/4 SW 1/4 sec.18, T.3 S., R.14 E., Stanislaus County, Hydrologic Unit 18040002, on left bank, 0.9 mi northwest of La Grange, and 1.7 mi downstream from intake at La Grange Dam.

PERIOD OF RECORD.—April 1903 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.—WSP 1315-A: 1904–9 (monthly figures only).

GAGE.—Water-stage recorder and concrete control. Datum of gage is 267.47 ft above NGVD of 1929 (levels by Modesto Irrigation District). See WSP 1930 for history of changes prior to March 1932. March 1932 to Apr. 27, 1988, at site 1.1 mi upstream at different datum.

REMARKS.—Records good except for estimated daily discharges, which are fair. Canal diverts from right bank of Tuolumne River at La Grange Dam for irrigation in Modesto and Waterford Irrigation Districts. See schematic diagram of Tuolumne River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 1,820 ft^3/s, July 1, 1935; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	339	457	407	0.00	84	e0.32	563	526	884	884	802	716
2	538	524	675	0.00	222	e0.35	542	345	761	1060	869	726
3	503	545	546	0.00	185	e636	1010	410	621	906	1000	613
4	495	510	159	0.00	0.00	e538	183	323	658	916	555	674
5	815	486	0.00	0.00	0.00	e466	47	230	606	652	847	588
6	612	194	0.85	96	0.00	e608	49	317	943	774	1070	612
7	493	12	0.00	260	64	e494	578	396	779	680	1060	642
8	561	42	0.00	57	0.00	e724	560	530	721	865	991	800
9	526	30	0.00	108	0.00	e528	462	399	643	857	1010	457
10	559	6.5	0.00	43	0.00	e686	325	454	597	701	841	754
11	524	34	0.00	33	0.00	e337	329	377	723	760	920	618
12	558	1.2	0.00	336	0.00	e404	186	618	723	758	938	495
13	443	0.05	0.00	387	0.00	e422	312	758	723	750	909	718
14	365	0.00	0.00	290	0.00	e408	249	411	959	1120	753	629
15	176	0.00	0.00	17	0.00	e381	178	849	1020	1040	813	590
16	47	0.00	0.00	34	0.00	e500	199	1120	891	820	703	660
17	34	0.00	0.00	51	e0.00	e409	464	773	345	802	954	671
18	37	0.00	0.00	76	e440	e301	208	947	734	916	797	720
19	35	0.00	0.00	273	e52	e37	244	697	902	1100	718	818
20	33	0.00	0.00	112	e0.00	e36	298	815	1050	1100	869	600
21	50	0.00	0.00	55	e0.00	e254	508	828	994	1040	813	826
22	57	0.00	0.00	24	e33	35	541	806	834	725	755	499
23	66	0.00	0.00	7.9	e177	38	364	720	932	779	1010	166
24	162	0.00	0.00	0.01	e161	37	206	377	923	993	1000	264
25	399	0.00	0.00	44	e0.00	47	219	546	885	992	888	150
26	443	0.00	0.00	38	e0.00	280	287	618	743	1100	928	129
27	441	0.00	0.00	0.00	e198	239	163	677	737	1040	597	104
28	753	127	0.00	0.00	e0.38	273	143	787	905	913	543	357
29	425	105	0.00	0.00	---	305	222	487	980	865	639	47
30	285	79	0.00	0.00	---	275	101	812	812	1010	441	105
31	323	---	0.00	0.00	---	482	---	786	---	806	548	---
TOTAL	11097	3152.75	1787.85	2341.91	1616.38	10180.67	9740	18739	24028	27724	25581	15748
MEAN	358	105	57.7	75.5	57.7	328	325	604	801	894	825	525
MAX	815	545	675	387	440	724	1010	1120	1050	1120	1070	826
MIN	33	0.00	0.00	0.00	0.00	0.32	47	230	345	652	441	47
AC-FT	22010	6250	3550	4650	3210	20190	19320	37170	47660	54990	50740	31240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2003, BY WATER YEAR (WY)

MEAN	248	103	75.9	54.2	86.9	300	651	818	885	793	648	437
MAX	633	579	416	465	407	799	1198	1349	1244	1194	977	902
(WY)	1968	1983	1980	1976	1976	1932	1949	1946	1943	1956	1983	1980
MIN	0.000	0.000	0.000	0.000	0.000	0.000	220	224	450	186	12.1	0.000
(WY)	1913	1910	1910	1910	1920	1938	1991	1977	1926	1919	1918	1917

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1909 - 2003	
ANNUAL TOTAL	167373.03		151736.56			
ANNUAL MEAN	459		416		428	
HIGHEST ANNUAL MEAN					570	1980
LOWEST ANNUAL MEAN					198	1910
HIGHEST DAILY MEAN	1360	Jun 30	1120	May 16	1820	Jul 1 1935
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Nov 14	0.00	Feb 8 1909
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 18	0.00	Nov 14	0.00	Feb 8 1909
ANNUAL RUNOFF (AC-FT)	332000		301000		309800	
10 PERCENT EXCEEDS	877		911		1000	
50 PERCENT EXCEEDS	547		407		383	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated.

11289500 TURLOCK CANAL NEAR LA GRANGE, CA

LOCATION.—Lat 37° 39'57", long 120° 26'24", in NW 1/4 NW 1/4 sec.21, T.3 S., R.14 E., Stanislaus County, Hydrologic Unit 18040002, on right bank, 0.4 mi downstream from intake at La Grange Dam, and 1.2 mi east of La Grange.

PERIOD OF RECORD.—October 1898 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.—WSP 1315-A: 1899–1908 (monthly figures only). WSP 1445: 1917–20, 1922.

GAGE.—Ultrasonic flow meter and concrete control. Datum of gage is 277.70 ft above NGVD of 1929 (levels by Turlock Irrigation District). See WSP 1930 for history of changes prior to Apr. 17, 1924. From May 17, 1984, to Oct. 7, 1999, water-stage recorder at site 0.2 mi downstream at datum 2.72 ft lower.

REMARKS.—Records good except those below 10 ft^3/s, which are poor. Canal diverts from left bank of Tuolumne River at La Grange Dam for irrigation in Turlock Irrigation District and to supply town of La Grange. Capacity of canal increased in March 1980 and in March 1984. During autumn and winter, some unmeasured flow is diverted from canal at tunnel 0.1 mi upstream from gage, passed through La Grange Powerplant, and returned to river. See schematic diagram of Tuolumne River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 3,400 ft^3/s, several days in May 1984; no diversion for irrigation during some periods in some years; prior to 1939, unmeasured small discharge during winter called zero. No flow Jan. 27, 1984, to Mar. 14, 1984, when canal was drained for construction and installation of electromagnetic flow meter, and many days during most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	490	52	0.81	67	0.00	447	1130	892	1440	2120	1860	1300
2	462	0.79	0.92	45	61	314	1070	944	1130	1070	1760	1240
3	898	0.36	0.91	14	140	400	565	448	1490	0.00	1970	1310
4	647	2.4	224	32	263	1220	392	506	1220	0.01	1750	1080
5	619	0.32	59	13	231	613	174	604	1430	0.00	1460	1070
6	744	0.26	127	0.00	235	748	155	527	1580	742	1930	884
7	679	0.05	144	0.00	112	782	584	512	976	1330	1400	406
8	560	0.05	144	0.00	54	739	365	744	1610	2400	1870	1160
9	391	0.06	38	0.00	108	827	918	1010	1840	2480	1890	773
10	460	0.29	9.5	0.00	272	829	900	470	1170	2680	1800	1170
11	472	0.36	109	0.00	236	1030	709	813	1080	2690	1540	1050
12	336	44	92	0.00	244	1140	986	1180	1130	2480	1540	1100
13	210	77	100	0.00	180	977	685	1110	1580	2490	1800	499
14	292	51	56	0.00	16	878	368	623	1120	2560	1460	924
15	186	0.64	269	0.00	46	544	648	692	1310	2630	1580	545
16	122	69	36	0.00	47	327	788	705	1860	2660	1550	287
17	8.3	17	135	0.00	207	603	984	1100	1550	2660	1890	257
18	29	94	55	0.00	103	600	833	1090	1350	2430	1730	250
19	36	0.74	152	0.00	428	60	681	1230	1750	2650	1710	353
20	11	69	51	0.00	215	553	601	1500	2250	2140	1970	552
21	532	30	168	0.01	133	15	1390	1250	1820	2080	1570	820
22	913	0.42	109	0.00	27	194	901	1650	1890	1910	1180	730
23	984	0.63	168	0.00	88	418	976	1640	2090	1900	1300	241
24	22	62	143	0.00	1350	365	1220	832	2440	1930	1490	318
25	4.7	0.58	201	11	1260	299	1890	1380	2620	2000	1280	406
26	4.8	0.89	0.00	0.00	1130	657	1130	1540	1580	1990	861	516
27	4.8	61	49	0.00	1040	591	742	1760	2020	1980	886	189
28	18	14	59	0.00	808	796	501	1780	1900	1930	727	305
29	226	7.5	0.00	0.00	---	828	498	1560	1730	1740	1140	615
30	607	2.5	146	0.00	---	908	346	1390	2200	1480	927	1060
31	135	---	76	0.00	---	1040	---	1780	---	1220	1170	---
TOTAL	11103.6	658.84	2922.14	182.01	9034.00	19742	23130	33262	49156	58372.01	46991	21410
MEAN	358	22.0	94.3	5.87	323	637	771	1073	1639	1883	1516	714
MAX	984	94	269	67	1350	1220	1890	1780	2620	2690	1970	1310
MIN	4.7	0.05	0.00	0.00	0.00	15	155	448	976	0.00	727	189
AC-FT	22020	1310	5800	361	17920	39160	45880	65980	97500	115800	93210	42470

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 2003, BY WATER YEAR (WY)

MEAN	305	141	132	78.6	129	481	1024	1248	1354	1305	1093	696
MAX	883	1008	1210	506	855	1457	1874	1829	1883	2098	1991	1604
(WY)	1996	1976	1984	1999	1976	1997	1949	1984	1981	1980	1983	1967
MIN	0.000	0.000	0.000	0.000	0.000	2.72	90.3	27.4	71.0	0.000	25.4	0.000
(WY)	1901	1901	1900	1900	1905	1973	1900	1977	1900	1914	1901	1901

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1899 - 2003	
ANNUAL TOTAL	288669.59		275963.60			
ANNUAL MEAN	791		756		671	
HIGHEST ANNUAL MEAN					1082	1984
LOWEST ANNUAL MEAN					54.3	1900
HIGHEST DAILY MEAN	2730	Jul 12	2690	Jul 11	3400	May 24 1984
LOWEST DAILY MEAN	0.00	Jan 4	0.00	Dec 26	0.00	Nov 14 1899
ANNUAL SEVEN-DAY MINIMUM	0.00	Feb 11	0.00	Jan 6	0.00	Nov 14 1899
ANNUAL RUNOFF (AC-FT)	572600		547400		485800	
10 PERCENT EXCEEDS	1760		1880		1680	
50 PERCENT EXCEEDS	679		591		470	
90 PERCENT EXCEEDS	0.61		0.31		0.00	

11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA

LOCATION.—Lat 37° 39'59", long 120° 26'28", in NW 1/4 NW 1/4 sec.21, T.3 S., R.14 E., Stanislaus County, Hydrologic Unit 18040002, on left bank, 0.5 mi downstream from La Grange Dam, and 1.1 mi east of La Grange.

DRAINAGE AREA.—1,538 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1970 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 170.19 ft above NGVD of 1929 (levels by Turlock Irrigation District).

REMARKS.—Records good. Flow diverted into Modesto Canal (station 11289000) and Turlock Canal (station 11289500) at La Grange Dam. Flow regulated by Don Pedro Powerplant, Don Pedro Reservoir (station 11287500), 4.5 mi upstream, Hetch Hetchy Reservoir (station 11275500), Cherry Lake (station 11277200), and Lake Eleanor (station 11277500). Tuolumne Canal (station 11297500) diverts water from the Stanislaus River Basin into the Tuolumne River Basin for power, irrigation, and domestic supply in the vicinity of Sonora, upstream from station. Diversion through Hetch Hetchy Aqueduct to San Francisco began Oct. 19, 1934; an average of 344 ft^3/s was diverted during the current year. For records of combined discharge of river and Modesto and Turlock Canals, see station 11289651. See schematic diagram of Tuolumne River Basin.

EXTREMES FOR PERIOD OF RECORD.—River only, maximum discharge, 58,900 ft^3/s, Jan. 3, 1997, gage height, 28.43 ft; no flow for several days during September and October 1977.

Combined flow, maximum daily discharge, 50,100 ft^3/s, Jan. 3, 1997; minimum daily, 0.45 ft^3/s, Nov. 2, 1970.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	201	187	181	183	183	181	524	265	203	251	276
2	83	198	190	182	185	185	182	525	264	212	242	279
3	87	192	185	182	185	185	180	525	267	250	226	270
4	82	196	220	183	184	185	181	524	272	250	221	273
5	91	204	188	182	185	185	182	524	271	249	222	273
6	91	201	188	182	186	185	181	589	275	248	222	236
7	90	209	187	184	186	185	184	585	268	201	210	232
8	101	200	185	183	186	187	182	583	262	203	216	226
9	174	189	196	185	185	184	183	574	264	244	221	233
10	185	188	179	184	187	181	182	576	270	246	220	274
11	185	187	178	185	187	178	303	579	269	237	221	240
12	185	186	177	182	187	177	472	541	271	239	224	268
13	183	186	184	183	186	177	891	488	240	239	218	269
14	183	186	187	182	187	175	1300	407	191	241	225	270
15	202	188	185	182	186	177	1310	353	191	238	221	273
16	331	187	215	186	184	177	1310	306	193	245	218	248
17	334	186	194	185	187	175	1310	228	195	244	256	235
18	338	185	193	185	189	176	1330	185	196	246	267	232
19	339	183	195	184	191	173	1330	184	195	246	265	221
20	335	183	191	185	184	176	1340	348	187	239	223	259
21	259	184	186	185	183	181	1330	563	192	254	229	258
22	254	181	187	190	183	181	1270	565	191	256	237	265
23	265	191	180	189	184	181	1030	569	189	258	244	266
24	262	193	177	188	183	189	818	567	194	252	250	259
25	261	190	180	187	184	189	602	568	243	254	272	220
26	252	188	180	187	184	188	574	568	247	257	265	229
27	213	189	181	188	185	184	573	569	250	262	231	219
28	189	207	183	183	183	187	575	566	243	255	230	218
29	195	192	182	182	---	184	551	512	251	258	266	215
30	211	186	181	183	---	183	522	323	224	257	267	270
31	201	---	181	185	---	181	---	266	---	261	244	---
TOTAL	6246	5736	5802	5714	5189	5634	20559	14784	7030	7544	7324	7506
MEAN	201	191	187	184	185	182	685	477	234	243	236	250
MAX	339	209	220	190	191	189	1340	589	275	262	272	279
MIN	82	181	177	181	183	173	180	184	187	201	210	215
AC-FT	12390	11380	11510	11330	10290	11180	40780	29320	13940	14960	14530	14890

11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	663	367	883	1526	1925	1828	1567	1405	691	435	241	495
MAX	4187	905	4625	13070	8116	6636	8900	9744	5161	3808	1747	3491
(WY)	1984	1984	1997	1997	1997	1983	1983	1983	1983	1983	1983	1983
MIN	1.02	8.16	10.2	9.78	21.6	93.9	40.9	8.73	8.43	7.46	5.63	4.42
(WY)	1978	1978	1978	1978	1978	1989	1977	1972	1976	1977	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1971 - 2003	
ANNUAL TOTAL	76448		99068			
ANNUAL MEAN	209		271		998	
HIGHEST ANNUAL MEAN					4786	1983
LOWEST ANNUAL MEAN					84.3	1989
HIGHEST DAILY MEAN	1310	Apr 24	1340	Apr 20	50100	Jan 3 1997
LOWEST DAILY MEAN	64	Sep 14	82	Oct 4	0.00	Sep 26 1977
ANNUAL SEVEN-DAY MINIMUM	66	Sep 10	87	Oct 1	0.00	Oct 12 1977
MAXIMUM PEAK FLOW			1760	Apr 17	58900	Jan 3 1997
MAXIMUM PEAK STAGE			7.37	Apr 17	28.43	Jan 3 1997
ANNUAL RUNOFF (AC-FT)	151600		196500		722800	
10 PERCENT EXCEEDS	334		524		3240	
50 PERCENT EXCEEDS	171		200		257	
90 PERCENT EXCEEDS	81		181		15	

11289651 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA—Continued

TUOLUMNE RIVER, MODESTO CANAL, AND TURLOCK CANAL NEAR LA GRANGE, CA

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	914	710	595	248	267	e630	1870	1940	2580	3200	2910	2300
2	1080	723	866	227	468	e499	1790	1820	2150	2340	2870	2250
3	1490	737	732	196	510	e1220	1760	1380	2380	1160	3200	2190
4	1220	708	603	215	447	e1940	756	1350	2150	1170	2520	2020
5	1520	690	247	195	416	e1260	403	1360	2310	901	2530	1930
6	1450	395	316	278	421	e1540	385	1430	2800	1770	3220	1740
7	1260	221	331	444	362	e1460	1340	1490	2030	2210	2670	1280
8	1220	242	329	240	240	e1650	1110	1850	2590	3460	3080	2190
9	1090	219	234	293	293	e1540	1560	1980	2740	3580	3120	1460
10	1200	195	188	227	459	e1700	1400	1500	2040	3630	2860	2190
11	1180	221	287	218	423	e1550	1340	1770	2070	3690	2680	1910
12	1080	231	269	518	431	e1720	1640	2340	2120	3480	2700	1870
13	836	263	284	570	366	e1580	1890	2360	2540	3480	2930	1490
14	840	237	243	472	203	e1460	1920	1440	2270	3920	2440	1820
15	564	189	454	199	232	e1100	2140	1890	2520	3910	2610	1410
16	500	256	251	220	231	e1000	2300	2130	2940	3720	2470	1200
17	376	203	329	236	e394	e1180	2760	2100	2100	3700	3100	1160
18	404	279	248	261	e732	e1080	2370	2220	2280	3600	2800	1200
19	410	184	347	457	e671	e270	2260	2110	2840	4000	2700	1390
20	379	252	242	297	e399	e765	2240	2670	3490	3480	3060	1410
21	841	214	354	240	e316	e450	3230	2640	3000	3370	2610	1910
22	1220	181	296	214	e243	410	2710	3020	2910	2900	2180	1500
23	1320	192	348	197	e449	637	2370	2930	3210	2940	2550	673
24	446	255	320	188	e1690	591	2250	1780	3550	3170	2740	841
25	665	191	381	242	e1440	535	2710	2500	3740	3240	2440	776
26	700	189	180	225	e1310	1120	1990	2730	2570	3350	2060	874
27	659	250	230	188	e1420	1010	1480	3010	3010	3280	1710	512
28	960	348	242	183	e991	1260	1220	3140	3040	3100	1500	880
29	846	304	182	182	---	1310	1270	2560	2960	2860	2050	877
30	1100	268	327	183	---	1360	969	2520	3230	2750	1640	1430
31	659	---	257	185	---	1700	---	2840	---	2290	1960	---
TOTAL	28429	9547	10512	8238	15824	35527	53433	66800	80160	93651	79910	44683
MEAN	917	318	339	266	565	1146	1781	2155	2672	3021	2578	1489
MAX	1520	737	866	570	1690	1940	3230	3140	3740	4000	3220	2300
MIN	376	181	180	182	203	270	385	1350	2030	901	1500	512
AC-FT	56390	18940	20850	16340	31390	70470	106000	132500	159000	185800	158500	88630

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2003, BY WATER YEAR (WY)

MEAN	1338	770	1254	1713	2134	2677	3205	3271	2931	3061	2552	1795
MAX	4693	2383	5327	13630	8885	6677	9873	11840	7644	6670	4715	5429
(WY)	1984	1983	1983	1997	1997	1983	1983	1983	1983	1983	1983	1983
MIN	107	35.9	115	76.8	97.8	230	921	262	595	664	606	305
(WY)	1978	1978	1989	1978	1989	1992	1992	1977	1992	1992	1992	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1971 - 2003	
ANNUAL TOTAL	532430		526714			
ANNUAL MEAN	1459		1443		2235	
HIGHEST ANNUAL MEAN					6186	1983
LOWEST ANNUAL MEAN					442	1992
HIGHEST DAILY MEAN	3810	Jul 12	4000	Jul 19	50100	Jan 3 1997
LOWEST DAILY MEAN	171	Feb 17	180	Dec 26	0.45	Nov 2 1970
ANNUAL SEVEN-DAY MINIMUM	177	Jan 19	198	Jan 25	0.61	Oct 29 1970
ANNUAL RUNOFF (AC-FT)	1056000		1045000		1620000	
10 PERCENT EXCEEDS	2720		3010		4580	
50 PERCENT EXCEEDS	1490		1310		1900	
90 PERCENT EXCEEDS	189		232		247	

e Estimated.

11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1971 to current year.
WATER TEMPERATURE: Water years 1971 to current year.

PERIOD OF DAILY RECORD.—November 1970 to current year.
WATER TEMPERATURE: November 1970 to current year.

INSTRUMENTATION.—Water-temperature recorder since November 1970.

REMARKS.—Water-temperature records rated excellent except Feb. 26 to Mar. 12, Mar. 28–30, Sept. 25–30, which are rated good; Mar. 13–24, Mar. 31 to Apr. 2, which are rated fair; and Apr. 3, which is rated poor. Water temperature can be affected by releases from La Grange Dam.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum recorded, 29.0° C, Sept. 27, Oct. 15, 1977; minimum recorded, 6.0° C, Feb. 6–8, 10, 1971.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 15.0° C, Sept. 10–12; minimum recorded, 9.5° C, several days in February and March.

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.0	11.5	11.5	11.0	11.5	10.5	11.0	10.5	11.5	11.0	11.0	10.0
2	12.5	11.0	11.5	10.5	11.5	10.5	11.0	10.5	11.0	10.0	11.0	10.0
3	13.0	11.0	12.0	11.0	11.5	10.5	11.5	10.5	11.0	10.0	11.0	10.0
4	13.0	11.5	12.0	11.0	11.5	10.5	11.5	10.5	11.0	10.0	11.5	10.0
5	13.0	11.5	11.5	11.0	11.5	11.0	11.0	11.0	11.0	10.0	11.5	9.5
6	13.0	11.5	11.5	11.0	11.5	11.0	11.0	10.5	11.0	10.0	11.5	9.5
7	13.0	11.5	12.0	11.5	11.5	11.0	10.5	10.5	11.0	10.0	11.5	9.5
8	13.5	11.5	12.5	12.0	11.5	10.5	11.0	10.5	11.0	10.0	11.5	9.5
9	13.0	11.5	12.5	12.0	11.5	11.0	11.0	10.5	11.0	10.0	11.5	9.5
10	12.5	11.5	12.0	11.5	11.0	10.5	11.0	11.0	11.0	10.0	11.5	9.5
11	12.5	11.5	12.0	11.0	11.0	10.5	11.0	10.5	10.5	10.5	11.5	10.0
12	12.5	11.5	12.0	11.5	11.5	10.5	11.5	10.5	10.5	10.5	12.0	10.0
13	12.5	11.5	12.0	11.5	11.0	11.0	11.5	11.0	11.5	10.5	11.5	10.0
14	12.5	11.5	11.5	11.0	11.0	11.0	11.0	10.5	11.0	10.5	12.0	10.0
15	12.5	11.0	11.5	11.0	11.5	11.0	11.0	10.5	11.5	10.5	11.5	10.5
16	12.0	11.5	12.0	11.0	11.5	11.0	11.0	10.5	11.5	11.0	11.0	10.0
17	12.0	11.0	11.5	11.0	11.5	11.0	10.5	10.5	11.0	10.5	11.5	9.5
18	12.0	11.5	11.5	11.0	11.0	10.5	10.5	10.5	11.0	10.0	12.0	9.5
19	12.0	11.5	11.5	10.5	10.5	10.0	10.5	10.5	10.5	10.0	11.5	9.5
20	12.0	11.5	11.5	11.0	11.0	10.0	11.0	10.5	11.0	10.0	12.5	10.5
21	12.5	11.5	11.5	11.0	11.5	10.5	11.0	10.5	11.0	10.0	12.0	10.0
22	12.5	11.0	11.5	11.0	11.0	10.5	11.0	10.5	11.5	10.5	12.0	10.5
23	12.5	11.0	11.5	11.0	11.0	10.0	11.5	11.0	11.0	10.5	11.0	10.5
24	12.0	11.0	11.5	11.0	10.5	10.0	11.5	11.0	11.0	10.5	12.0	10.0
25	12.0	11.0	11.5	11.0	10.5	10.0	11.0	10.5	11.5	10.0	11.5	9.5
26	12.0	11.0	11.5	10.5	11.0	10.5	11.0	10.5	11.0	10.0	11.5	10.0
27	12.0	11.0	11.5	10.5	11.5	11.0	11.5	11.0	11.0	10.0	11.5	9.5
28	12.0	11.0	11.0	10.5	11.5	11.0	11.0	10.5	11.0	9.5	11.5	9.5
29	12.0	11.0	11.5	10.5	11.0	10.5	11.0	10.5	---	---	12.0	10.0
30	12.0	11.0	11.0	11.0	11.0	10.5	11.0	11.0	---	---	12.0	10.0
31	12.0	11.0	---	---	11.0	10.5	11.0	11.0	---	---	12.0	10.0
MONTH	13.5	11.0	12.5	10.5	11.5	10.0	11.5	10.5	11.5	9.5	12.5	9.5

11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.0	10.5	11.5	10.5	13.0	11.0	13.0	11.0	13.0	11.5	13.5	11.5
2	11.5	10.0	11.0	10.5	13.0	11.0	13.0	11.0	13.0	11.5	13.5	11.5
3	12.0	10.0	11.5	10.5	13.0	11.0	13.0	11.0	13.5	11.5	13.5	12.0
4	11.5	10.5	12.0	10.5	13.0	11.0	13.5	11.0	13.5	11.5	13.5	12.0
5	12.0	10.0	12.0	10.5	13.0	11.0	13.5	11.0	13.5	11.5	13.5	11.5
6	12.0	10.5	12.0	10.5	13.0	11.0	13.5	11.0	13.5	11.5	13.5	11.5
7	12.5	10.5	11.5	10.5	13.0	11.0	13.5	11.0	13.5	11.5	13.0	11.5
8	12.5	10.5	11.5	10.5	13.0	11.0	13.5	11.0	13.5	11.5	14.5	11.5
9	12.5	10.5	11.5	10.5	13.0	11.0	13.5	11.0	14.0	11.5	14.5	12.5
10	12.5	10.5	12.0	10.5	13.0	10.5	13.5	11.0	14.0	11.5	15.0	13.0
11	11.5	10.5	12.0	10.5	12.5	10.5	13.5	11.0	13.5	11.5	15.0	13.0
12	11.0	10.5	12.0	10.5	12.5	10.5	13.5	11.5	13.5	11.5	15.0	13.0
13	11.0	10.5	12.0	10.5	13.0	10.5	13.5	11.5	13.5	11.5	14.5	13.0
14	11.0	10.5	12.0	10.5	13.0	10.5	13.5	11.5	13.5	11.5	14.5	13.0
15	11.5	10.5	12.0	10.5	13.0	11.0	13.5	11.5	13.5	11.5	14.5	13.0
16	11.0	10.5	12.0	10.5	13.0	11.0	13.5	11.5	13.5	11.5	14.5	12.5
17	11.0	10.5	12.5	11.0	13.0	11.0	13.5	11.5	13.5	11.5	14.5	12.5
18	11.5	10.5	12.5	10.5	12.5	11.0	13.5	11.5	13.5	12.0	14.5	12.5
19	11.5	10.5	12.5	10.5	13.0	11.0	13.0	11.5	13.5	11.5	14.5	12.5
20	11.0	10.5	12.5	10.5	13.0	11.0	13.5	11.5	13.5	11.5	14.0	12.5
21	11.0	10.5	12.0	10.5	13.0	11.0	13.5	11.5	13.0	12.0	14.0	12.5
22	11.0	10.5	12.0	10.5	13.0	11.0	13.5	11.5	14.0	12.0	14.0	12.5
23	11.5	10.5	12.5	10.5	13.0	11.0	12.5	11.5	13.5	11.5	14.0	12.5
24	11.0	10.5	12.0	10.5	13.0	11.0	13.5	11.5	13.5	12.0	14.0	12.5
25	11.5	10.5	12.0	10.5	13.0	11.0	13.5	11.5	13.5	11.5	13.5	12.5
26	11.5	10.5	12.0	10.5	13.0	11.0	13.5	11.5	13.5	12.0	14.0	12.5
27	12.0	10.5	12.0	10.5	13.5	11.0	13.5	11.5	13.5	12.0	13.5	12.5
28	12.0	10.5	12.0	10.5	13.0	11.0	13.5	11.5	13.5	11.5	13.5	12.5
29	11.5	10.5	12.0	10.5	13.0	11.0	13.5	11.5	13.5	11.5	13.5	12.0
30	12.0	10.5	12.5	10.5	13.0	11.0	13.5	12.0	13.5	11.5	13.5	12.0
31	---	---	13.0	11.0	---	---	12.5	11.5	13.5	11.5	---	---
MONTH	12.5	10.0	13.0	10.5	13.5	10.5	13.5	11.0	14.0	11.5	15.0	11.5

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	Depth at sample location, feet (81903)	Temperature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR				
03...*	1245	1.20	11.5	5.00
03...*	1249	4.20	11.4	15.0
03...*	1251	6.30	11.4	25.0
03...*	1253	5.80	11.4	35.0
03...*	1255	5.70	11.4	45.0
03...*	1256	5.80	11.4	55.0
03...*	1258	5.30	11.4	65.0
03...*	1259	4.40	11.4	75.0
03...*	1300	3.30	11.5	85.0
03...*	1301	2.80	11.5	95.0
03...*	1303	2.00	11.7	105
03...*	1305	1.20	11.8	115
AUG				
19...*	1026	1.30	12.2	5.00
19...*	1028	4.70	12.2	16.0
19...*	1035	7.60	12.1	27.0
19...*	1039	6.50	12.1	38.0
19...*	1043	6.20	12.1	49.0
19...*	1046	6.20	12.2	60.0
19...*	1048	5.50	12.2	71.0
19...*	1051	4.60	12.2	82.0
19...*	1054	3.50	12.3	93.0
19...*	1055	2.60	12.5	104

* Instantaneous discharge at time of cross-sectional measurement: Apr. 3, 177 ft^3/s; Aug. 19, 262 ft^3/s.

11290000 TUOLUMNE RIVER AT MODESTO, CA

LOCATION.—Lat 37° 37'38", long 120° 59'11", in SE 1/4 SW 1/4 sec.33, T.3 S., R.9 E., Stanislaus County, Hydrologic Unit 18040002, on left bank at bridge on Ninth Street in Modesto, and 0.2 mi downstream from Dry Creek.

DRAINAGE AREA.—1,884 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—1878–84, 1891–94, 1897 (gage heights only), January 1895 to December 1896, April 1940 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Water-quality data for the period October 1985 to March 1987 are available in U.S. Geological Survey Open-File Report 88-479. Water-quality data for the period April 1987 to September 1988 are available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is NGVD of 1929 (levels by Modesto Irrigation District). Prior to July 11, 1947, at site 1,700 ft downstream at same datum; July 11, 1947, to Nov. 16, 1953, at site 1,000 ft downstream at same datum.

REMARKS.—Records fair except estimated daily discharges, which are poor. Flow regulated by reservoirs and powerplants upstream from station. Several major diversions for power, irrigation, and municipal supply upstream of station, including Modesto and Turlock Canals (stations 11289000 and 11289500). See REMARKS for Tuolumne River below La Grange Dam (station 11289650) and schematic diagram of Tuolumne River Basin.

EXTREMES FOR PERIOD OF RECORD (water years 1896, 1941–2003).—Maximum discharge observed, 57,000 ft^3/s, Dec. 9, 1950, elevation, 69.19 ft, maximum gage height, 71.21 ft, Jan. 4, 1997 (backwater caused by debris on railroad trestle 1,500 ft downstream of gage); minimum daily, 56 ft^3/s, Aug. 6, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e226	e298	257	330	271	287	327	685	395	332	354	400
2	e230	e295	253	323	270	287	322	699	372	327	362	398
3	e210	e293	258	317	269	288	312	710	357	326	391	389
4	e229	e275	257	300	269	273	299	681	353	335	374	419
5	e220	274	275	293	269	267	295	668	369	358	351	427
6	e236	328	266	287	267	271	286	650	376	350	350	482
7	e227	319	262	280	266	278	282	717	353	364	344	447
8	e219	492	258	277	265	280	282	726	364	317	381	392
9	e310	399	265	278	267	285	287	725	386	284	351	362
10	e371	332	267	312	266	285	297	717	376	298	361	379
11	e372	307	254	335	266	287	316	723	365	329	363	406
12	e373	294	251	467	269	292	382	715	365	329	337	392
13	e371	283	297	359	281	297	597	676	372	336	341	414
14	e363	273	309	322	274	302	951	637	386	330	343	430
15	e367	263	300	304	270	397	1240	559	340	326	359	400
16	e389	261	378	293	288	337	1330	462	334	331	380	397
17	e460	259	553	287	271	316	1350	453	300	333	444	377
18	e470	258	590	282	275	307	1390	395	292	344	356	394
19	e473	256	484	279	283	294	1450	346	278	345	368	384
20	e490	254	424	276	286	290	1470	317	291	343	372	377
21	e420	252	463	276	281	283	1470	407	309	354	352	368
22	e401	252	426	275	278	302	1470	657	282	354	397	377
23	e360	250	401	278	280	313	1390	702	323	348	397	408
24	e367	253	343	278	281	291	1210	694	314	368	406	399
25	e363	256	312	277	285	287	1040	709	331	368	386	387
26	e360	256	299	276	284	297	816	734	323	399	389	365
27	e351	255	289	276	283	303	779	709	335	383	410	359
28	e339	255	287	276	287	301	822	685	365	370	391	391
29	e309	264	296	276	---	312	772	698	353	343	351	337
30	e304	262	286	272	---	324	730	633	373	332	372	329
31	e329	---	348	270	---	326	---	488	---	350	383	---
TOTAL	10509	8568	10208	9231	7701	9259	23964	19377	10332	10606	11516	11786
MEAN	339	286	329	298	275	299	799	625	344	342	371	393
MAX	490	492	590	467	288	397	1470	734	395	399	444	482
MIN	210	250	251	270	265	267	282	317	278	284	337	329
AC-FT	20840	16990	20250	18310	15270	18370	47530	38430	20490	21040	22840	23380

e Estimated.

11290000 TUOLUMNE RIVER AT MODESTO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	852	965	1507	1888	2140	2060	1891	1888	1531	636	376	560
MAX	4760	4124	8677	15500	8782	7658	9268	10420	7665	4244	2225	4041
(WY)	1984	1951	1951	1997	1997	1983	1983	1983	1942	1983	1983	1983
MIN	78.2	93.1	110	154	166	199	169	138	94.5	78.8	67.5	72.6
(WY)	1978	1978	1978	1991	1991	1961	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	130987		143057			
ANNUAL MEAN	359		392		1347	
HIGHEST ANNUAL MEAN					5518	1983
LOWEST ANNUAL MEAN					185	1989
HIGHEST DAILY MEAN	1750	Jan 3	1470	Apr 20	52900	Jan 4 1997
LOWEST DAILY MEAN	191	Jul 4	210	Oct 3	56	Aug 6 1977
ANNUAL SEVEN-DAY MINIMUM	214	Jul 3	224	Oct 2	62	Aug 2 1977
MAXIMUM PEAK FLOW			1520	Apr 22	57000	Dec 9 1950
MAXIMUM PEAK STAGE			41.20	Apr 22	71.21	Jan 4 1997
ANNUAL RUNOFF (AC-FT)	259800		283800		975500	
10 PERCENT EXCEEDS	663		661		3600	
50 PERCENT EXCEEDS	276		334		574	
90 PERCENT EXCEEDS	227		266		185	

11290000 TUOLUMNE RIVER AT MODESTO, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water year 1989 to Mar. 31, 1995, December 2000 to current year. Data for the period October 1985 to March 1987 are available in U.S. Geological Survey Open-File Report 88-479. Data for the period April 1987 to September 1988 are available in the files of the U.S. Geological Survey.
CHEMICAL DATA: Water years 1993–95.
SPECIFIC CONDUCTANCE: Water years 1989–95, December 2000 to current year.
WATER TEMPERATURE: Water years 1989–95, December 2000 to current year.
SEDIMENT: Water years 1993–95.

PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: October 1988 to March 31, 1995, December 2000 to current year.
WATER TEMPERATURE: October 1988 to March 31, 1995, December 2000 to current year.

INSTRUMENTATION.—Water-quality montitor since December 2000.

REMARKS.—Specific conductance records rated excellent except for Oct. 11 to Nov. 1, Jan. 1–30, May 15 to June 23, Aug. 17–30, which are rated good; Nov. 2–14, June 24 to July 6, which are rated fair; and July 7–15, which are rated poor. Water-temperature records rated excellent except for Oct. 27 to Nov. 14, Feb. 26 to Mar. 12, which are rated good.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum recorded, 587 microsiemens, Mar. 12, 1993; minimum recorded, 22 microsiemens, Feb. 26, 27, 2001.
WATER TEMPERATURE: Maximum recorded, 34.5° C, July 3–5, 1991; minimum recorded, 3.5° C, several days during December 1990.

EXTREMES FOR CURRENT YEAR.—
SPECIFIC CONDUCTANCE: Maximum recorded, 268 microsiemens, Nov. 7; minimum recorded, 39 microsiemens, Nov. 8.
WATER TEMPERATURE: Maximum recorded, 30.0° C, July 20; minimum recorded, 9.0° C, Dec. 19.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	227	212	130	125	171	169	179	173	184	183	169	167
2	227	209	129	120	172	170	184	179	185	183	169	167
3	230	203	127	120	173	169	185	180	186	182	168	166
4	229	202	130	120	172	170	186	182	183	181	174	168
5	230	207	139	121	172	156	186	180	182	180	174	172
6	226	194	127	114	170	157	184	181	182	179	174	168
7	212	190	268	57	169	166	184	179	180	178	175	168
8	220	205	122	39	170	167	183	179	180	178	173	170
9	205	173	136	115	171	169	181	161	180	177	171	166
10	205	184	157	136	172	165	178	105	180	178	172	167
11	184	172	169	157	173	165	186	167	180	177	172	168
12	172	141	176	168	173	171	182	163	180	145	170	169
13	162	144	181	172	173	121	175	167	176	145	172	154
14	157	145	178	172	166	112	181	175	178	172	173	130
15	150	141	178	174	170	140	182	180	179	174	155	99
16	146	141	178	176	170	47	182	181	175	127	165	140
17	144	117	177	176	176	133	182	178	178	173	172	165
18	117	99	177	175	172	153	178	177	182	174	178	172
19	99	87	178	176	169	57	177	175	179	137	182	178
20	89	86	177	176	174	144	177	175	177	170	184	174
21	90	86	180	177	181	148	177	175	176	170	184	182
22	98	90	180	176	183	175	176	175	172	170	182	165
23	105	92	178	176	188	182	175	173	171	166	176	164
24	108	88	178	175	195	188	174	171	172	170	180	176
25	112	79	175	173	196	195	172	170	172	169	180	176
26	104	86	174	173	196	193	175	171	171	169	177	171
27	109	102	174	172	193	191	177	174	173	168	176	172
28	115	106	173	171	192	159	177	176	169	166	176	173
29	122	115	173	165	187	172	179	175	---	---	175	166
30	127	118	171	166	181	180	185	179	---	---	171	162
31	135	127	---	---	180	113	184	182	---	---	162	151
MONTH	230	79	268	39	196	47	186	105	186	127	184	99

11290000 TUOLUMNE RIVER AT MODESTO, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	163	145	90	87	117	106	130	116	109	101	113	102
2	167	156	90	86	124	115	132	126	113	103	114	104
3	171	165	90	88	125	122	135	127	108	90	111	106
4	174	166	91	88	124	120	137	131	115	98	110	104
5	175	168	90	88	121	117	132	119	115	111	110	109
6	177	171	92	90	122	107	128	122	118	111	110	101
7	177	173	91	85	122	115	126	114	118	111	112	96
8	178	159	86	84	118	109	128	118	118	106	116	105
9	169	156	86	85	115	102	140	128	121	105	122	116
10	161	143	88	86	122	106	145	128	121	107	122	115
11	149	138	90	87	123	117	128	116	120	103	119	111
12	144	127	94	90	122	118	122	117	120	116	120	111
13	127	107	93	90	123	118	120	117	118	114	118	112
14	107	76	102	91	124	111	119	110	119	112	114	105
15	76	65	105	97	140	121	120	116	120	109	118	113
16	65	63	116	101	143	125	117	114	120	101	119	115
17	64	62	127	116	155	142	116	112	119	90	119	113
18	64	62	137	127	164	153	114	107	116	113	122	111
19	63	60	141	137	163	159	109	107	116	107	123	113
20	60	58	149	138	164	160	110	107	116	102	127	118
21	60	58	155	118	160	127	113	98	113	106	135	127
22	60	59	118	87	145	138	115	100	112	87	133	109
23	63	59	87	77	144	117	113	106	112	99	116	106
24	67	59	80	78	141	128	112	102	114	100	116	111
25	71	62	81	78	142	124	111	106	115	110	120	116
26	81	71	80	77	138	128	110	91	113	107	122	115
27	84	80	81	80	133	126	109	100	108	103	123	122
28	85	81	83	80	129	113	107	104	109	94	122	113
29	83	80	84	82	126	116	111	106	112	105	123	115
30	88	82	89	82	128	111	111	107	112	107	123	121
31	---	---	106	87	---	---	109	101	110	106	---	---
MONTH	178	58	155	77	164	102	145	91	121	87	135	96

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.0	18.0	14.5	13.0	12.5	11.5	11.0	10.0	14.5	13.0	15.5	13.0
2	20.0	16.5	14.0	12.5	12.0	11.0	11.5	10.5	13.0	11.5	16.0	13.0
3	21.0	17.0	14.0	12.5	12.0	11.0	11.5	10.5	13.5	11.5	15.0	13.0
4	21.5	18.0	14.0	12.5	12.5	11.0	11.5	10.5	13.0	11.5	15.5	13.0
5	22.0	18.5	14.0	12.5	12.0	11.0	12.0	11.0	12.5	10.5	16.5	13.0
6	22.5	19.0	14.0	12.5	12.0	11.0	12.0	11.0	12.0	10.5	17.0	13.5
7	23.0	19.5	16.0	13.5	12.5	11.5	11.5	10.5	12.0	10.5	16.5	13.5
8	23.0	19.5	16.0	14.5	12.0	10.5	11.0	11.0	12.0	10.0	17.0	14.0
9	23.0	20.0	15.5	14.0	12.0	11.0	11.0	11.0	12.0	10.0	17.5	14.5
10	21.5	20.0	15.0	14.5	12.0	11.0	12.0	11.0	12.0	10.0	18.0	15.0
11	21.0	19.0	16.0	14.5	11.5	11.0	12.0	11.0	12.0	11.0	18.5	16.0
12	20.5	19.0	15.5	14.5	12.0	11.5	12.5	11.0	12.0	11.0	19.5	16.0
13	20.5	18.5	16.0	14.5	12.0	11.0	13.0	12.0	14.0	11.5	18.5	16.5
14	20.0	18.5	15.5	14.5	13.5	12.0	12.5	12.0	13.5	12.5	19.5	16.5
15	19.5	18.0	15.0	14.5	12.5	12.0	13.5	12.0	14.5	13.0	18.5	14.0
16	19.0	17.5	15.5	14.0	13.0	11.5	12.5	11.5	15.0	13.0	17.5	16.0
17	18.5	17.0	15.0	14.0	12.5	12.0	12.0	11.5	14.5	13.0	17.5	15.0
18	18.0	16.5	14.5	13.0	12.0	11.0	12.0	11.0	15.0	12.5	17.0	14.5
19	17.5	16.0	14.0	12.5	11.5	9.0	11.0	11.0	14.0	12.0	17.0	14.5
20	17.5	15.5	14.0	13.0	11.0	10.0	11.0	10.5	14.5	11.5	18.0	15.5
21	17.0	15.5	14.5	13.0	11.0	10.5	11.5	10.5	14.5	12.0	18.5	15.0
22	17.0	15.5	14.5	13.0	11.0	10.0	11.5	10.5	14.5	12.0	18.5	16.0
23	17.0	15.5	14.0	13.0	10.5	9.5	13.0	11.0	14.5	12.0	17.5	16.5
24	16.5	15.0	14.0	13.5	10.5	9.5	13.0	12.5	14.0	13.5	19.0	15.5
25	16.5	15.0	14.0	13.0	10.0	9.5	13.0	12.0	16.0	13.5	19.0	16.0
26	16.0	14.5	13.0	12.0	10.5	9.5	13.5	13.0	15.5	13.0	19.5	17.0
27	16.0	14.5	13.0	11.5	11.0	10.0	14.0	13.0	15.5	13.5	18.5	15.5
28	16.0	14.5	12.5	11.5	12.0	10.5	14.5	13.0	15.0	12.5	19.0	15.0
29	16.0	14.0	13.0	12.0	11.5	10.5	14.0	12.5	---	---	19.5	16.0
30	15.5	14.0	12.0	11.5	11.0	10.5	14.0	13.5	---	---	20.5	17.0
31	15.0	13.5	---	---	11.5	10.0	14.0	13.0	---	---	20.0	17.5
MONTH	23.0	13.5	16.0	11.5	13.5	9.0	14.5	10.0	16.0	10.0	20.5	13.0

11290000 TUOLUMNE RIVER AT MODESTO, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	19.0	16.5	17.5	15.0	24.0	20.5	27.5	24.0	27.5	24.5	25.5	22.5
2	18.0	15.5	17.0	16.0	25.5	21.5	27.0	23.5	26.0	24.5	25.5	23.0
3	18.5	15.5	17.0	15.5	26.5	23.0	27.5	23.5	26.5	22.5	26.0	23.5
4	17.5	15.0	16.0	14.5	26.5	23.0	27.0	23.5	26.0	23.0	26.0	23.5
5	17.5	14.0	17.5	14.5	26.5	23.0	27.0	23.5	26.0	23.0	25.5	23.0
6	17.5	14.5	18.0	15.0	26.0	22.5	27.0	23.5	26.0	23.0	24.5	22.0
7	18.5	15.0	18.0	16.0	26.0	22.5	26.5	23.5	26.0	23.0	24.0	21.5
8	19.5	16.0	17.0	15.5	26.0	22.5	27.0	22.5	25.5	23.0	23.5	21.5
9	20.5	17.0	17.5	14.5	26.0	22.5	28.0	23.0	26.5	23.0	22.5	21.0
10	20.5	17.5	18.0	14.5	25.5	22.5	28.0	24.0	26.0	23.0	23.5	21.0
11	20.5	17.5	18.5	15.0	25.5	22.0	27.5	24.0	26.0	23.0	23.5	21.0
12	19.5	18.0	19.0	16.0	25.0	21.5	28.0	24.5	26.5	23.0	24.0	21.5
13	18.5	17.0	20.0	16.5	24.5	21.5	27.5	24.0	26.0	23.0	24.0	21.5
14	17.5	14.0	19.5	17.5	24.5	21.0	28.0	24.0	26.0	23.0	24.0	21.5
15	14.5	13.0	20.5	17.5	25.5	21.5	28.5	25.0	26.0	23.0	24.0	22.0
16	14.0	12.5	20.0	17.5	26.5	22.5	28.5	25.0	26.0	22.5	23.0	21.0
17	14.0	13.0	20.5	17.5	27.5	23.5	29.0	25.5	25.5	22.5	22.5	20.5
18	14.5	12.5	20.5	17.5	26.5	23.5	29.0	26.0	26.5	23.5	22.0	20.0
19	15.5	13.0	22.0	18.0	27.0	23.0	29.5	26.0	26.5	23.5	22.5	20.0
20	14.5	13.5	23.0	19.5	27.0	23.0	30.0	27.0	26.5	23.5	22.5	20.0
21	13.5	13.0	23.5	20.5	26.0	23.0	29.0	26.5	25.5	23.5	23.0	20.5
22	14.0	12.5	24.5	21.0	26.5	22.5	29.5	26.0	24.5	22.5	23.5	21.0
23	14.5	12.5	23.0	20.5	25.5	22.0	28.5	26.5	25.5	22.0	23.5	21.0
24	14.5	13.5	22.5	19.5	26.0	22.0	28.5	25.5	26.0	23.0	22.5	21.0
25	14.5	13.5	21.5	19.0	27.0	23.0	28.5	25.5	26.5	23.5	22.5	20.0
26	15.5	12.5	21.5	18.5	28.0	24.0	27.5	24.5	27.5	24.5	22.5	20.0
27	17.0	13.5	22.0	18.5	28.0	25.0	28.0	25.0	26.0	23.5	22.5	20.0
28	17.0	15.0	22.5	19.0	28.0	24.0	28.5	25.5	25.5	22.5	22.0	20.0
29	16.5	15.0	22.5	20.0	28.0	24.5	29.0	25.5	25.0	22.0	22.0	20.0
30	17.0	14.5	22.5	19.5	27.0	23.0	28.5	26.5	25.0	22.5	22.0	20.0
31	---	---	23.0	19.5	---	---	27.5	25.5	25.0	22.5	---	---
MONTH	20.5	12.5	24.5	14.5	28.0	20.5	30.0	22.5	27.5	22.0	26.0	20.0

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	Depth at sample location, feet (81903)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR					
03...*	1502	.80	167	18.2	7.0
03...*	1503	1.80	167	18.1	20.0
03...*	1504	2.20	167	18.1	33.0
03...*	1505	2.50	170	17.9	46.0
03...*	1506	2.80	173	17.9	59.0
03...*	1507	2.70	176	17.8	72.0
03...*	1508	1.60	177	17.7	85.0
03...*	1509	2.20	180	17.7	98.0
03...*	1510	3.10	181	17.7	111
03...*	1511	2.70	182	17.6	124
AUG					
20...*	0746	1.30	107	23.3	10.0
20...*	0748	2.70	107	23.3	25.0
20...*	0749	3.00	111	23.2	40.0
20...*	0750	2.80	116	23.1	55.0
20...*	0751	3.00	118	23.1	70.0
20...*	0752	3.00	119	23.1	85.0
20...*	0753	2.80	121	23.1	100
20...*	0754	2.80	124	23.0	115
20...*	0755	3.30	125	23.0	130
20...*	0756	4.00	126	23.0	145

* Instantaneous discharge at time of cross-sectional measurement: Apr. 3, 310 ft^3/s; Aug. 20, 396 ft^3/s.

11290200 TUOLUMNE RIVER AT SHILOH ROAD BRIDGE, NEAR GRAYSON, CA

LOCATION.—Lat 37° 36'12", long 121° 07'49", in SE 1/4 NE 1/4 sec.7, T.4 S., R.8 E., Stanislaus County, Hydrologic Unit 18040002, at Shiloh Bridge, at the old town of Tuolumne City, 3.8 mi northeast of Grayson, and 6.7 mi southwest of Modesto.

DRAINAGE AREA.—1,897 mi^2.

PERIOD OF RECORD.—October 1960 to September 1966, water years 1980, 1992, 1994, January 2000 to August 2001.
CHEMICAL DATA: Water years 1960–1966, 1980, 1992, 1994, January 2000 to August 2001.

REMARKS.—CALFED cooperator station. Discharge values calculated from flows at U.S. Geological Survey Gage 11290000, Tuolumne River at Modesto, with appropriate travel times taken into account.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
JAN										
06...	1230	e413	186	--	--	--	--	--	--	--
12...	1130	e479	184	--	--	--	--	--	--	--
19...	1200	e548	167	--	--	--	--	--	--	--
25...	1000	e756	92	--	--	--	--	--	--	--
26...	1510	e941	198	--	--	--	--	--	--	--
FEB										
04...	1130	e455	195	--	--	--	--	--	--	--
09...	1150	e449	195	--	--	--	--	--	--	--
11...	1830	e476	230	--	--	--	--	--	--	--
12...	0945	e703	--	--	--	--	--	--	--	--
12...	1800	--	134	--	--	--	--	--	--	--
12...	2350	e642	145	--	--	--	--	--	--	--
13...	0700	e1010	125	1.4	3.1	.54	.62	.019	.16	.20
13...	1400	e1850	102	--	--	--	--	--	--	--
13...	2100	e1480	104	.91	1.5	.35	.60	.017	.21	.25
14...	0430	e833	114	--	--	--	--	--	--	--
14...	1500	--	102	1.3	1.2	.39	.57	.016	.27	.32
15...	0030	e3210	85	--	--	--	--	--	--	--
15...	0830	e3640	87	--	--	--	--	--	--	--
15...	1700	e3950	91	--	--	--	--	--	--	--
16...	0315	e3500	82	--	--	--	--	--	--	--

Date	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphosmethyl, water, fltrd 0.7u GF ug/L (82686)
JAN									
06...	--	--	<.003	e.005	<.002	<.002	<.002	.005	<.001
12...	--	--	<.003	e.004	<.002	<.002	<.002	.006	<.001
19...	--	--	<.003	e.005	<.002	<.002	<.002	.005	<.001
25...	--	--	<.003	<.002	<.002	<.002	<.002	<.005	<.001
26...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	<.003	e.005	<.002	<.002	<.002	.005	<.001
09...	--	--	<.003	<.002	<.002	<.002	<.002	.005	<.001
11...	--	--	<.003	e.004	<.002	<.002	<.002	.005	<.001
12...	--	7.3	<.003	e.003	<.002	<.002	<.002	.005	<.001
12...	--	--	<.003	<.002	<.002	<.002	<.002	e.004	<.001
12...	--	--	<.003	e.003	<.002	<.002	<.002	.006	<.001
13...	.79	27.9	<.003	<.002	<.002	<.002	<.002	e.004	<.001
13...	--	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001
13...	.43	9.6	<.003	<.002	<.002	<.002	<.002	<.001	<.001
14...	--	--	<.003	e.003	<.002	<.002	<.002	.006	<.001
14...	.31	17.8	<.003	<.002	<.002	<.002	<.002	<.001	<.001
15...	--	--	<.003	<.002	<.002	<.002	<.002	.005	<.001
15...	--	--	<.003	<.002	<.002	<.002	<.002	e.004	<.001
15...	--	--	<.003	<.002	<.002	<.002	<.002	e.004	<.001
16...	--	--	<.003	<.002	<.002	<.002	<.002	e.004	<.001

e Estimated.
< Actual value is known to be less than value shown.

11290200 TUOLUMNE RIVER AT SHILOH ROAD BRIDGE, NEAR GRAYSON, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Diazi-non, water, fltrd, ug/L (39572)
JAN									
06...	<.002	<.002	<.003	<.003	<.004	<.005	<.004	<.002	.005
12...	<.002	<.002	e.034	<.003	.007	<.005	<.004	e.002	.064
19...	<.002	<.002	e.007	<.003	.004	<.005	<.004	e.002	.017
25...	<.002	<.002	e.025	<.003	.018	<.005	<.004	e.003	.092
26...	--	--	--	--	--	--	--	--	--
FEB									
04...	<.002	<.002	e.005	<.003	.008	<.005	<.004	e.002	.020
09...	<.002	<.002	<.003	<.003	<.004	<.005	<.004	<.002	e.003
11...	<.002	<.002	e.005	<.003	e.003	<.005	<.004	e.001	.019
12...	<.002	<.002	e.013	<.003	.008	<.005	<.005	e.002	.073
12...	<.002	<.002	e.015	<.003	.006	<.005	<.004	e.002	.043
12...	<.002	<.002	e.004	<.003	.005	<.005	<.004	e.003	.020
13...	<.002	<.002	<.006	<.003	.004	<.005	<.004	e.002	.021
13...	<.002	<.002	e.006	<.003	.006	<.005	<.004	e.001	.032
13...	<.002	<.002	e.008	<.003	.006	<.005	<.004	e.001	.030
14...	<.002	<.002	e.011	<.003	.008	<.005	<.004	<.002	.031
14...	<.002	<.002	e.006	<.003	.006	<.005	<.004	<.002	.018
15...	<.002	<.002	e.006	<.003	.005	<.005	.012	<.002	.011
15...	<.002	<.002	e.008	<.003	e.004	<.005	<.004	<.002	.010
15...	<.002	<.002	e.008	<.003	e.003	<.005	<.004	<.002	.007
16...	<.002	<.002	e.009	<.003	e.003	<.005	<.004	<.002	.007

Date	Diel-drin, water, fltrd, ug/L (39381)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)
JAN									
06...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
12...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
19...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
25...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	.007
26...	--	--	--	--	--	--	--	--	--
FEB									
04...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
09...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
11...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
12...	<.001	<.02	.004	<.004	<.003	<.003	<.004	<.002	.021
12...	<.001	<.02	e.002	<.004	<.003	<.003	<.004	<.002	.009
12...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
13...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
13...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
13...	<.001	<.02	<.010	<.004	<.003	<.003	<.004	<.002	e.005
14...	<.001	<.02	e.002	<.004	<.003	<.003	<.004	<.002	<.005
14...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
15...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
15...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
15...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
16...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005

< Actual value is known to be less than value shown.
e Estimated.

11290200 TUOLUMNE RIVER AT SHILOH ROAD BRIDGE, NEAR GRAYSON, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)
JAN									
06...	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004	<.004
12...	<.006	.005	<.004	<.004	<.003	<.006	<.004	<.004	.013
19...	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004	.007
25...	<.006	.005	<.010	<.004	<.003	<.006	<.004	<.004	.063
26...	--	--	--	--	--	--	--	--	--
FEB									
04...	<.006	.005	<.004	<.004	<.003	e.002	<.004	<.004	.012
09...	<.006	<.004	<.004	<.004	<.003	<.006	<.004	<.004	<.004
11...	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004	<.004
12...	<.006	.005	<.004	<.004	<.003	<.006	<.004	<.004	.049
12...	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004	.030
12...	<.006	<.006	<.004	<.004	<.003	<.006	<.004	<.004	.011
13...	<.006	.007	.018	<.004	<.007	<.006	<.004	<.004	<.010
13...	<.006	.006	.019	<.004	<.003	<.006	<.004	<.004	.019
13...	<.006	.006	<.010	<.004	<.003	<.006	<.004	<.004	.017
14...	<.006	.010	<.008	<.004	<.003	<.006	<.004	<.004	.018
14...	<.006	.009	.019	<.004	<.007	<.006	<.004	<.004	.010
15...	<.006	.008	.012	<.004	<.003	<.006	<.004	<.004	.009
15...	<.006	.009	.007	<.004	<.003	<.006	<.004	<.004	<.013
15...	<.006	.006	<.004	<.004	<.003	e.002	<.004	<.004	.012
16...	<.006	.005	<.004	<.004	<.003	<.006	<.004	<.004	<.004

Date	Phorate water fltrd 0.7u GF ug/L (82664)	Prome-ton, water, fltrd, ug/L (04037)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Sima-zine, water, fltrd, ug/L (04035)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)
JAN									
06...	<.002	<.02	<.003	<.007	<.004	--	.008	<.01	<.007
12...	<.002	<.02	<.003	<.007	<.004	<.01	.045	<.01	<.020
19...	<.002	M	<.003	<.007	<.004	<.01	.015	<.01	<.007
25...	<.002	e.01	<.003	<.007	<.004	<.01	.099	<.01	<.007
26...	--	--	--	--	--	--	--	--	--
FEB									
04...	<.002	<.02	<.003	<.007	<.004	<.01	.053	<.01	<.007
09...	<.002	<.02	<.003	<.007	<.004	<.01	.033	<.01	<.007
11...	<.002	<.02	<.003	<.007	<.004	<.01	.017	<.01	<.007
12...	<.002	e.01	<.003	<.007	<.004	<.01	.224	<.01	<.007
12...	<.002	<.02	<.003	<.007	<.004	<.01	.052	<.01	<.007
12...	<.002	e.01	<.003	<.007	<.004	<.01	.033	<.01	<.007
13...	<.002	<.02	<.003	<.007	<.004	<.01	.240	<.01	<.007
13...	<.002	<.02	<.003	<.007	<.004	<.01	.757	<.01	<.007
13...	<.002	M	<.003	<.007	<.004	<.01	.692	<.01	<.007
14...	<.002	<.02	<.003	<.007	<.004	<.01	.457	<.01	<.007
14...	<.002	<.02	<.003	<.007	<.004	<.01	.544	e.01	<.007
15...	<.002	<.02	<.003	<.007	<.004	<.01	.531	<.01	<.007
15...	<.002	<.02	<.003	<.007	<.004	<.01	.702	<.01	<.007
15...	<.002	<.02	<.003	<.007	<.004	<.01	.311	<.01	<.007
16...	<.002	<.02	<.003	<.007	<.004	<.01	.326	<.01	<.007

< Actual value is known to be less than value shown.
e Estimated.
M Presence of material verified, but not quantified.

11290200 TUOLUMNE RIVER AT SHILOH ROAD BRIDGE, NEAR GRAYSON, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
JAN				
06...	<.01	<.002	<.001	<.002
12...	<.01	<.002	<.001	<.002
19...	<.01	<.002	<.001	e.001
25...	<.01	<.002	<.001	e.001
26...	--	--	--	--
FEB				
04...	<.01	<.002	<.001	<.002
09...	<.01	<.002	<.001	<.005
11...	<.01	<.002	<.001	<.002
12...	<.01	<.002	<.001	e.002
12...	<.01	<.002	<.001	e.001
12...	<.01	<.002	<.001	e.004
13...	<.01	<.002	<.001	.006
13...	<.01	<.002	<.001	<.002
13...	<.01	<.002	<.001	e.001
14...	<.01	<.002	<.001	.005
14...	<.01	<.002	<.001	e.004
15...	<.01	<.002	<.001	<.002
15...	<.01	<.002	<.001	<.002
15...	<.01	<.002	<.001	<.002

< Actual value is known to be less than value shown.
e Estimated.

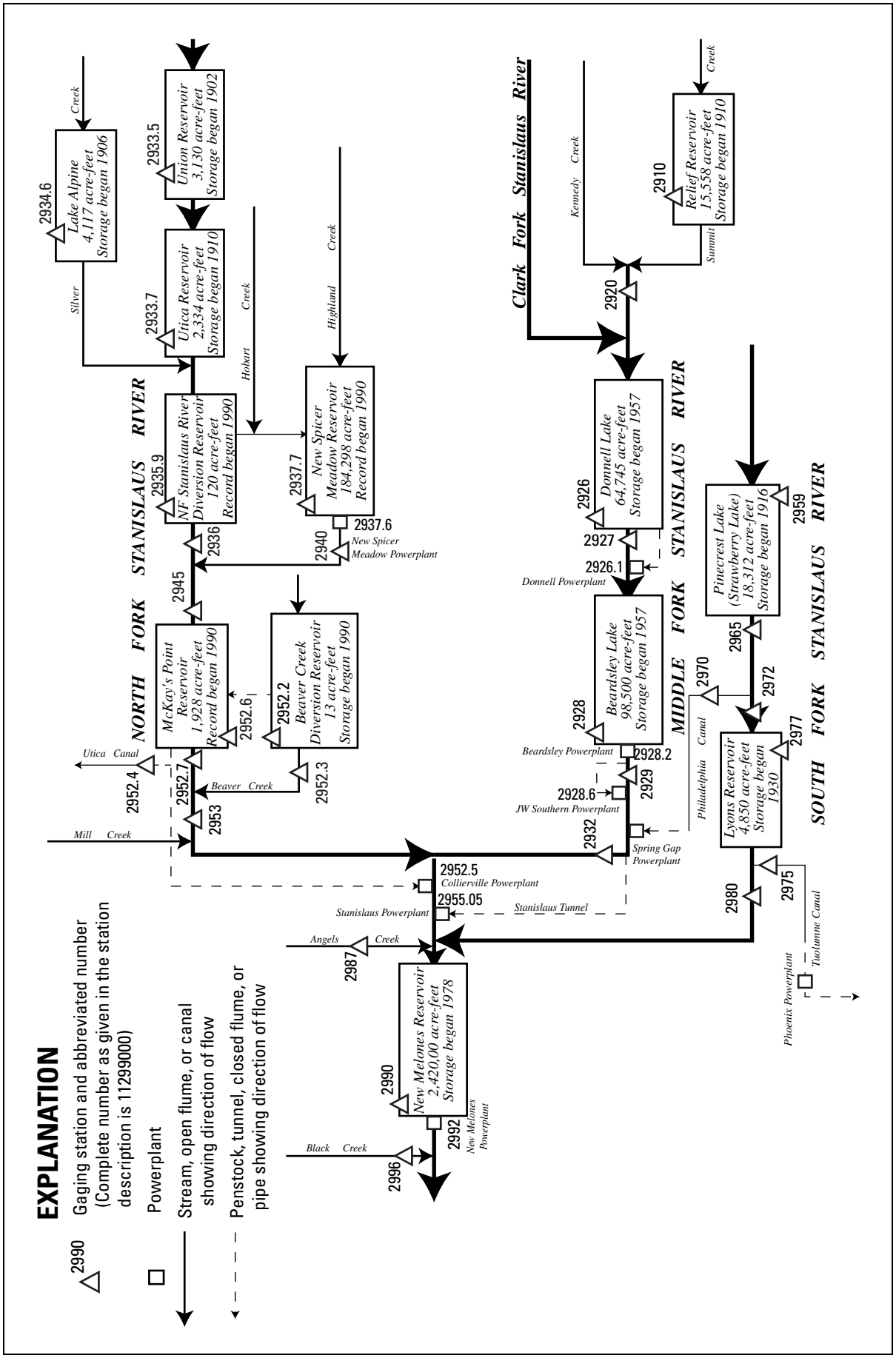


Figure 30. Diversions and storage in Stanislaus River Basin.

11291000 RELIEF RESERVOIR NEAR BAKER STATION, CA

LOCATION.—Lat 38° 16'52", long 119° 43'57", in NW 1/4 SW 1/4 sec.13, T.5 N., R.20 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on dam near spillway, 2.2 mi south of Kennedy Meadows, 3.6 mi southeast of Baker Station, and 7.0 mi southeast of Dardanelle.

DRAINAGE AREA.—24.4 mi^2.

PERIOD OF RECORD.—October 1986 to current year. Unpublished records for water years 1981–86 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder. Prior to Dec. 9, 1991, nonrecording gage observed approximately weekly. Datum of gage is 7,200 ft above NGVD of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.—Reservoir is formed by concrete-faced, rockfill dam completed in 1910. Usable capacity, 12,348 acre-ft, between gage height 1.37 ft, invert of outlet, and 123 ft, spillway crest. Flashboards are added in the summer months, increasing gage height to 138 ft and usable capacity to 15,550 acre-ft. Figures given represent total contents. Released water is used for hydroelectric power and irrigation downstream. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by the Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2130. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 15,908 acre-ft, June 29, 2000, gage height, 139.55 ft; minimum observed, 33 acre-ft, Jan. 12, 1987, gage height, 6.1 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 15,400 acre-ft, several days in June and July, maximum gage height, 137.30 ft, June 29; minimum, 740 acre-ft, estimated, Nov. 5, 6, gage height unknown.

Capacity table (gage height, in feet, and contents, in acre-ft)
(Based on survey by Pacific Gas & Electric Co. in 1942)

10	53	40	842	70	3763	100	8105
20	105	50	1605	80	5105	120	11895
30	308	60	2632	90	6579	140	16012

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1590	e780	1460	1580	2180	2550	2350	2960	15300	15400	11800	7660
2	1610	e770	1450	1590	2220	2490	2400	2960	15400	15300	11700	7610
3	1570	e760	1450	1600	2250	2430	2430	2970	15400	15300	11500	7650
4	1540	e750	1450	1610	2270	2380	2450	2980	15300	15200	11400	7640
5	1510	e740	1440	1620	2300	2330	2450	2990	15300	15100	11200	7610
6	1470	e740	1430	1630	2320	2270	2450	3010	15300	15000	11000	7580
7	1440	e860	1430	1640	2340	2220	2450	3030	15200	14900	10700	7550
8	1410	1030	1420	1650	2360	2170	2480	3050	15300	14700	10500	7510
9	1380	1180	1420	1670	2370	2130	2540	3050	15300	14600	10200	7490
10	1340	1220	1410	1680	2390	2080	2630	3050	15200	14500	9980	7460
11	1310	1240	1400	1690	2400	2040	2720	3080	15200	14400	9800	7420
12	1270	1260	1390	1710	2410	2020	2810	3180	15100	14200	9640	7390
13	1240	1290	1390	1720	2430	2020	2890	3400	15100	14000	9480	7360
14	1210	1300	1410	1730	2450	2020	2940	3650	15200	13800	9320	7330
15	1180	1320	1410	1730	2460	2030	2960	3980	15200	13600	9160	7290
16	1150	1330	1430	1750	2480	2020	2970	4350	15200	13400	9010	7260
17	1110	1330	1440	1760	2500	2000	2980	4740	15300	13200	8840	7230
18	1080	1330	1460	1780	2510	1970	2980	5170	15300	13100	8700	7190
19	1050	1340	1470	1800	2530	1950	2980	5620	15300	13000	8580	7160
20	1020	1370	1490	1820	2540	1930	2980	6160	15300	13000	8460	7130
21	987	1400	1490	1830	2550	1910	2990	6810	15300	12900	8400	7090
22	962	1420	1500	1850	2560	1920	2970	7590	15300	12700	8330	7060
23	e940	1440	1510	1880	2570	1920	2970	8560	15200	13200	8250	7020
24	e920	1460	1510	1900	2590	1930	2990	9640	15200	13100	8160	6990
25	e900	1470	1510	1920	2600	1930	3000	10600	15200	12900	8080	6950
26	e880	1460	1520	1950	2610	2010	2990	11200	15200	12700	8010	6920
27	e860	1470	1520	1990	2620	2060	2990	12000	15300	12500	7930	6890
28	e840	1460	1530	2030	2600	2070	2990	13100	15400	12400	7870	6860
29	e820	1460	1540	2060	---	2100	2980	14200	15400	12200	7820	6820
30	e805	1460	1560	2090	---	2160	2970	15200	15400	12000	7760	6780
31	e790	---	1570	2130	---	2260	---	15300	---	11900	7710	---
MAX	1610	1470	1570	2130	2620	2550	3000	15300	15400	15400	11800	7660
MIN	790	740	1390	1580	2180	1910	2350	2960	15100	11900	7710	6780
a		48.40	49.58	55.53	59.77	56.72	63.17	136.92	137.19	120.05	97.55	91.42
b	-850	+670	+110	+560	+470	-340	+710	+12330	+100	-3500	-4190	-930

CAL YR 2002 MAX 15600 MIN 700 b +540
WTR YR 2003 MAX 15400 MIN 740 b +5140

e Estimated.
a Gage height, in feet, at end of month
b Change in contents, in acre-feet.

11292000 MIDDLE FORK STANISLAUS RIVER AT KENNEDY MEADOWS, NEAR DARDANELLE, CA

LOCATION.—Lat 38° 17'51", long 119° 44'25", in SW 1/4 NE 1/4 sec.11, T.5 N., R.20 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank at upper end of Kennedy Meadows, 1.3 mi upstream from Deadman Creek, 1.6 mi downstream from Relief Reservoir, and 5.8 mi southwest of Dardanelle.

DRAINAGE AREA.—47.5 mi^2.

PERIOD OF RECORD.—October 1938 to current year. Records for water year 1946 incomplete, yearly estimate published in WSP 1315-A. Prior to October 1960, published as "at Kennedy Meadows."

REVISED RECORDS.—WSP 1315-A: 1939(M). WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 6,326.3 ft above NGVD of 1929.

REMARKS.—Low and medium flow regulated by Relief Reservoir (station 11291000) 1.6 mi upstream. No diversion upstream from station. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2130.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,310 ft^3/s, May 16, 1996, gage height, 8.37 ft; minimum daily, 7.1 ft^3/s, Jan. 14, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	19	22	27	36	55	99	79	831	233	166	46
2	27	19	22	21	33	55	94	81	787	223	167	45
3	27	19	21	21	31	55	86	83	871	225	164	42
4	27	18	21	e21	30	54	83	87	907	222	159	37
5	27	18	21	e21	29	54	78	86	808	215	156	37
6	26	18	21	e21	30	54	76	90	749	213	153	36
7	26	20	21	e21	28	54	77	91	728	218	150	35
8	26	85	21	e21	30	54	82	89	714	225	148	35
9	26	70	21	e21	28	54	88	87	774	222	146	35
10	26	39	21	e21	25	55	93	87	679	224	144	35
11	26	31	20	e21	24	56	98	91	588	223	126	34
12	26	30	20	e21	24	59	103	105	536	219	111	34
13	25	29	e20	e21	25	62	99	132	492	215	110	33
14	25	28	e20	e21	24	65	96	162	493	210	108	33
15	25	26	e20	e21	24	77	92	178	515	207	107	33
16	25	26	e20	e21	e24	68	87	195	551	208	106	32
17	25	25	e20	e23	24	65	83	195	542	198	105	32
18	25	24	e20	e24	e23	63	81	202	476	190	94	32
19	25	24	e20	26	23	62	82	210	468	193	82	32
20	25	25	e21	26	23	63	84	231	379	196	81	32
21	25	25	e21	26	23	65	82	263	322	188	89	31
22	23	26	e21	26	23	70	79	301	308	184	77	31
23	20	26	e21	e27	23	72	80	349	267	188	70	31
24	20	25	e21	e27	23	71	85	374	221	187	67	31
25	19	25	e21	28	23	72	84	415	217	178	65	31
26	19	23	e20	29	23	84	81	430	227	171	67	31
27	19	24	20	e31	23	85	82	469	242	168	65	31
28	19	24	20	e32	35	82	82	554	255	174	56	31
29	19	23	22	31	---	81	80	585	274	172	48	30
30	19	22	23	e31	---	87	78	614	263	168	47	31
31	19	---	21	e33	---	97	---	805	---	168	46	---
TOTAL	738	836	644	762	734	2050	2574	7720	15484	6225	3280	1019
MEAN	23.8	27.9	20.8	24.6	26.2	66.1	85.8	249	516	201	106	34.0
MAX	27	85	23	33	36	97	103	805	907	233	167	46
MIN	19	18	20	21	23	54	76	79	217	168	46	30
AC-FT	1460	1660	1280	1510	1460	4070	5110	15310	30710	12350	6510	2020

e Estimated.

11292000 MIDDLE FORK STANISLAUS RIVER AT KENNEDY MEADOWS, NEAR DARDANELLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	79.8	45.6	39.0	33.7	30.7	45.5	95.6	314	438	240	122	123
MAX	226	372	266	272	92.5	155	247	626	949	767	328	272
(WY)	1983	1951	1951	1997	1997	1980	1943	1969	1983	1995	1983	1983
MIN	10.4	9.85	10.0	9.23	8.81	12.6	23.7	28.0	68.1	43.1	24.9	12.2
(WY)	1967	1978	1960	1960	1991	1948	1975	1977	1977	1939	1961	1981

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1939 - 2003	
ANNUAL TOTAL	38348		42066			
ANNUAL MEAN	105		115		134	
HIGHEST ANNUAL MEAN					256	1983
LOWEST ANNUAL MEAN					36.4	1977
HIGHEST DAILY MEAN	732	Jun 1	907	Jun 4	2350	May 16 1996
LOWEST DAILY MEAN	18	Nov 4	18	Nov 4	7.1	Jan 14 1977
ANNUAL SEVEN-DAY MINIMUM	19	Oct 31	19	Oct 31	7.5	Feb 21 1991
MAXIMUM PEAK FLOW			1010	Jun 3	3310	May 16 1996
MAXIMUM PEAK STAGE			5.60	Jun 3	8.37	May 16 1996
ANNUAL RUNOFF (AC-FT)	76060		83440		97260	
10 PERCENT EXCEEDS	209		258		355	
50 PERCENT EXCEEDS	68		54		61	
90 PERCENT EXCEEDS	21		21		16	

11292600 DONNELL LAKE NEAR DARDANELLE, CA

LOCATION.—Lat 38° 19'46", long 119° 57'37", unsurveyed, T.6 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank in hoist house of Donnell Dam on Middle Fork Stanislaus River, 1.2 mi downstream from Niagara Creek, and 6.9 mi west of Dardanelle.

DRAINAGE AREA.—230 mi^2.

PERIOD OF RECORD.—October 1957 to current year. Prior to October 1960, published as "Donnells Reservoir near Dardanelle."

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 4.84 ft above NGVD of 1929 (levels by Oakdale and South San Joaquin Irrigation Districts).

REMARKS.—Lake is formed by concrete arch-type dam completed in 1957. Usable capacity, 64,745 acre-ft, between gage heights 4,720.0 ft, minimum operating head, and 4,917.0 ft, top of spillway gates. Lake is for power and conservation storage. Water passes through a 7.2-mi tunnel to a powerplant and down the Middle Fork Stanislaus River to Beardsley Lake (station 11292800). Records, including extremes, represent total contents at 2400 hours, of which 2,150 acre-ft is below minimum operating head. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were provided by Oakdale and South San Joaquin Irrigation District, in connection with Federal Energy Regulatory Commission project no. 2005.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 64,900 acre-ft, May 8, 1963, gage height, 4,917.3 ft; minimum since reservoir first filled, 2,220 acre-ft, Apr. 15, 1983, gage height, 4,720.6 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 64,200 acre-ft, June 16, gage height, 4,915.69 ft; minimum, 4,990 acre-ft, Feb. 12, gage height, 4,736.19 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated Oct. 1, 1956)

4,720	2,150	4,740	5,830	4,780	16,200	4,850	38,700
4,725	2,850	4,750	8,220	4,790	19,100	4,880	49,800
4,730	3,730	4,760	10,800	4,800	22,100	4,917.3	64,900
4,735	4,730	4,770	13,400	4,820	28,400		

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23400	10400	9240	6620	7710	5420	9450	6310	62700	62700	53400	45300
2	22400	10200	9360	6550	7890	5650	9700	5680	63300	62400	53400	44700
3	21600	10100	9470	6360	7820	5620	9370	6300	63500	62100	53300	44200
4	21100	9750	9580	6440	7700	5500	8910	6920	63600	61700	53000	43600
5	20600	9460	9690	6310	7210	5340	8610	7250	63400	61300	53000	43000
6	20100	9200	9770	6060	6740	5220	7990	7160	63600	60900	53200	42500
7	19600	8990	9880	5880	6340	5160	7240	6950	63700	60400	53100	42000
8	18900	9720	9840	5740	6330	5340	6920	6820	63900	60300	52900	41700
9	18300	10500	9550	5780	6060	5390	6820	6540	64000	60200	52800	41600
10	17800	10800	9300	5860	5620	5420	6530	6030	63600	60000	52700	41600
11	17100	10700	9040	5920	5230	5420	6400	5770	63400	59800	52400	41500
12	16600	10600	8780	6020	4990	5480	6380	5930	63300	59600	52300	40900
13	16100	10400	8610	5960	5370	5500	7040	6460	63200	59400	52100	40600
14	15500	10100	8660	5970	5720	5650	6940	7540	63600	59100	52000	40200
15	15000	9780	8670	5980	6130	6190	6640	8690	64000	58800	51800	40100
16	14600	9560	8550	5980	6300	6430	6210	10200	64200	58400	51500	39800
17	14300	9310	8330	6040	6460	6410	5630	11600	64000	58200	51300	39800
18	14000	9430	8150	6040	6560	6860	5620	13200	63900	57700	51400	39600
19	13900	9160	7970	5970	6360	7420	6370	14800	63900	57600	51600	39000
20	13500	8910	7780	6030	6050	7760	6980	16800	63800	57600	51500	38400
21	13500	8730	7770	6120	5870	7490	6900	19500	63700	57300	51200	37700
22	13300	8510	7540	6060	5840	7910	6550	22700	63800	56900	51000	37100
23	13000	8480	7330	6050	5680	8260	5820	26500	63900	56500	50400	36500
24	12600	8390	7050	6230	5500	8300	5610	30700	63800	56100	49600	36000
25	12300	8510	7010	6480	5400	8360	5430	34800	63600	55800	49000	35400
26	12200	8620	6880	6650	5390	8640	5980	38500	63400	55600	48300	34800
27	12000	8750	6840	6990	5060	8870	6480	42600	63300	55400	47900	34400
28	11700	8880	6890	7280	5160	8710	7000	47700	63200	55000	47200	34400
29	11400	9000	6720	7380	---	8640	7510	52800	63100	54500	46700	33800
30	11000	9120	6610	7390	---	8840	6980	58000	62900	54100	46400	33300
31	10700	---	6570	7500	---	9140	---	61100	---	53700	45900	---
MAX	23400	10800	9880	7500	7890	9140	9700	61100	64200	62700	53400	45300
MIN	10700	8390	6570	5740	4990	5160	5430	5680	62700	53700	45900	33300
a	4759.69	4753.59	4743.22	4747.07	4736.97	4753.64	4744.92	4908.28	4912.72	4890.06	4869.64	4834.64
b	-13800	-1580	-2550	+930	-2340	+3980	-2160	+54120	+1800	-9200	-7800	-12600

CAL YR 2002 b -7630
WTR YR 2003 b +8800

a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.

11292700 MIDDLE FORK STANISLAUS RIVER AT HELLS HALF ACRE BRIDGE, NEAR PINECREST, CA

LOCATION.—Lat 38° 14'50", long 120° 02'01", in NW 1/4 NE 1/4 sec.31, T.5 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, on left bank 200 ft upstream from Donnell Powerplant, 800 ft downstream from Hells Half Acre bridge, 1.1 mi upstream from Cow Creek, and 4.7 mi northwest of Pinecrest.

DRAINAGE AREA.—287 mi^2.

PERIOD OF RECORD.—February 1956 to current year. Prior to October 1965, published as "Middle Fork Stanislaus River at Hells Half Acre bridge."
WATER TEMPERATURE: Water years 1966–71 and 1973–78.

GAGE.—Water-stage recorder. Datum of gage is 3,418.31 ft above NGVD of 1929 (river-profile survey). Prior to Aug. 9, 1961, at site 1,600 ft upstream at different datum.

REMARKS.—Flow regulated by Relief Reservoir (station 11291000), Donnell Lake (station 11292600) since April 1957 and diversion around station through Donnell Powerplant (station 11292610). See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were provided by Oakdale and South San Joaquin Irrigation District, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2005.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 24,600 ft^3/s (revised), Jan. 2, 1997, gage height, 18.02 ft, from rating curve extended above 5,200 ft^3/s, on basis of slope-area measurement at gage height 12.20 ft; minimum daily, 3.3 ft^3/s, Nov. 9, 10, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum stage known since at least 1905, 23 ft, Dec. 23, 1955, from floodmarks, at present site, discharge, 26,600 ft^3/s, by slope-area measurement.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	35	27	49	161	90	253	257	1880	59	49	43
2	36	35	27	56	146	87	220	272	2310	58	49	43
3	36	35	27	64	124	87	196	322	2630	56	46	43
4	36	34	27	65	114	87	184	411	2630	55	44	43
5	36	32	27	67	107	84	169	365	2380	53	44	42
6	36	20	27	70	101	85	160	344	1980	52	43	42
7	35	23	27	69	95	87	158	334	1820	51	43	42
8	35	141	27	70	90	88	188	345	1720	50	42	42
9	35	153	27	72	86	90	213	306	1760	49	42	41
10	35	62	27	94	84	92	231	300	1800	48	42	41
11	36	47	27	92	83	100	243	329	1490	47	41	41
12	36	41	26	80	81	112	269	379	1190	46	41	41
13	36	41	31	77	129	134	366	451	995	46	41	41
14	35	39	76	75	155	162	299	489	724	45	40	40
15	35	35	71	71	132	274	270	488	612	44	40	40
16	35	33	81	70	139	215	246	504	792	44	40	40
17	35	31	67	73	123	169	239	498	1050	43	39	40
18	36	30	59	82	112	147	236	498	784	42	38	40
19	36	29	52	86	110	138	231	491	635	42	38	40
20	36	29	50	85	104	142	250	516	544	47	38	40
21	36	29	47	84	101	142	258	560	371	46	38	39
22	36	29	44	84	100	154	232	589	198	45	38	39
23	36	28	41	102	100	235	226	587	78	45	38	39
24	36	28	40	122	102	264	272	576	76	44	37	39
25	36	27	39	112	102	226	309	519	72	44	37	38
26	36	27	39	122	99	330	300	464	69	43	37	40
27	36	27	42	131	97	309	309	477	66	43	37	40
28	36	27	53	140	92	237	315	479	64	42	38	40
29	35	27	57	124	---	216	296	452	62	42	43	40
30	35	26	51	119	---	232	265	407	60	43	43	40
31	35	---	55	140	---	255	---	1080	---	46	43	---
TOTAL	1106	1200	1318	2747	3069	5070	7403	14089	30842	1460	1269	1219
MEAN	35.7	40.0	42.5	88.6	110	164	247	454	1028	47.1	40.9	40.6
MAX	37	153	81	140	161	330	366	1080	2630	59	49	43
MIN	35	20	26	49	81	84	158	257	60	42	37	38
AC-FT	2190	2380	2610	5450	6090	10060	14680	27950	61180	2900	2520	2420
a	14450	7340	7190	8870	12220	17100	31610	40320	40490	29940	16630	14670

a Diversion, in acre-feet, through Donnell Powerplant (station 11292610), provided by Oakdale and South San Joaquin Irrigation District.

11292700 MIDDLE FORK STANISLAUS RIVER AT HELLS HALF ACRE BRIDGE, NEAR PINECREST, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	37.9	44.8	82.4	156	160	209	294	828	979	271	46.0	35.4
MAX	184	305	814	1856	986	738	808	3144	4512	2016	320	72.8
(WY)	1983	1984	1965	1997	1986	1986	1986	1969	1983	1995	1983	1983
MIN	12.6	7.09	8.69	13.9	12.4	13.0	19.9	29.9	16.7	12.5	11.5	12.1
(WY)	1978	1958	1959	1961	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1958 - 2003	
ANNUAL TOTAL	38827		70792			
ANNUAL MEAN	106		194		262	
HIGHEST ANNUAL MEAN					868	1983
LOWEST ANNUAL MEAN					18.4	1977
HIGHEST DAILY MEAN	669	Jun 7	2630	Jun 3	17300	Jan 2 1997
LOWEST DAILY MEAN	20	Nov 6	20	Nov 6	3.3	Nov 9 1957
ANNUAL SEVEN-DAY MINIMUM	27	Nov 25	27	Nov 25	3.7	Nov 7 1957
MAXIMUM PEAK FLOW			2680	Jun 4	24600	Jan 2 1997
MAXIMUM PEAK STAGE			8.41	Jun 4	18.02	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	77010		140400		189700	
TOTAL DIVERSION (AC-FT) a	259700		240800		258300	
10 PERCENT EXCEEDS	236		457		595	
50 PERCENT EXCEEDS	52		64		48	
90 PERCENT EXCEEDS	35		35		21	

a Diversion, in acre-feet, through Donnell Powerplant (station 11262610), provided by Oakdale and South San Joaquin Irrigation District.

11292800 BEARDSLEY LAKE NEAR STRAWBERRY, CA

LOCATION.—Lat 38° 12'17", long 120° 04'31", in SE 1/4 NW 1/4 sec.14, T.4 N., R.17 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, in hoist house of Beardsley Dam on Middle Fork Stanislaus River, 2.4 mi upstream from Spring Gap Powerplant, 3.9 mi west of Strawberry, and 4.7 mi west of Pinecrest.

DRAINAGE AREA.—309 mi^2.

PERIOD OF RECORD.—June 1957 to current year. Prior to October 1960, published as "Lake Hartley near Strawberry."

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 7.84 ft above NGVD of 1929 (levels by Oakdale and South San Joaquin Irrigation Districts).

REMARKS.—Reservoir is formed by rockfill, earth-core dam completed in 1957. Capacity, 98,500 acre-ft, between gage heights 3,145.0 ft, tunnel invert, and 3,398.0 ft, top of spillway gates. No dead storage. Reservoir is used for power and conservation storage. Water passes through Beardsley Powerplant, is diverted at Beardsley Afterbay to J.W. Southern Powerplant at Sand Bar Flat on the Middle Fork Stanislaus River, then diverted to Stanislaus Powerplant at the head of New Melones Reservoir (station 11299000). Records, including extremes, represent contents at 2400 hours. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were provided by Oakdale and South San Joaquin Irrigation District, in connection with Federal Energy Regulatory Commission project no. 2005.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 98,700 acre-ft, June 27, 1957, gage height, 3,398.2 ft; minimum since reservoir first filled, 3 acre-ft, Sept. 23, 1976, gage height, 3,154.4 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 97,700 acre-ft, June 22, 30, gage height, 3,396.88 ft, June 22; minimum, 19,800 acre-ft, Feb. 14, gage height, 3,260.84 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated Oct. 3, 1956)

3,154	2	3,190	1,370	3,240	11,600	3,350	66,400
3,160	41	3,200	2,370	3,260	19,500	3,370	79,200
3,170	267	3,210	3,790	3,290	33,100	3,398	98,500
3,180	693	3,220	5,720	3,320	48,800		

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70000	54800	49200	31700	21000	21200	28700	53900	96400	97600	95400	81900
2	70000	54000	48300	31200	20800	21000	29200	55200	97500	97600	95100	81700
3	69800	53900	47400	30800	20700	20900	30100	55500	97300	97600	94700	81500
4	69400	54100	46600	30200	20600	20900	31000	56200	97300	97600	94500	81300
5	69000	54200	45800	29800	20600	21000	31600	56900	97300	97600	93900	81100
6	68600	54200	45000	29500	20800	21000	32500	58000	97100	97600	93300	80800
7	68200	54400	44100	29200	21000	21100	33400	59200	97100	97600	92700	80400
8	67900	55000	43300	28900	20800	21000	34200	60400	97200	97300	92400	79800
9	67600	55300	42800	28400	20600	20900	35000	61600	97200	97200	91800	79200
10	67200	55200	42200	28100	20500	20800	36100	62900	97200	97300	91200	78300
11	66900	55400	41700	27700	20500	20900	37200	64100	97200	97200	90900	77700
12	66400	55500	41200	27200	20400	21000	38400	65300	97300	97200	90300	77400
13	66000	55800	40700	26900	20000	21300	39300	66900	97400	97100	89800	76800
14	65700	56100	40300	26500	19800	21800	40600	68500	97500	97200	89200	76400
15	65300	56300	39700	26000	19900	22400	41800	70100	97200	97100	88600	75600
16	64700	56400	39500	25600	20200	22800	43000	71800	97100	97100	88300	75100
17	64100	56600	39400	25100	20400	23300	44200	73500	97300	97100	87800	74200
18	63400	56400	39000	24800	20500	23300	44800	75200	97400	97100	87000	73600
19	62700	56600	38500	24400	20700	22800	44700	76900	97400	96800	86000	73300
20	62100	56800	38100	24100	20900	22300	44800	78600	97400	96500	85400	73000
21	61500	56900	37500	23700	21000	22500	45600	80400	97600	96500	84900	72900
22	61100	56800	37000	23400	21000	22300	46500	82300	97700	96500	84500	72600
23	60400	56100	36600	23200	21200	22400	47700	84100	97600	96500	84300	72500
24	59900	55400	36200	23000	21400	22900	48700	85800	97600	96500	84200	72100
25	59300	54500	35600	22700	21400	23500	49800	87300	97500	96400	84100	71600
26	58800	53600	34900	22300	21400	24400	50200	88600	97500	96100	83900	71300
27	58000	52700	34400	22000	21600	25300	50700	90100	97500	95700	83700	71000
28	57300	51900	33700	21700	21600	26100	51100	91900	97600	95700	83500	70800
29	56700	51000	33300	21400	---	26700	51500	93200	97600	95800	83200	71300
30	56100	50100	32800	21300	---	27200	52700	93800	97700	95800	82500	71600
31	55500	---	32300	21100	---	27900	---	94900	---	95600	82200	---
MAX	70000	56900	49200	31700	21600	27900	52700	94900	97700	97600	95400	81900
MIN	55500	50100	32300	21100	19800	20800	28700	53900	96400	95600	82200	70800
a	3331.77	3322.33	3288.36	3263.82	3264.90	3279.01	3326.93	3392.95	3396.82	3393.90	3374.59	3358.35
b	-14400	-5400	-17800	-11200	+500	+6300	+24800	+42200	+2800	-2100	-13400	-10600

CAL YR 2002 b +6700
WTR YR 2003 b +1700

a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.

11292900 MIDDLE FORK STANISLAUS RIVER BELOW BEARDSLEY DAM, CA

LOCATION.—Lat 38° 11'36", long 120° 05'53", in NW 1/4 NW 1/4 sec.22, T.4 N., R.17 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank, 0.5 mi downstream from Beardsley Afterbay Dam, 1.5 mi downstream from Beardsley Dam, and 5.7 mi west of Pinecrest.

DRAINAGE AREA.—316 mi^2.

PERIOD OF RECORD.—December 1956 to current year.

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 3,044.7 ft above NGVD of 1929 (river-profile survey).

REMARKS.—Diversion from Beardsley Afterbay Dam, 0.5 mi upstream, to J.W. Southern Powerplant (station 11292860) at Sand Bar Flat 3 mi downstream, began May 31, 1986. Flow regulated by Relief Reservoir (station 11291000) since 1909, Donnell Lake (station 11292600) since April 1957, and by Beardsley Lake (station 11292800) since January 1957. See schematic diagram of Stanislaus River Basin. For records of combined discharge for river and powerplant, see station 11292901.

COOPERATION.—Records were provided by Oakdale and South San Joaquin Irrigation District, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2005.

EXTREMES FOR PERIOD OF RECORD.—River only, maximum discharge, 28,200 ft^3/s, from rating curve extended above 5,400 ft^3/s, on basis of spillway computation at Beardsley Dam, Jan. 2, 1997, gage height, 19.31 ft; minimum daily, 3.0 ft^3/s, Oct. 10, 11, 1958.
Combined flow, maximum daily discharge, 23,100 ft^3/s, Jan. 2, 1997; minimum daily, 25 ft^3/s, Oct. 23, 1986.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	141	142	142	140	145	139	137	925	154	137	140
2	139	141	143	143	139	138	139	137	1770	149	145	141
3	140	143	142	143	138	138	138	138	2580	145	146	141
4	139	142	143	142	138	138	139	138	2510	143	146	141
5	138	142	141	142	137	138	138	137	2340	143	143	142
6	138	140	140	141	139	138	138	137	2060	143	138	141
7	140	140	140	141	137	138	139	139	1820	142	138	142
8	138	141	141	140	137	138	138	139	1690	141	138	141
9	139	140	141	141	136	138	137	140	1750	142	138	142
10	140	140	141	140	137	138	138	137	1810	141	138	141
11	140	139	141	140	137	138	139	137	1520	141	138	142
12	143	140	140	140	137	135	137	137	1230	141	137	142
13	142	141	143	140	136	137	140	138	1030	140	136	141
14	140	141	143	138	136	135	138	137	807	141	136	142
15	141	142	144	143	137	136	137	137	885	142	137	142
16	141	143	141	141	140	137	139	137	956	141	138	142
17	140	142	142	138	140	139	140	137	1060	141	138	142
18	140	143	140	138	140	139	137	139	812	141	138	142
19	140	142	144	138	142	138	138	138	757	141	138	142
20	140	140	141	138	143	138	139	137	668	140	139	142
21	140	141	141	138	143	137	139	136	408	140	141	142
22	142	140	141	137	142	137	139	137	260	141	142	142
23	143	140	141	135	141	138	139	137	254	140	141	142
24	142	140	140	135	191	138	138	137	205	140	139	142
25	141	140	141	135	297	138	139	137	196	142	141	142
26	140	142	140	135	297	139	141	137	195	143	142	142
27	141	143	140	135	297	138	139	137	178	141	141	140
28	141	143	140	135	254	138	139	136	159	141	140	139
29	142	141	142	138	---	138	138	135	156	141	142	140
30	141	143	143	139	---	138	137	240	155	140	141	142
31	140	---	141	140	---	138	---	567	---	140	141	---
TOTAL	4349	4236	4383	4311	4528	4276	4155	4789	31146	4401	4333	4244
MEAN	140	141	141	139	162	138	138	154	1038	142	140	141
MAX	143	143	144	143	297	145	141	567	2580	154	146	142
MIN	138	139	140	135	136	135	137	135	155	140	136	139
AC-FT	8630	8400	8690	8550	8980	8480	8240	9500	61780	8730	8590	8420
a	31860	10910	29220	26800	18470	22720	25550	29610	35870	34250	33530	27280

a Diversion, in acre-feet, through Beardsley Powerplant (station 11292820), provided by Oakdale and South San Joaquin Irrigation District.

11292900 MIDDLE FORK STANISLAUS RIVER BELOW BEARDSLEY DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1985, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	396	410	449	432	478	494	588	1271	1607	819	523	488
MAX	651	1064	1322	1035	1322	1307	1378	3754	5325	2420	958	690
(WY)	1984	1983	1984	1984	1980	1983	1982	1969	1983	1983	1983	1983
MIN	23.3	19.9	18.8	18.9	21.0	22.4	180	168	348	77.5	44.5	39.5
(WY)	1977	1977	1977	1977	1977	1977	1957	1960	1976	1977	1977	1977

SUMMARY STATISTICS	WATER YEARS 1957 - 1985	
ANNUAL MEAN	671	
HIGHEST ANNUAL MEAN	1507	1983
LOWEST ANNUAL MEAN	111	1977
HIGHEST DAILY MEAN	8630	May 30 1983
LOWEST DAILY MEAN	3.0	Oct 10 1958
ANNUAL SEVEN-DAY MINIMUM	5.0	Jan 16 1957
MAXIMUM PEAK FLOW	9080	May 30 1983
MAXIMUM PEAK STAGE	12.30	May 30 1983
ANNUAL RUNOFF (AC-FT)	485800	
10 PERCENT EXCEEDS	1270	
50 PERCENT EXCEEDS	500	
90 PERCENT EXCEEDS	110	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	118	121	119	241	155	193	195	603	841	330	128	119
MAX	152	172	154	2227	398	625	607	1973	3266	1960	269	151
(WY)	1998	1999	1990	1997	1997	1996	1995	1995	1995	1995	1995	1998
MIN	54.8	54.4	53.9	53.1	55.1	58.7	135	59.1	57.6	57.3	55.8	56.8
(WY)	1991	1991	1995	1995	1991	1991	1991	1994	1994	1994	1988	1990

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	56256		79151			
ANNUAL MEAN	154		217		264	
HIGHEST ANNUAL MEAN					735	1995
LOWEST ANNUAL MEAN					76.6	1988
HIGHEST DAILY MEAN	464	Mar 1	2580	Jun 3	23100	Jan 2 1997
LOWEST DAILY MEAN	135	Sep 6	135	Jan 23	25	Oct 23 1986
ANNUAL SEVEN-DAY MINIMUM	136	Sep 4	135	Jan 22	44	Jan 19 1995
MAXIMUM PEAK FLOW			2690	Jun 3	28200	Jan 2 1997
MAXIMUM PEAK STAGE			8.24	Jun 3	19.31	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	111600		157000		191100	
TOTAL DIVERSION (AC-FT) a	341100		325600		296600	
10 PERCENT EXCEEDS	143		155		408	
50 PERCENT EXCEEDS	140		140		142	
90 PERCENT EXCEEDS	138		137		58	

a Diversion, in acre-feet, through Beardsley Powerplant (station 11292820), provided by Oakdale and South San Joaquin Irrigation District.

11292901 MIDDLE FORK STANISLAUS RIVER BELOW BEARDSLEY DAM, CA—Continued

MIDDLE FORK STANISLAUS RIVER AND J.W. SOUTHERN POWERPLANT BELOW BEARDSLEY DAM, CA

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	538	539	491	480	466	318	473	466	1530	765	547	545
2	539	509	486	480	467	309	473	467	2380	751	552	548
3	541	143	486	477	469	309	477	460	3190	449	554	546
4	540	142	435	470	470	310	470	443	3120	734	553	537
5	538	142	433	470	452	310	473	457	2950	734	554	517
6	539	140	486	470	462	310	443	468	2670	733	564	515
7	539	140	489	463	463	310	467	470	2430	732	564	518
8	538	141	487	458	461	311	463	462	2300	662	566	516
9	536	140	486	456	461	309	462	462	2360	557	565	515
10	535	140	489	413	465	310	464	460	2420	548	565	516
11	536	139	489	416	466	311	464	461	2130	552	564	515
12	537	140	489	423	465	307	461	469	1840	555	562	513
13	537	141	485	426	455	312	396	472	1640	554	561	512
14	537	141	485	424	191	305	392	475	1420	547	553	514
15	537	142	478	422	137	307	420	476	1500	545	535	514
16	537	143	453	421	140	307	429	479	1570	546	536	514
17	538	142	444	426	140	309	438	483	1670	545	537	516
18	538	143	486	432	235	309	439	487	1420	548	542	515
19	536	142	500	434	304	482	447	487	1370	549	542	516
20	537	140	493	434	310	476	451	487	1280	548	545	515
21	348	141	490	434	310	478	450	488	1020	548	543	514
22	370	319	490	433	311	478	451	495	870	546	545	513
23	539	502	488	430	310	472	452	491	864	544	544	514
24	538	497	482	431	245	469	450	493	816	545	544	512
25	538	496	484	431	297	363	434	494	808	549	546	556
26	344	493	483	433	297	474	415	497	805	549	546	556
27	539	492	485	436	297	470	427	498	781	548	545	411
28	539	491	482	437	312	470	439	501	763	547	547	139
29	541	490	478	444	---	473	458	587	766	549	546	140
30	540	490	480	464	---	473	459	830	765	548	544	142
31	540	---	475	466	---	476	---	1180	---	551	545	---
TOTAL	16129	8000	14887	13734	9858	11627	13437	15945	49448	18178	17056	14414
MEAN	520	267	480	443	352	375	448	514	1648	586	550	480
MAX	541	539	500	480	470	482	477	1180	3190	765	566	556
MIN	344	139	433	413	137	305	392	443	763	449	535	139
AC-FT	31990	15870	29530	27240	19550	23060	26650	31630	98080	36060	33830	28590

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2003, BY WATER YEAR (WY)

MEAN	402	277	408	423	380	514	601	1070	1376	809	573	496
MAX	671	538	656	2608	1007	1560	1448	2554	3874	2504	805	702
(WY)	2000	1987	1997	1997	1997	1986	1986	1995	1998	1995	1995	1999
MIN	57.6	58.1	55.8	55.3	55.1	58.7	146	72.7	208	444	471	124
(WY)	1989	1989	1989	1989	1991	1991	1988	1990	1987	1994	1994	1988

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1986 - 2003	
ANNUAL TOTAL	183476		202713			
ANNUAL MEAN	503		555		612	
HIGHEST ANNUAL MEAN					1165	1995
LOWEST ANNUAL MEAN					221	1988
HIGHEST DAILY MEAN	824	Jun 22	3190	Jun 3	23100	Jan 2 1997
LOWEST DAILY MEAN	138	Feb 8	137	Feb 15	25	Oct 23 1986
ANNUAL SEVEN-DAY MINIMUM	138	Feb 8	140	Nov 6	27	Nov 12 1985
ANNUAL RUNOFF (AC-FT)	363900		402100		443000	
10 PERCENT EXCEEDS	698		733		1140	
50 PERCENT EXCEEDS	531		486		503	
90 PERCENT EXCEEDS	278		308		137	

11293200 MIDDLE FORK STANISLAUS RIVER BELOW SAND BAR DIVERSION DAM, CA

LOCATION.—Lat 38° 10'59", long 120° 09'28", in NW 1/4 SE 1/4 sec.24, T.4 N., R.16 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank, 100 ft downstream from Sand Bar Diversion Dam, and 8.5 mi west of Strawberry.

DRAINAGE AREA.—332 mi^2.

PERIOD OF RECORD.—October 1985 to current year (low-flow records only). Unpublished records for water years 1970, 1971, and 1976–85 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and sharp-crested weir since February 1986. Elevation of gage is 2,700 ft above NGVD of 1929, from topographic map.

REMARKS.—No records computed above 70 ft^3/s. Flow regulated by Relief Reservoir and Donnell and Beardsley Lakes (stations 11291000, 11292600, and 11292800, respectively). Most of the water is diverted at Sand Bar Diversion Dam for use at Stanislaus Powerplant (station 11295505). See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2130.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	55	29	29	29	29	30	55	---	---	60	54
2	53	55	29	29	29	29	30	55	---	---	65	54
3	54	---	29	29	29	30	30	55	---	---	68	54
4	53	---	29	29	29	32	30	56	---	---	58	55
5	53	33	29	29	29	34	30	55	---	---	54	54
6	54	29	29	29	29	34	30	55	---	---	54	54
7	54	31	29	29	29	32	30	55	---	---	54	55
8	54	57	29	29	29	31	30	55	---	---	54	55
9	54	40	29	29	29	31	30	55	---	64	54	55
10	53	35	29	29	29	30	30	54	---	55	54	55
11	54	34	29	29	29	30	30	55	---	55	54	55
12	53	34	29	29	29	30	30	55	---	55	54	55
13	54	34	29	29	29	30	62	55	---	55	54	55
14	54	34	30	29	29	30	30	55	---	55	54	55
15	54	35	31	29	29	30	30	55	---	55	54	56
16	54	34	38	29	29	30	30	55	---	55	54	56
17	54	35	29	29	29	30	30	55	---	55	54	57
18	54	34	29	29	29	30	30	55	---	58	54	57
19	54	34	29	29	29	31	30	55	---	59	54	57
20	54	34	29	29	29	30	30	55	---	59	54	58
21	53	34	29	29	29	30	30	54	---	58	54	57
22	55	35	29	29	29	30	30	55	---	54	54	57
23	55	34	29	29	29	30	30	55	---	54	54	57
24	54	32	29	29	29	30	30	55	---	54	54	57
25	54	30	29	29	29	30	30	55	---	54	54	---
26	53	29	29	29	29	32	30	55	---	54	54	---
27	54	30	29	29	29	30	30	55	---	54	54	---
28	54	29	29	29	29	30	47	55	---	54	54	---
29	55	30	29	29	---	30	55	---	---	54	54	---
30	54	30	29	29	---	30	55	---	---	55	54	---
31	55	---	29	29	---	30	---	---	---	55	54	---
TOTAL	1670	---	911	899	812	945	999	---	---	---	1709	---
MEAN	53.9	---	29.4	29.0	29.0	30.5	33.3	---	---	---	55.1	---
MAX	55	---	38	29	29	34	62	---	---	---	68	---
MIN	53	---	29	29	29	29	30	---	---	---	54	---
AC-FT	3310	---	1810	1780	1610	1870	1980	---	---	---	3390	---
a	29790	10950	30250	28630	21200	24410	29560	30890	30500	30880	30210	26650

CAL YR 2002 a 329700
WTR YR 2003 a 323900

a Diversion, in acre-feet, through Stanislaus Powerplant (station 11295505), provided by Pacific Gas & Electric Co.

11293350 UNION RESERVOIR NEAR BIG MEADOWS, CA

LOCATION.—Lat 38° 25'50", long 119° 59'47", unsurveyed, T.7 N., R.18 E., Alpine County, Hydrologic Unit 18040010, Stanislaus National Forest, at outlet structure on upstream face of Union Dam on North Fork Stanislaus River, and 6.4 mi east of Big Meadows.

DRAINAGE AREA.—13.8 mi^2.

PERIOD OF RECORD.—October 1986 to current year. Unpublished records for water years 1981–86 available in files of the U.S. Geological Survey.

GAGE.—Nonrecording gage, observed intermittently in the summer months. Datum of gage is 6,823.4 ft above NGVD of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.—Reservoir is formed by concrete and rock dam completed in 1902. Usable capacity, 3,130 acre-ft, between gage heights -1.9 ft, invert of outlet, and 26.9 ft, crest of spillway. Figures given represent usable contents. Released water is used for hydroelectric power and irrigation downstream. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by the Northern California Power Association, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 11563.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas & Electric Co. in 1954)

0	4	10	359	20	1,756	27.6	3,283
5	81	15	938	25	2,723		

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	909	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	1846
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	2828	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

11293370 UTICA RESERVOIR NEAR BIG MEADOWS, CA

LOCATION.—Lat 38° 26'26", long 120° 00'08", unsurveyed, T.7 N., R.18 E., Alpine County, Hydrologic Unit 18040010, Stanislaus National Forest, at outlet structure on upstream face of Utica Dam on North Fork Stanislaus River, 1.2 mi upstream from Silver Creek, 2.6 mi southeast of Bear Valley, and 6.2 mi east of Big Meadows.

DRAINAGE AREA.—15.2 mi^2.

PERIOD OF RECORD.—October 1986 to current year. Unpublished records for water years 1981–86 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder since Oct. 1, 1999. Datum of gage is 6,776.75 ft above NGVD of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.—Reservoir is formed by concrete and rock dam completed in 1910. Usable capacity, 2,334 acre-ft, between gage heights 0.7 ft, invert of outlet, and 42.5 ft, crest of spillway. Figures given represent usable contents. Released water is used for hydroelectric power and irrigation downstream. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by the Northern California Power Agency, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 11563.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 2,580 acre-ft, May 29, 2003, gage height, 43.75 ft; minimum, 388 acre-ft, Feb. 2, 3, 2001, gage height, 30.74 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 2,580 acre-ft, May 29, gage height, 43.75 ft; minimum, 748 acre-ft, Dec. 8, gage height, 39.16 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas and Electric Co. in 1954)

0.7	0	20	64	30	356	40	1,763
10	19	25	127	35	858	43	2,456

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2130	2000	817	1040	1370	1690	2480	2440	2540	2360	2300	2270
2	2130	1950	772	1040	1380	1700	2480	2450	2540	2360	2320	2270
3	2130	1890	752	1050	1390	1720	2460	2460	2540	2350	2310	2280
4	2120	1840	752	1060	1400	1730	2470	2460	2530	2340	2300	2280
5	2120	1790	751	1060	1410	1740	2450	2460	2530	2340	2300	2280
6	2120	1730	751	1070	1420	1750	2450	2460	2530	2330	2300	2270
7	2120	1750	749	1080	1420	1770	2450	2460	2510	2330	2290	2270
8	2120	1860	748	1080	1430	1780	2480	2460	2520	2330	2290	2270
9	2120	1840	749	1090	1430	1800	2480	e2450	2510	2320	2290	2270
10	2110	1820	751	1110	1440	1820	2480	2450	2500	2320	2290	2270
11	2110	1770	749	1110	1440	1880	2490	2480	2500	2320	2280	2270
12	2110	1730	749	1120	1450	1970	2490	2500	2490	2320	2280	e2270
13	2110	1700	764	1120	1480	2130	2470	2530	2480	2320	2280	2270
14	2110	1650	803	1130	1500	2330	e2460	2500	2480	2320	e2280	e2270
15	2100	1600	821	1130	1520	2460	2450	2520	2480	2320	2280	e2260
16	2100	1560	872	1140	1540	2460	2460	2530	2480	2310	2270	2260
17	2100	1510	894	1140	1560	2440	2450	2540	2490	2310	2270	e2260
18	2100	1460	901	1150	1560	2430	2450	2530	2480	2310	2270	2260
19	2100	1400	920	1160	1580	2420	2430	2540	2470	2310	2270	2260
20	2100	1360	929	1170	1590	2430	2450	2550	2460	2320	2270	2260
21	2090	1300	938	1180	1600	2440	2450	2560	2450	2320	2270	2260
22	2090	1250	944	1190	1610	2460	e2450	2570	2440	2310	2270	e2260
23	2090	1200	948	1210	1620	2480	2440	2560	2420	e2320	2270	e2260
24	2090	1150	953	1230	1630	2470	2470	2570	2410	2310	2270	e2260
25	2090	1100	956	1250	1640	2470	2460	2560	2400	2310	2270	e2260
26	2090	1050	962	1260	1660	2510	2450	2550	2390	2300	2270	e2260
27	2080	1000	970	1280	1670	2480	2450	2570	2390	2300	2270	e2260
28	2080	955	993	1300	1680	2470	2450	2570	2390	2300	e2270	e2260
29	2080	907	1010	1310	---	2480	2430	2580	2380	2280	e2270	e2250
30	2080	862	1020	1330	---	2500	2420	2560	2370	e2280	2260	e2250
31	2050	---	1040	1350	---	2500	---	2540	---	2300	2270	---
MAX	2130	2000	1040	1350	1680	2510	2490	2580	2540	2360	2320	2280
MIN	2050	862	748	1040	1370	1690	2420	2440	2370	2280	2260	2250
a	41.32	35.03	36.19	37.97	39.62	43.27	42.87	43.57	42.66	42.34	42.23	
b	-80	-1188	+178	+310	+330	+820	-80	+120	-170	-70	-30	-20

CAL YR 2002 MAX 2540 MIN 748 b -980
WTR YR 2003 MAX 2580 MIN 748 b +120

e Estimated.
a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.

11293460 LAKE ALPINE NEAR BIG MEADOWS, CA

LOCATION.—Lat 38° 28'17", long 120° 00'10", in NE 1/4 SW 1/4 sec.9, T.7 N., R.18 E., Alpine County, Hydrologic Unit 18040010, Stanislaus National Forest, at outlet structure on upstream face of Lake Alpine Dam on Silver Creek, and 7.2 mi northeast of Big Meadows.

DRAINAGE AREA.—5.34 mi^2.

PERIOD OF RECORD.—October 1986 to current year. Unpublished records for water years 1981–86 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder since Oct. 1, 1999. Datum of gage is 7,260.07 ft above NGVD of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.—Reservoir is formed on natural lake by concrete and rock dam completed in 1906. Usable capacity, 4,117 acre-ft, between gage heights 0.0 ft, invert of outlet, and 42.07 ft, crest of spillway. Figures given represent usable contents. Released water is used for hydroelectric power and irrigation downstream. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Northern California Power Agency, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 11563.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 4,220 acre-ft, May 22, 27–29, 2003, maximum gage height, 42.66 ft, May 27–29, 2003; minimum, 1,760 acre-ft, Mar. 16–18, 2001, minimum gage height, 26.54 ft, Mar. 17, 2001.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 4,220 acre-ft, May 22, 27–29, maximum gage height, 42.66 ft, May 27–29; minimum, 2,470 acre-ft, Dec. 12, gage height, 31.68 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas and Electric Co. in 1948)

0	0	15	533	30	2,229	40	3,765
5	41	20	990	35	2,962	43	4,279
10	208	25	1,564				

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2950	2600	2540	2550	2560	2640	3350	4060	4210	4100	3810	3480
2	2930	2590	2540	2550	2570	2640	3400	4070	4210	4090	3810	3470
3	2920	2580	2530	2540	2580	2640	3420	4090	4210	4060	3810	3460
4	2910	2570	2520	2540	2580	2640	3460	4090	4200	4070	3800	3450
5	2900	2560	2520	2530	2580	2640	3480	4100	4200	4060	3780	3440
6	2900	2550	2510	2520	2580	2640	3490	4110	4200	4050	3770	3430
7	2890	2570	2500	2520	2590	2640	3500	4120	4200	4050	3760	3420
8	2880	2650	2500	2520	2590	2650	3530	4130	4200	4040	3750	3410
9	2860	2660	2490	2520	2590	2650	3570	4120	4190	4020	3740	3400
10	2850	2670	2480	2520	2590	2650	3610	4130	4190	4020	3730	3380
11	2840	2660	2480	2520	2590	2660	3650	4140	4180	4010	3720	3370
12	2820	2660	2470	2510	2590	2680	3720	4160	4180	4000	3710	3360
13	2810	2650	2480	2510	2610	2700	3790	4180	4170	3990	3690	3340
14	2800	2640	2500	2500	2610	2740	3810	4170	4170	3980	3680	3330
15	2790	2640	2510	2500	2620	2780	3820	4190	4160	3970	3670	3320
16	2780	2630	2560	2490	2630	2790	3840	4190	4160	3960	3660	3310
17	2760	2620	2570	2490	2630	2800	3850	4190	4160	3950	3650	3300
18	2750	2610	2560	2490	2630	2810	3860	4190	4160	3940	3640	3290
19	2740	2610	2580	2480	2630	2820	3870	4190	4150	3930	3630	3280
20	2730	2610	2570	2480	2630	2830	3890	4200	4150	3920	3620	3270
21	2720	2600	2570	2480	2630	2850	3910	4210	4140	3910	3610	3260
22	2710	2600	2570	2480	2630	2870	3920	4220	4140	e3890	3600	3240
23	2700	2600	2560	2490	2640	2910	3920	4210	4140	e3890	3590	3230
24	2690	2590	2550	2490	2640	2930	3950	4210	4120	3880	3580	3230
25	2680	2590	2550	2500	2640	2960	3990	4210	4120	3860	3560	3210
26	2660	2580	2540	2500	2640	3040	4000	4210	4120	3850	3560	3200
27	2650	2570	2540	2510	2640	3100	4010	4220	4120	3840	3540	3190
28	2640	2560	2550	2520	2640	3130	4030	4220	4110	3830	3530	3180
29	2630	2560	2550	2520	---	3160	4040	4220	4110	3820	3520	3170
30	2620	2550	2550	2530	---	3220	4050	4210	4100	3820	3500	3160
31	2610	---	2560	2540	---	3290	---	4210	---	3820	3500	---
MAX	2950	2670	2580	2550	2640	3290	4050	4220	4210	4100	3810	3480
MIN	2610	2550	2470	2480	2560	2640	3350	4060	4100	3820	3500	3160
a	32.65	32.26	32.29	32.20	32.89	37.08	41.66	42.59	41.98	40.32	38.38	36.25
b	-350	-60	+10	-20	+100	+650	+760	+160	-110	-280	-320	-340

CAL YR 2002 MAX 4200 MIN 2470 b -390
WTR YR 2003 MAX 4220 MIN 2470 b +200

e Estimated.
a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.

11293590 NORTH FORK STANISLAUS RIVER DIVERSION RESERVOIR NEAR BIG MEADOWS, CA

LOCATION.—Lat 38° 26'18", long 120° 01'00", unsurveyed, T.7 N., R.18 E., Alpine County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank of diversion dam on North Fork Stanislaus River, and 5.6 mi northeast of Big Meadows.

PERIOD OF RECORD.—February 1990 to current year. Contents less than 12 acre-ft and end of month elevations for November 1990 to March 1991 published in WDR CA-91-3 are unreliable and should not be used.

REVISED RECORD.—WDR CA-92-3: 1991.

GAGE.—Water-stage recorder. Prior to Sept. 14, 1990, contents estimated on basis of periodic observations of nonrecording gage. Datum of gage is NGVD of 1929 (levels by Calaveras County Water District).

REMARKS.—Reservoir is formed by gravity-type concrete dam completed in October 1987. Capacity, 120 acre-ft, between elevations 6,672.0 ft, sill of emergency release gate, and 6,695.0 ft, crest of spillway. Reservoir is used for power development and fishery enhancement. Flow is diverted through tunnel to New Spicer Meadow Reservoir (station 11293770). Records, including extremes, represent total contents at 2400 hours. Elevations below 6,678.9 ft are not recorded. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Northern California Power Agency, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2409.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 212 acre-ft, Jan. 1, 1997, elevation, 6,699.6 ft; minimum, 4 acre-ft, many days in 1999, 2000, 2002, and 2003.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 132 acre-ft, May 27, elevation, 6,695.78 ft; minimum, 4 acre-ft, several days, elevation unknown.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Calaveras County Water District in July 1989)

6,679	11	6,690	65	6,695	120	6,696	140
6,685	32						

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	31	33	27	34	28	54	41	98	27	12	11
2	11	31	33	28	31	28	47	43	98	24	15	11
3	11	31	25	29	31	29	41	48	98	21	13	11
4	11	31	16	29	30	e29	42	46	92	18	12	11
5	11	31	12	29	30	e29	39	48	81	15	12	11
6	11	31	12	29	29	e30	e37	49	77	14	11	e11
7	11	38	12	29	29	30	43	47	65	13	11	e11
8	11	66	12	29	28	31	51	47	66	12	11	e11
9	12	35	12	29	28	31	55	42	63	12	11	e11
10	12	34	12	28	29	33	55	47	56	11	11	e11
11	12	36	12	28	28	35	60	57	52	11	11	e11
12	12	38	12	28	28	38	56	76	48	11	11	e11
13	12	38	13	28	31	42	50	99	47	11	11	e11
14	12	35	27	28	31	38	44	75	45	11	11	e10
15	e11	34	28	28	30	41	41	100	44	11	11	e10
16	e11	33	26	29	30	39	40	92	44	11	11	e10
17	e4	33	28	30	29	36	40	99	47	11	11	e10
18	e4	33	28	30	29	35	39	96	44	11	11	e10
19	e4	34	28	30	29	36	42	99	40	11	11	e10
20	e4	34	28	30	29	37	43	111	38	11	11	e10
21	e4	34	28	29	29	41	42	126	37	11	11	e10
22	e4	33	27	29	29	46	39	131	35	11	11	e10
23	e4	33	26	35	30	49	44	127	34	11	11	e10
24	e4	33	25	32	29	48	47	129	32	11	11	e10
25	e4	33	24	34	29	48	44	120	31	11	11	e10
26	e4	32	24	32	29	78	41	115	30	11	11	e10
27	e4	33	27	34	29	52	41	132	30	11	11	e10
28	e4	33	29	32	28	47	42	131	29	11	11	e10
29	e4	33	28	32	---	53	e40	131	29	11	11	e4
30	e8	33	28	34	---	61	40	119	28	11	11	e4
31	e24	---	28	36	---	62	---	101	---	12	11	---
MAX	24	66	33	36	34	78	60	132	98	27	15	11
MIN	4.0	31	12	27	28	28	37	41	28	11	11	4.0
a		6685.32	6684.08	6685.86	6684.28	6689.77	6686.42	6693.53	6684.19	6679.57	6679.01	
b	+13	+9	-5	+8	-8	+34	-22	+61	-73	-16	-1	-7

CAL YR 2002 MAX 125 MIN 4.0 b -5
WTR YR 2003 MAX 132 MIN 4.0 b -7

e Estimated.
a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11293600 NORTH FORK STANISLAUS RIVER BELOW DIVERSION DAM, NEAR BIG MEADOWS, CA

LOCATION.—Lat 38° 26'04", long 120° 01'04", unsurveyed, T.7 N., R.18 E., Calaveras County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank, 0.3 mi downstream from diversion dam, and 5.6 mi northeast of Big Meadows.

DRAINAGE AREA.—28.8 mi^2.

PERIOD OF RECORD.—October 1987 to current year.

REVISED RECORDS.—WDR CA-89-3: 1988 (M).

GAGE.—Water-stage recorder, crest-stage gage, and artificial control. Elevation of gage is 6,640 ft above NGVD of 1929, from topographic map.

REMARKS.—Low and medium flow regulated by Union and Utica Reservoirs and Lake Alpine (stations 11293350, 11293370, and 11293460, respectively). Diversion upstream from station at North Fork Stanislaus River Diversion Reservoir (station 11293590) through North Fork Stanislaus River Diversion Tunnel (station 11293580) and into New Spicer Meadow Reservoir (station 11293770), for hydroelectric power generation. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Northern California Power Agency, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2409.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,220 ft^3/s, May 16, 1996, gage height, 7.92 ft, from rating curve extended above 120 ft^3/s, on basis of computation of peak flow over diversion dam; minimum daily, 2.3 ft^3/s, Oct. 18–20, 22, 23, 1992.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	21	22	20	23	20	28	24	34	21	13	11
2	11	21	22	20	22	20	26	24	34	20	15	11
3	11	21	21	20	21	20	24	26	34	19	15	11
4	11	21	17	20	21	20	24	26	34	18	14	12
5	9.0	21	14	20	21	20	24	25	33	16	13	11
6	8.7	21	12	20	21	21	23	26	32	15	12	11
7	8.6	24	12	20	20	21	24	26	32	15	12	11
8	8.9	30	12	20	20	21	25	25	31	14	12	11
9	11	24	12	20	20	21	27	24	31	13	12	11
10	12	22	12	20	20	22	28	25	30	13	12	11
11	12	22	12	20	20	22	28	27	29	12	12	11
12	12	23	12	20	20	23	29	30	28	12	e9.4	11
13	12	23	13	20	21	24	28	32	28	12	11	11
14	12	22	18	20	21	24	25	32	27	12	11	11
15	11	22	20	20	21	24	24	32	27	12	11	11
16	11	22	20	20	21	24	24	33	27	12	11	11
17	13	22	21	21	21	23	24	32	27	12	11	11
18	11	22	20	21	20	23	23	33	27	12	11	10
19	11	22	21	21	20	22	24	33	26	12	11	11
20	11	22	20	21	20	23	24	33	25	12	11	11
21	11	22	20	21	20	23	24	53	25	12	11	11
22	11	22	20	21	21	24	24	77	24	12	11	11
23	11	22	20	22	21	26	24	68	24	12	11	11
24	11	22	19	22	21	26	25	65	23	12	11	11
25	11	22	19	22	20	26	25	45	23	12	11	11
26	12	21	19	22	20	31	24	35	22	12	11	11
27	12	21	19	22	20	29	24	81	22	11	11	11
28	11	22	20	22	20	26	24	90	22	11	11	11
29	10	22	20	22	---	26	24	86	22	11	11	12
30	9.8	22	20	22	---	28	24	49	21	11	11	11
31	12	---	20	22	---	29	---	34	---	12	12	---
TOTAL	340.0	666	549	644	577	732	748	1251	824	412	361.4	331
MEAN	11.0	22.2	17.7	20.8	20.6	23.6	24.9	40.4	27.5	13.3	11.7	11.0
MAX	13	30	22	22	23	31	29	90	34	21	15	12
MIN	8.6	21	12	20	20	20	23	24	21	11	9.4	10
AC-FT	674	1320	1090	1280	1140	1450	1480	2480	1630	817	717	657
a	0	1490	96	546	390	4540	5600	23200	8440	1.1	0	0

e Estimated.

a Diversion, in acre-feet, through North Fork Stanislaus River Diversion Tunnel (station 11293580) to New Spicer Meadows Reservoir, provided by Northern California Power Agency.

11293600 NORTH FORK STANISLAUS RIVER BELOW DIVERSION DAM, NEAR BIG MEADOWS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15.0	18.2	14.3	16.6	17.4	22.3	31.3	40.4	27.3	14.4	12.1	14.1
MAX	20.2	42.2	25.6	39.3	25.3	42.5	99.6	106	98.7	28.1	22.8	26.5
(WY)	1989	1990	1997	1997	1996	1988	1988	1996	1995	1989	1988	1988
MIN	8.08	7.01	3.19	3.80	4.85	16.2	18.8	18.0	9.68	5.45	5.32	5.48
(WY)	2002	1991	1991	1991	1991	1991	1991	1992	1992	1988	1989	1989

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1988 - 2003	
ANNUAL TOTAL	6597.5		7435.4			
ANNUAL MEAN	18.1		20.4		20.3	
HIGHEST ANNUAL MEAN					32.6	1995
LOWEST ANNUAL MEAN					13.0	1991
HIGHEST DAILY MEAN	41	Apr 14	90	May 28	1840	May 16 1996
LOWEST DAILY MEAN	8.4	Aug 4	8.6	Oct 7	2.3	Oct 18 1992
ANNUAL SEVEN-DAY MINIMUM	9.0	Jul 30	9.7	Oct 2	2.3	Oct 17 1992
MAXIMUM PEAK FLOW			262	May 27	3220	May 16 1996
MAXIMUM PEAK STAGE			4.47	May 27	7.92	May 16 1996
ANNUAL RUNOFF (AC-FT)	13090		14750		14690	
ANNUAL DIVERSION (AC-FT) a	41130		44300			
10 PERCENT EXCEEDS	27		28		27	
50 PERCENT EXCEEDS	20		20		17	
90 PERCENT EXCEEDS	9.4		11		8.0	

11293770 NEW SPICER MEADOW RESERVOIR NEAR BIG MEADOWS, CA

LOCATION.—Lat 38° 23'35", long 119° 59'53", in NW 1/4 NE 1/4 sec.9, T.7 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, at outlet structure on upstream face of New Spicer Meadow Dam on Highland Creek, and 7.7 mi east-southeast of Big Meadows.

DRAINAGE AREA.—45.4 mi^2.

PERIOD OF RECORD.—February 1990 to current year.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Calaveras County Water District).

REMARKS.—Reservoir is formed by rockfill dam with a reinforced concrete face completed in December 1988. Dam is 600 ft downstream from original concrete gravity-type dam which was completed in 1929. Usable capacity, 184,298 acre-ft, between elevations 6,420.0 ft, minimum operating head, and 6,614.0 ft, crest of spillway. Released water is used for hydroelectric power and fishery maintenance. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Northern California Power Agency, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2409.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 190,024 acre-ft, July 5, 1998, elevation, 6,614.5 ft; minimum, 30,198 acre-ft, Mar. 5, 1993, elevation, 6,491.2 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 180,800 acre-ft, estimated, June 21–23, elevation unknown; minimum, 94,300 acre-ft, Mar. 9, 10, elevation, 6,559.43 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Calaveras County Water District in July 1989)

6,420	4,702	6,480	23,781	6,540	69,652	6,600	160,318
6,440	9,299	6,500	35,214	6,560	94,859	6,614	189,000
6,460	15,511	6,520	50,197	6,580	125,341		

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117600	106400	104600	100700	99000	97300	106500	120200	164800	178200	161200	143800
2	117200	106100	104400	100500	99100	97100	107100	120600	166500	177900	160700	143400
3	116900	106000	104400	100400	99300	96600	107600	121300	168400	177800	160100	142600
4	116500	105700	104000	100200	99300	96000	108200	121800	170300	177400	159100	141700
5	116200	105600	103600	100100	99300	95300	108600	122100	171700	177300	158600	141100
6	115900	105300	103300	100000	99400	94800	108900	122600	172900	176900	158000	140400
7	115500	105800	102900	99800	99400	94600	109200	123200	173800	176600	157500	139800
8	115200	107100	102600	99500	99400	94500	109600	123800	174400	176400	157100	139100
9	114800	107100	102400	99400	99400	94300	110300	123600	175200	176000	156700	138400
10	114500	107100	102200	99200	99400	94300	111000	122600	176100	175500	156200	137900
11	114100	107100	101900	98800	99400	94400	111700	121900	e177100	174900	155800	137200
12	113800	107100	101600	98500	99400	94500	112900	121900	e177900	174600	155300	136700
13	113600	107000	101700	98300	99500	94800	113800	122700	e178700	174100	154700	136000
14	113200	106900	102100	98000	99700	95200	114400	123900	e179400	173600	154000	135400
15	112800	106900	102200	97700	99700	96000	114800	125100	e179700	173000	153400	134700
16	112500	106800	102600	97500	100000	96400	115000	126400	e179700	172200	152600	134100
17	112200	106600	102700	97300	100100	96700	115000	127900	e179700	171300	152100	133500
18	111900	106400	102600	97300	100100	96900	115200	129300	e180100	170300	151400	133000
19	111500	106300	102700	97300	100200	97100	115600	130800	e180400	169700	151000	132400
20	110800	106200	102600	97100	100300	97400	116000	132600	e180700	169100	150400	132100
21	110300	106100	102600	97100	100300	97700	116400	135400	e180800	168000	150000	131500
22	109900	106000	102500	97100	100400	98200	116700	138400	e180800	167400	149500	130600
23	109400	105900	102300	97100	100500	98900	117000	141700	e180800	166900	148900	129800
24	109100	105800	102100	97300	100400	99500	117700	144700	e180500	166500	148400	129000
25	108700	105600	101900	97600	99700	100000	118200	147300	e180000	166100	147700	128500
26	108300	105400	101700	97700	98900	101400	118600	149800	e179500	165200	146900	128100
27	107900	105200	101500	98000	98100	102300	119000	152500	e179100	163900	146300	127600
28	107600	105100	101400	98300	97700	102900	119300	155400	178700	163200	145400	127300
29	107200	104900	101200	98400	---	103500	119700	158200	178700	162600	145100	127000
30	107000	104700	100900	98500	---	104400	119900	160800	177900	161800	144600	126400
31	106600	---	100900	98700	---	105400	---	162700	---	161400	144200	---
MAX	117600	107100	104600	100700	100500	105400	119900	162700	180800	178200	161200	143800
MIN	106600	104700	100900	97100	97700	94300	106500	120200	164800	161400	144200	126400
a	6567.49	6566.33	6563.83	6562.42	6561.75	6566.76	6576.16	6600.46	6607.78	6599.85	6590.26	6580.19
b	-11300	-1900	-3800	-2200	-1000	+7700	+14500	+42800	+15200	-16500	-17200	-17800
c	11320	5730	7130	6480	5210	5770	2040	12020	11900	16690	17430	17000

CAL YR 2002 MAX 157800 MIN 60700 b +40300 c 75120
WTR YR 2003 MAX 180800 MIN 94300 b +8500 c 118700

e Estimated.
a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.
c Diversion, in acre-feet, through New Spicer Meadow Powerplant (station 11293760), provided by Northern California Power Agency.

11294000 HIGHLAND CREEK BELOW NEW SPICER MEADOW RESERVOIR, CA

LOCATION.—Lat 38° 23'35", long 119° 59'53", in NW 1/4 NE 1/4 sec.9, T.7 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank in New Spicer Meadow Powerplant at downstream side of New Spicer Meadow Dam, 5.4 mi upstream from mouth, and 6.5 mi east-southeast of Big Meadows.

DRAINAGE AREA.—46.0 mi^2.

PERIOD OF RECORD.—October 1952 to current year.

REVISED RECORDS.—WSP 1930: 1953. WDR CA-89-3: Drainage area, 1987(M), 1988(M).

GAGE.—Acoustic-flow meter and water-stage recorder on New Spicer Meadow Reservoir (station 11293770). Elevation of gage is 6,340 ft above NGVD of 1929, from topographic map. December 1986 to September 1990 at site 1,400 ft downstream at different datum. October 1952 to November 1986, at site 900 ft upstream at different datum.

REMARKS.—Low and medium flows regulated by New Spicer Meadow Reservoir since 1988 and, prior to 1988, by Spicer Meadows Reservoir, capacity, 4,060 acre-ft. Flow has been diverted to New Spicer Meadow Reservoir from North Fork Stanislaus River since Oct. 21, 1987. Penstock diverts from New Spicer Meadow Reservoir to New Spicer Meadow Powerplant. At times flow may bypass New Spicer Meadow Powerplant. Discharges, including extremes, represent flow through or past powerplant, and flow over spillway of reservoir. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Northern California Power Agency, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2409.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9,860 ft^3/s, Jan. 31, 1963, gage height, 11.88 ft, site and datum then in use, from rating curve extended above 1,200 ft^3/s; no flow some years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Nov. 20, 1950, reached a stage of 11.50 ft, site and datum then in use, from Pacific Gas & Electric Co. recorder chart, discharge, 8,800 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	116	100	104	50	200	20	21	200	156	170	202
2	172	107	88	104	50	200	21	21	294	130	194	252
3	172	101	97	104	50	268	21	21	234	136	333	430
4	173	101	145	104	51	361	21	21	141	145	492	420
5	173	101	199	104	51	378	21	21	272	145	335	299
6	173	101	200	119	51	353	21	22	377	145	253	299
7	172	101	200	151	51	141	42	23	378	147	243	298
8	173	75	130	169	51	139	126	23	388	184	226	298
9	173	51	125	180	51	140	21	314	360	202	226	305
10	173	100	125	180	51	108	21	710	159	255	226	301
11	172	103	124	180	51	94	21	685	21	263	225	299
12	172	104	125	180	51	95	21	546	21	188	247	299
13	172	101	105	179	51	74	21	446	29	186	320	298
14	172	90	51	179	51	20	21	269	42	225	334	298
15	172	61	36	179	38	20	20	254	153	346	334	298
16	172	102	32	141	24	20	51	304	291	349	334	300
17	172	103	53	125	24	20	238	270	341	417	334	267
18	171	102	75	115	24	20	49	328	130	496	298	255
19	215	102	75	81	24	20	23	301	86	329	252	236
20	323	102	75	81	24	20	21	268	92	290	251	201
21	282	93	80	93	24	20	21	80	92	512	251	295
22	210	87	81	100	24	20	21	25	95	323	251	423
23	209	87	79	82	24	20	21	26	139	205	251	422
24	184	88	111	29	129	20	21	26	228	204	292	350
25	171	90	132	21	410	20	21	26	306	205	366	251
26	170	90	131	21	451	20	21	42	326	415	387	210
27	170	88	145	21	452	20	21	173	275	560	387	170
28	170	87	176	23	244	20	21	204	178	413	338	171
29	170	120	175	28	---	20	21	160	177	302	232	169
30	170	134	176	40	---	20	21	140	177	302	202	254
31	164	---	147	49	---	20	---	290	---	237	202	---
TOTAL	5708	2888	3593	3266	2627	2911	1031	6060	6002	8412	8786	8570
MEAN	184	96.3	116	105	93.8	93.9	34.4	195	200	271	283	286
MAX	323	134	200	180	452	378	238	710	388	560	492	430
MIN	164	51	32	21	24	20	20	21	21	130	170	169
AC-FT	11320	5730	7130	6480	5210	5770	2040	12020	11900	16690	17430	17000

11294000 HIGHLAND CREEK BELOW NEW SPICER MEADOW RESERVOIR, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	73.2	58.0	77.9	69.4	97.7	126	209	362	277	141	99.0	87.1
MAX	358	254	399	334	902	605	456	1047	1097	787	592	423
(WY)	1997	2001	1965	1997	1997	1999	1995	1969	1983	1995	1998	1997
MIN	0.000	0.000	0.50	0.50	2.69	0.83	17.9	21.9	37.7	5.23	1.63	1.34
(WY)	1965	1965	1961	1961	1960	1977	1992	1991	1987	1961	1961	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1953 - 2003	
ANNUAL TOTAL	37872		59854			
ANNUAL MEAN	104		164		140	
HIGHEST ANNUAL MEAN					333	1997
LOWEST ANNUAL MEAN					25.3	1977
HIGHEST DAILY MEAN	364	Jul 11	710	May 10	5040	Dec 23 1955
LOWEST DAILY MEAN	20	Feb 25	20	Mar 14	0.00	Sep 28 1964
ANNUAL SEVEN-DAY MINIMUM	20	Mar 6	20	Mar 14	0.00	Sep 28 1964
MAXIMUM PEAK FLOW					9860	Jan 31 1963
MAXIMUM PEAK STAGE					11.88	Jan 31 1963
ANNUAL RUNOFF (AC-FT)	75120		118700		101400	
10 PERCENT EXCEEDS	202		334		399	
50 PERCENT EXCEEDS	90		145		55	
90 PERCENT EXCEEDS	21		21		3.0	

11294500 NORTH FORK STANISLAUS RIVER NEAR AVERY, CA

LOCATION.—Lat 38° 14'38", long 120° 17'24", in SW 1/4 NE 1/4 sec.35, T.5 N., R.15 E., Calaveras County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank, 1.1 mi upstream from McKay's Point Dam, 3.3 mi upstream from Beaver Creek, and 5.1 mi northeast of Avery.

DRAINAGE AREA.—163 mi^2.

PERIOD OF RECORD.—July 1914 to September 1925, October 1928 to current year. Water-year estimates for 1923–25 and 1929 published in WSP 1315-A.
WATER TEMPERATURE: Water years 1990–98.

REVISED RECORDS.—WSP 1215: 1938(M). WSP 1515: 1915(M), 1932(M), 1936(M), 1938, 1940(M).

GAGE.—Water-stage recorder. Datum of gage is 3,388.3 ft above NGVD of 1929 (river-profile survey). Prior to September 1922, nonrecording gage at same site at datum 0.05 ft lower.

REMARKS.—Low and medium flows regulated by Union and Utica Reservoirs, Lake Alpine, North Fork Stanislaus River Diversion Reservoir, and New Spicer Meadow Reservoir beginning 1990 (stations 11293350, 11293370, 11293460, 11293590, and 11293770, respectively), total combined usable capacity, 194,001 acre-ft. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Northern California Power Agency, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2409.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 36,000 ft^3/s, Jan. 31, 1963, gage height, 15.00 ft, from floodmarks, from rating curve extended above 14,000 ft^3/s, on basis of slope-area measurement at gage height 13.8 ft; minimum daily, 5.5 ft^3/s, Dec. 6, 7, 1929.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	169	148	151	189	386	345	619	425	1010	217	190	199
2	e178	129	115	194	347	337	474	472	1000	175	190	203
3	172	118	114	216	278	358	394	709	1000	165	274	352
4	172	115	123	224	250	495	357	890	786	172	476	516
5	172	115	197	223	228	528	321	659	748	173	468	316
6	171	114	207	231	214	534	301	641	886	170	263	303
7	169	131	206	270	199	361	290	643	825	168	261	303
8	168	567	181	288	190	282	516	644	787	174	236	303
9	169	500	140	312	184	289	506	637	765	220	231	306
10	171	186	141	386	180	286	538	1170	527	235	229	312
11	e179	168	140	370	179	269	563	1300	315	303	229	304
12	e179	165	138	331	175	311	708	1300	227	236	233	304
13	172	166	154	330	295	371	983	1380	201	198	290	303
14	172	161	333	328	390	411	640	1330	192	197	344	303
15	169	126	196	312	313	723	523	1180	189	324	345	303
16	166	113	269	301	311	462	451	1310	384	373	344	304
17	168	137	160	267	253	318	597	1280	521	e366	345	291
18	173	135	159	298	215	262	584	1340	324	526	343	256
19	171	133	156	269	206	237	417	1320	201	485	257	255
20	288	134	156	249	193	244	466	1380	179	233	252	207
21	328	137	153	245	186	246	484	1360	176	481	253	205
22	223	124	150	261	187	299	412	1370	170	485	254	417
23	207	120	146	340	186	483	389	1450	173	224	252	440
24	203	118	142	366	184	592	586	1390	247	212	253	436
25	173	118	186	272	511	476	672	1290	349	210	353	262
26	170	117	188	295	640	800	578	1110	398	292	405	250
27	171	116	194	288	641	739	567	1280	394	571	404	173
28	171	114	275	329	505	493	602	1430	251	550	403	168
29	170	115	288	280	---	424	516	1370	223	316	268	168
30	169	155	259	259	---	509	430	1180	220	314	208	185
31	168	---	269	325	---	631	---	1140	---	316	199	---
TOTAL	5701	4795	5686	8848	8026	13115	15484	34380	13668	9081	9052	8647
MEAN	184	160	183	285	287	423	516	1109	456	293	292	288
MAX	328	567	333	386	641	800	983	1450	1010	571	476	516
MIN	166	113	114	189	175	237	290	425	170	165	190	168
AC-FT	11310	9510	11280	17550	15920	26010	30710	68190	27110	18010	17950	17150

e Estimated.

11294500 NORTH FORK STANISLAUS RIVER NEAR AVERY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	88.7	140	230	267	346	510	956	1422	761	185	101	92.4
MAX	482	2103	1957	2440	2105	1785	2026	3299	3651	1231	672	464
(WY)	1983	1951	1965	1997	1986	1986	1982	1969	1983	1983	1998	1997
MIN	21.8	10.6	10.1	17.0	23.5	39.7	70.6	138	44.9	34.0	24.2	22.9
(WY)	1960	1960	1977	1977	1933	1977	1924	1924	1924	1924	1981	1924

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1915 - 2003	
ANNUAL TOTAL	105183		136483			
ANNUAL MEAN	288		374		425	
HIGHEST ANNUAL MEAN					1019	1983
LOWEST ANNUAL MEAN					54.3	1924
HIGHEST DAILY MEAN	1160	Apr 14	1450	May 23	23400	Dec 23 1955
LOWEST DAILY MEAN	113	Nov 16	113	Nov 16	5.5	Dec 6 1929
ANNUAL SEVEN-DAY MINIMUM	117	Nov 23	117	Nov 23	7.4	Dec 2 1929
MAXIMUM PEAK FLOW			1810	May 22	36000	Jan 31 1963
MAXIMUM PEAK STAGE			5.55	May 22	15.00	Jan 31 1963
ANNUAL RUNOFF (AC-FT)	208600		270700		307800	
10 PERCENT EXCEEDS	599		715		1180	
50 PERCENT EXCEEDS	190		275		152	
90 PERCENT EXCEEDS	140		156		36	

11295220 BEAVER CREEK DIVERSION RESERVOIR NEAR ARNOLD, CA

LOCATION.—Lat 38° 13'58", long 120° 16'43", in NW 1/4 NW 1/4 sec.1, T.4 N., R.15 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank at outlet structure of Beaver Creek Diversion Dam on Beaver Creek, and 4.5 mi east-southeast of Arnold.

DRAINAGE AREA.—29.3 mi^2.

PERIOD OF RECORD.—February 1990 to current year.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Calaveras County Water District).

REMARKS.—Reservoir is formed by concrete gravity-type dam completed in July 1989. Usable capacity, 13 acre-ft, between elevations 4,186.0 ft, minimum fishwater release elevation, and 4,191.5 ft, crest of spillway. Water is diverted through tunnel to McKay's Point Reservoir (station 11295260) on North Fork Stanislaus River. Released water is used for fishery maintenance. At times, during some years, reservoir is drained below minimum fishwater release elevation to allow replacement of the fish screens. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Northern California Power Agency, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2409.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 15 acre-ft, Jan. 1, 1997, elevation, 4,195.5 ft; minimum, no storage Jan. 3 to Nov. 10, 1997, Oct. 26 to Nov. 21, Dec. 14, 1998, Aug. 2 to Oct. 31, 1999.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 13 acre-ft, several days, maximum elevation, 4,192.29 ft, May 25; minimum, 1 acre-ft, many days, minimum elevation unknown.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on survey by Calaveras County Water District in July 1989)

4,180	6	4,184	8	4,188	11	4,192	13
4,182	7	4,186	9	4,190	12	4,193	14

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1	10	10	11	13	12	12	12	12	10	10	e1
2	e1	10	10	12	12	12	12	12	12	10	10	e1
3	e10	10	10	12	13	12	12	12	12	10	10	e1
4	e10	10	10	12	12	12	12	12	12	10	10	e1
5	10	10	10	12	12	12	12	12	12	10	10	e1
6	10	10	10	12	12	12	12	12	12	10	10	e1
7	10	11	10	12	12	12	12	12	12	10	10	e1
8	10	13	10	12	12	12	12	12	12	10	10	e1
9	10	13	10	12	12	12	12	12	12	10	10	e1
10	10	13	10	12	12	12	12	12	12	10	10	e1
11	10	12	10	12	12	12	12	12	12	10	e1	e10
12	10	12	10	13	12	12	13	12	12	10	e1	10
13	10	12	12	12	12	12	12	12	12	10	e1	10
14	10	10	12	12	12	12	12	12	12	10	e1	10
15	10	10	13	12	12	12	12	13	12	10	e1	10
16	10	10	12	12	12	12	12	12	12	10	e1	10
17	10	10	12	12	12	12	12	12	12	10	e1	10
18	10	10	12	12	12	12	12	12	12	10	e1	10
19	10	10	12	13	12	12	12	12	12	10	e1	10
20	10	10	12	12	12	12	12	12	12	10	e1	10
21	10	10	12	12	12	12	12	12	12	10	e1	10
22	10	10	11	13	12	12	12	12	12	10	e1	10
23	10	10	11	12	12	12	12	12	12	10	e1	10
24	10	10	10	12	12	12	12	12	12	10	e1	10
25	10	10	10	12	12	12	12	13	12	10	e1	10
26	10	10	10	12	12	12	12	12	11	10	e1	10
27	10	10	10	12	12	12	12	12	10	10	e1	10
28	10	10	11	12	12	12	11	12	10	10	e1	10
29	10	10	12	12	---	13	12	12	10	10	e1	10
30	10	10	12	13	---	12	13	12	10	10	e1	10
31	10	---	12	12	---	12	---	12	---	10	e1	---
MAX	10	13	13	13	13	13	13	13	12	10	10	10
MIN	1.0	10	10	11	12	12	11	12	10	10	1.0	1.0
a	4186.90	4187.09	4190.06	4190.88	4190.74	4190.69	4191.38	4190.30	4187.59	4181.25		4186.93
b	+9	0	+2	0	0	0	+1	-1	-2	0	-9	+9

CAL YR 2002 MAX 13 MIN 1.0 b -1
WTR YR 2003 MAX 13 MIN 1.0 b +9

e Estimated.
a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11295230 BEAVER CREEK BELOW DIVERSION DAM, NEAR ARNOLD, CA

LOCATION.—Lat 38° 13'59", long 120° 16'46", in NE 1/4 NW 1/4 sec.1, T.4 N., R.15 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, at Beaver Creek Diversion Dam, and 4.5 mi east-southeast of Arnold.

DRAINAGE AREA.—29.3 mi^2.

PERIOD OF RECORD.—February 1990 to current year.

REVISED RECORDS.—WDR CA-92-3: 1991 (M).

GAGE.—Acoustic-velocity meter on low-flow discharge, and water-stage recorder on Beaver Creek Diversion Reservoir (station 11295220). Datum of gage is NGVD of 1929 (levels by Calaveras County Water District).

REMARKS.—Entire flow of Beaver Creek in excess of 16.5 ft^3/s required for stream maintenance can be diverted through tunnel and penstock to turbine at McKay's Point Reservoir (stations 11295210 and 11295260). Capacity of tunnel and penstock is 400 ft^3/s and flow in excess of that amount is either released or spilled at Beaver Creek Diversion Dam to the creek. Discharge, including extremes, represents the combined flow of Beaver Creek and spill or release at diversion dam. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Northern California Power Agency, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2409.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,020 ft^3/s, Jan. 1, 1997; minimum daily, 1.2 ft^3/s, Dec. 22, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	4.7	7.3	18	19	19	19	19	18	15	11	e4.8
2	2.9	4.8	7.3	18	19	19	19	19	18	14	14	e4.8
3	e2.9	4.8	7.3	19	19	19	19	19	18	14	12	e4.8
4	4.0	4.7	7.3	19	19	19	19	18	18	14	9.6	e4.8
5	4.4	4.7	7.3	19	19	19	19	19	18	13	9.0	e4.8
6	4.4	4.7	7.3	19	19	19	19	19	18	13	8.7	e4.8
7	4.3	8.3	7.2	19	19	19	19	19	18	13	8.4	e4.8
8	4.2	32	7.0	19	24	19	19	19	18	12	7.9	e4.8
9	4.2	23	7.2	19	19	19	19	19	18	12	7.7	e4.8
10	3.8	25	7.7	19	19	19	19	19	18	12	7.4	e4.8
11	2.9	19	7.8	19	19	19	19	19	18	11	e11	e4.9
12	4.2	19	7.4	19	19	19	21	19	18	11	e4.8	6.5
13	4.1	18	12	19	19	19	21	19	18	11	e4.8	5.2
14	4.1	17	19	19	19	19	19	19	18	10	e4.8	5.1
15	4.0	14	19	19	19	19	19	19	18	10	e4.8	5.0
16	4.1	12	19	19	19	19	19	19	18	9.8	e4.8	5.0
17	4.1	11	19	19	19	19	19	19	18	9.5	e4.8	5.1
18	4.1	10	19	19	19	19	19	19	18	9.3	e4.8	5.1
19	4.3	9.6	19	19	19	19	19	19	18	9.1	e4.8	5.1
20	4.4	9.3	19	19	19	19	18	19	18	9.3	e4.8	5.1
21	4.4	9.1	19	19	19	19	18	18	18	8.7	e4.8	5.0
22	4.4	8.8	18	19	19	19	19	18	18	8.5	e6.5	4.9
23	4.5	8.5	15	19	19	19	19	19	18	8.7	e4.8	4.8
24	4.6	8.3	16	19	19	19	19	38	18	8.6	e4.8	4.8
25	4.7	8.0	15	19	19	18	19	60	18	8.2	e4.8	4.8
26	4.7	7.5	15	19	19	19	19	137	18	8.0	e4.8	4.8
27	4.8	7.5	16	19	19	17	19	18	18	7.8	e4.8	4.9
28	4.7	7.4	18	19	19	18	19	18	16	7.6	e4.8	4.8
29	4.6	7.3	18	19	---	19	19	18	16	7.4	e4.8	4.7
30	4.6	7.3	19	19	---	19	19	18	15	7.9	e4.8	4.8
31	4.7	---	19	19	---	19	---	18	---	8.4	e4.8	---
TOTAL	129.9	335.3	421.1	587	537	585	572	759	533	321.8	204.4	148.4
MEAN	4.19	11.2	13.6	18.9	19.2	18.9	19.1	24.5	17.8	10.4	6.59	4.95
MAX	4.8	32	19	19	24	19	21	137	18	15	14	6.5
MIN	2.9	4.7	7.0	18	19	17	18	18	15	7.4	4.8	4.7
AC-FT	258	665	835	1160	1070	1160	1130	1510	1060	638	405	294
a	0	0	215	947	1680	3420	5400	8980	1240	0	0	0

e Estimated.

a Diversion, in acre-feet, through tunnel and penstock (station 11295210) to McKay's Point Reservoir, provided by Northern California Power Agency.

11295230 BEAVER CREEK BELOW DIVERSION DAM, NEAR ARNOLD, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.46	10.8	26.7	75.0	40.0	55.5	44.0	55.5	30.7	12.3	8.15	6.68
MAX	12.8	21.1	184	610	130	280	185	291	129	21.5	18.2	16.2
(WY)	1999	1997	1997	1997	1997	1995	1995	1995	1998	1998	1998	1998
MIN	3.28	4.48	4.53	5.00	6.32	17.6	17.2	16.3	6.93	4.77	2.61	2.48
(WY)	1991	1991	1991	1991	1991	1990	1990	1992	1992	1994	1994	1992

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	4944.7		5133.9			
ANNUAL MEAN	13.5		14.1		32.1	
HIGHEST ANNUAL MEAN					102	1997
LOWEST ANNUAL MEAN					9.86	1991
HIGHEST DAILY MEAN	42	Apr 3	137	May 26	3570	Jan 2 1997
LOWEST DAILY MEAN	2.9	Sep 19	2.9	Oct 2	1.2	Dec 22 1994
ANNUAL SEVEN-DAY MINIMUM	2.9	Sep 19	3.8	Oct 1	2.0	Oct 1 1991
MAXIMUM PEAK FLOW			193	May 25	6020	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	9810		10180		23270	
ANNUAL DIVERSION (AC-FT) a	18470		21870			
10 PERCENT EXCEEDS	20		19		38	
50 PERCENT EXCEEDS	18		18		17	
90 PERCENT EXCEEDS	4.1		4.8		4.4	

a Diversion, in acre-feet, through tunnel and penstock (station 11295210) to McKay's Point Reservoir, provided by Northern California Power Agency.

11295240 UTICA CANAL AT PRESSURE TAP, NEAR HATHAWAY PINES, CA

LOCATION.—Lat 38° 11'33", long 120° 21'14", in SW 1/4 SW 1/4 sec.17, T.4 N., R.15 E., Calaveras County, Hydrologic Unit 18040010, Stanislaus National Forest, at pressure tap in Collierville Tunnel, and 0.5 mi east of Hathaway Pines.

PERIOD OF RECORD.—October 1989 to current year.

GAGE.—Acoustic-velocity meter. Elevation of gage is 3,160 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow is diverted into Collierville Tunnel at McKay's Point Reservoir (stations 11295250 and 11295260) and enters canal through pressure tap in the tunnel. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Utica Power Authority, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2019.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 89 ft^3/s, Oct. 17, 1989; no flow for many days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	28	23	11	17	35	42	0.0	33	44	44	46
2	39	29	23	18	18	34	42	5.8	35	34	44	46
3	33	29	22	18	18	34	42	9.1	47	46	46	46
4	33	29	24	16	18	34	40	9.0	53	47	47	46
5	33	29	25	14	18	34	40	9.0	52	47	49	45
6	33	29	26	15	18	38	40	16	52	47	50	45
7	33	29	27	14	18	39	37	23	53	47	50	45
8	34	15	27	15	18	39	34	14	53	47	51	45
9	34	16	27	15	18	39	34	18	53	47	50	45
10	34	21	23	10	18	39	34	23	49	45	49	45
11	33	18	21	7.4	18	39	34	23	42	44	46	45
12	33	18	22	3.7	18	39	34	23	42	44	46	45
13	33	18	22	0.0	18	39	10	23	42	44	46	46
14	33	22	21	7.2	18	39	0.0	23	42	44	46	47
15	36	24	4.7	14	18	32	0.0	23	42	44	46	47
16	39	24	3.1	15	18	28	14	26	42	44	46	47
17	39	24	0.0	14	28	27	23	27	41	44	46	47
18	39	24	0.0	15	35	35	17	27	42	44	46	47
19	22	24	0.0	14	35	42	9.1	27	42	44	46	46
20	39	24	0.0	15	35	43	9.1	34	42	44	46	47
21	33	24	0.0	14	35	42	9.1	34	42	45	46	46
22	18	24	10	15	35	42	9.0	34	42	45	46	46
23	32	23	20	14	35	42	9.1	32	42	44	46	46
24	32	23	17	14	35	42	9.1	30	44	44	46	47
25	32	23	15	15	35	42	3.3	30	44	44	47	47
26	29	23	15	15	36	42	0.0	30	44	44	46	47
27	28	23	14	15	38	42	0.0	30	44	44	46	47
28	28	23	16	14	38	42	0.0	30	44	44	46	47
29	28	23	14	15	---	42	0.0	30	44	44	46	46
30	28	23	3.9	14	---	42	0.0	30	44	44	46	47
31	28	---	0.0	15	---	42	---	30	---	44	46	---
TOTAL	1015	706	465.7	411.3	707	1190	574.8	722.9	1333	1377	1447	1384
MEAN	32.7	23.5	15.0	13.3	25.2	38.4	19.2	23.3	44.4	44.4	46.7	46.1
MAX	47	29	27	18	38	43	42	34	53	47	51	47
MIN	18	15	0.00	0.00	17	27	0.00	0.00	33	34	44	45
AC-FT	2010	1400	924	816	1400	2360	1140	1430	2640	2730	2870	2750

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

MEAN	39.1	32.8	37.5	34.1	31.3	33.1	34.2	47.8	53.4	49.2	44.2	41.5
MAX	74.7	59.3	70.2	77.7	79.0	75.8	81.5	85.2	86.0	81.9	56.0	51.3
(WY)	1990	1992	1994	1990	1991	1990	1990	1992	1992	1993	1995	1993
MIN	5.71	1.15	0.000	0.000	0.000	0.000	0.000	2.19	15.3	36.2	30.4	5.93
(WY)	2002	2002	2002	2002	1997	2000	2002	2002	2002	1990	1990	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	7207.40		11333.7			
ANNUAL MEAN	19.7		31.1		39.9	
HIGHEST ANNUAL MEAN					59.8	1990
LOWEST ANNUAL MEAN					14.3	2002
HIGHEST DAILY MEAN	64	Jul 8	53	Jun 4	89	Oct 17 1989
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Dec 17	0.00	Feb 4 1990
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.47	Apr 25	0.00	Feb 4 1990
ANNUAL RUNOFF (AC-FT)	14300		22480		28910	
10 PERCENT EXCEEDS	50		46		75	
50 PERCENT EXCEEDS	15		34		42	
90 PERCENT EXCEEDS	0.00		13		0.00	

11295250 COLLIERVILLE POWERPLANT NEAR MURPHYS, CA

LOCATION.—Lat 38° 08'33", long 120° 22'39", in NE 1/4 SE 1/4 sec.1, T.3 N., R.14 E., Calaveras County, Hydrologic Unit 18040010, 800 ft upstream from Stanislaus River, and 4.4 mi east of Murphys.

PERIOD OF RECORD.—February 1990 to current year.

GAGE.—Pressure-differential sensors in powerplant penstocks. Elevation of powerplant is 1,120 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow is diverted from McKay's Point Reservoir (station 11295260) through Collierville Tunnel to the powerplant. A portion of the flow in the tunnel is diverted to Utica Canal (station 11295240) through a pressure tap near Mill Creek in SW 1/4 SW 1/4 sec.17, T.4 N., R.15 E. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Northern California Power Agency, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2409.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 1,610 ft^3/s, May 8, 2000; no flow for many days most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	150	64	60	269	104	651	624	998	116	392	227
2	93	3.5	170	155	281	196	218	665	1070	151	190	370
3	100	51	136	335	291	518	319	492	796	92	240	309
4	236	117	76	178	301	e449	566	1100	884	110	206	177
5	16	72	80	217	210	e449	287	604	671	69	311	207
6	113	70	50	377	252	e483	165	668	954	9.0	207	112
7	232	208	39	246	243	155	389	569	789	34	167	190
8	156	308	72	250	73	126	342	991	646	185	166	175
9	109	416	109	166	49	97	423	957	602	177	122	159
10	59	89	146	302	164	260	565	817	365	96	107	233
11	e71	148	199	234	223	366	609	1310	220	25	160	190
12	e44	196	151	234	312	313	544	1330	220	119	221	334
13	45	27	241	273	300	400	1180	1340	273	61	175	195
14	154	74	111	212	233	273	773	1180	110	356	127	190
15	e327	118	192	339	229	822	648	1290	108	322	127	122
16	e312	31	240	299	196	412	637	1210	367	e300	142	103
17	321	36	226	277	216	415	475	1360	223	311	197	167
18	194	106	188	205	197	407	552	1390	114	253	247	117
19	49	72	274	159	260	217	393	1350	196	233	160	188
20	0.00	135	138	285	179	81	420	1310	172	367	239	181
21	115	98	61	390	148	120	653	1140	103	221	151	246
22	46	124	35	394	29	248	592	1390	146	303	96	338
23	71	92	105	332	53	348	435	1540	119	170	128	258
24	139	37	11	283	231	630	416	1560	153	277	248	110
25	196	67	5.9	75	626	738	718	1450	264	344	349	150
26	16	26	286	138	701	599	704	1000	298	294	285	196
27	120	100	410	346	550	748	647	1330	289	178	141	126
28	132	87	123	312	409	638	612	1420	116	255	172	159
29	136	58	84	370	---	435	571	1380	83	196	131	187
30	113	35	206	359	---	477	541	1480	108	151	119	183
31	113	---	78	368	---	690	---	1050	---	258	138	---
TOTAL	3876.00	3151.5	4306.9	8170	7225	12214	16045	35297	11457	6033.0	5861	5899
MEAN	125	105	139	264	258	394	535	1139	382	195	189	197
MAX	327	416	410	394	701	822	1180	1560	1070	367	392	370
MIN	0.00	3.5	5.9	60	29	81	165	492	83	9.0	96	103
AC-FT	7690	6250	8540	16210	14330	24230	31830	70010	22720	11970	11630	11700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

MEAN	186	140	198	278	416	581	688	702	424	284	243	225
MAX	333	315	774	820	1170	1101	1240	1339	1340	897	544	364
(WY)	1997	1997	1997	1997	1997	1995	1995	1995	1998	1995	1998	1997
MIN	49.5	40.2	25.3	32.3	9.79	140	309	50.6	55.5	94.7	104	114
(WY)	1993	1992	1992	1992	1991	1991	1994	1992	1992	1994	1992	1992

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	93489.27		119535.40			
ANNUAL MEAN	256		327		375	
HIGHEST ANNUAL MEAN					696	1995
LOWEST ANNUAL MEAN					115	1992
HIGHEST DAILY MEAN	1260	Apr 5	1560	May 24	1610	May 8 2000
LOWEST DAILY MEAN	0.00	Jun 9	0.00	Oct 20	0.00	Feb 10 1990
ANNUAL SEVEN-DAY MINIMUM	59	Nov 24	59	Nov 24	0.00	Feb 7 1991
ANNUAL RUNOFF (AC-FT)	185400		237100		271900	
10 PERCENT EXCEEDS	656		726		987	
50 PERCENT EXCEEDS	166		218		232	
90 PERCENT EXCEEDS	45		71		11	

e Estimated.

11295260 MCKAYS POINT RESERVOIR NEAR AVERY, CA

LOCATION.—Lat 38° 14'01", long 120° 17'30", in NE 1/4 NW 1/4 sec.2, T.4 N., R.15 E., Calaveras County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank at outlet structure near upstream face of McKay's Point Dam on North Fork Stanislaus River, and 4.6 mi northeast of Avery.

DRAINAGE AREA.—166 mi^2.

PERIOD OF RECORD.—February 1990 to current year.

REVISED RECORDS.—WDR CA-92-3: 1992 (M).

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Calaveras County Water District).

REMARKS.—Reservoir is formed by concrete arch-type dam completed in July 1989. Usable capacity, 1,928 acre-ft, between elevations 3,280.0 ft, minimum operating head, and 3,370.0 ft, crest of spillway. Water is diverted from reservoir through tunnel to Utica Canal (station 11295240) and Collierville Powerplant (station 11295250, near the confluence of the middle and north forks of the Stanislaus River). Released water is used for fishery maintenance. New capacity table started on Sept. 1, 1991, based on inflow-outflow computations. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Northern California Power Agency, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2409.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 2,572 acre-ft, Jan. 1, 1997, elevation, 3,379.9 ft; minimum, 255 acre-ft, Oct. 26, 2001, elevation, 3,279.42 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 2,070 acre-ft, Sept. 25, elevation, 3,364.98 ft; minimum, 293 acre-ft, Oct. 18, elevation, 3,283.35 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on inflow-outflow computations provided by Calaveras County Water District in September 1991)

3,280	320	3,320	869	3,360	1,921	3,380	2,575
3,300	480	3,340	1,325	3,370	2,248		

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1990	1440	1460	1890	1510	1620	1170	1260	1710	1630	1520	1700
2	1890	1550	1270	1880	1630	1730	1600	1010	1510	1530	1370	1230
3	1860	1550	1140	1590	1600	1340	1700	1590	1810	1500	1280	1150
4	1600	1420	1110	1600	1490	e1420	1280	1370	1510	1460	1580	1560
5	1750	1360	1230	1530	1510	e1440	1310	1630	1520	1490	1710	1570
6	1720	1300	1420	1200	1380	e1230	e1460	1700	1230	1600	1640	1700
7	1490	1060	1630	1180	1260	1450	1230	1940	1170	1660	1640	1720
8	1380	1570	1720	1140	1390	1600	1510	1420	1290	1470	1560	1780
9	1350	1730	1650	1320	1580	1860	1540	943	1450	1400	1540	1820
10	1430	1780	1560	1430	1510	1820	1460	1710	1620	1480	1560	1820
11	e1520	1710	1360	1620	1370	1570	1370	1570	1690	1830	1470	1850
12	e1580	1590	1250	1740	1070	1500	1710	1460	1610	1900	1310	1590
13	1740	1730	1010	1790	1100	1380	1560	1590	1350	1990	1320	1600
14	1700	1780	1390	1930	1410	1600	1470	1440	1330	1570	1520	1630
15	e1380	1700	1380	1810	1560	1500	1330	1430	1370	1420	1720	1740
16	e1050	1760	1470	1750	1770	1630	1050	1330	1260	1300	1860	1880
17	e468	1870	1340	1670	1810	1460	1300	1350	1640	1280	1940	1920
18	293	1810	1270	1790	1760	1190	1390	1480	1870	1580	1930	1980
19	476	1780	1020	1920	1610	1200	1530	1500	1730	1850	1920	1920
20	965	1660	997	1800	1560	1410	1700	1720	1590	1460	1770	1820
21	1230	1610	1120	1470	1540	1550	1440	1880	1530	1750	1770	1610
22	1450	1490	1240	1180	1760	1610	1160	1800	1390	1930	1870	1570
23	1570	1420	1220	1160	1930	1880	1160	1930	1310	1870	1880	1670
24	1580	1430	1350	1270	1780	1820	1580	1830	1300	1600	1690	2030
25	1440	1400	1600	1560	1450	1290	1630	1640	1310	1200	1510	2070
26	1630	1420	1340	1810	1220	1740	1540	1710	1340	1030	1540	2010
27	1640	1350	882	1700	1270	1760	1480	1750	1370	1550	1790	1910
28	1600	1290	1100	1730	1330	1460	1580	1940	1420	1890	2000	1750
29	1560	1280	1380	1560	---	1430	1590	2030	1530	1960	2030	1540
30	1550	1400	1420	1370	---	1470	1510	1530	1580	2060	2000	1340
31	1550	---	1730	1280	---	1280	---	1710	---	2020	1920	---
MAX	1990	1870	1730	1930	1930	1880	1710	2030	1870	2060	2030	2070
MIN	293	1060	882	1140	1070	1190	1050	943	1170	1030	1280	1150
a	3348.52	3343.25	3354.46	3338.73	3340.67	3338.50	3347.15	3353.87	3349.47	3363.38	3360.08	3341.10
b	-420	-150	+330	-450	+50	-50	+230	+200	-130	+440	-100	-580

CAL YR 2002 MAX 2150 MIN 293 b -630
WTR YR 2003 MAX 2070 MIN 293 b +250

e Estimated.
a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11295270 NORTH FORK STANISLAUS RIVER BELOW McKAY'S POINT DAM, NEAR AVERY, CA

LOCATION.—Lat 38° 13'58", long 120° 17'33", in NE 1/4 NW 1/4 sec.2, T.4 N., R.15 E., Calaveras County, Hydrologic Unit 18040010, Stanislaus National Forest, at McKay's Point Dam, and 4.5 mi northeast of Avery.

DRAINAGE AREA.—166 mi^2.

PERIOD OF RECORD.—August 1989 to current year.

REVISED RECORDS.—WDR CA-91-3: 1990.

GAGE.—Acoustic-flow meter and water-stage recorder on McKay's Point Reservoir (station 11295260). August 1989 to September 1992 at site 500 ft downstream at different datum. Elevation of gage is 3,280 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow regulated by Union and Utica Reservoirs, Lake Alpine (stations 11293350, 11293370, and 11293460, respectively), New Spicer Meadow Reservoir and McKay's Point Reservoir (stations 11293770 and 11295260) with combined capacity, 200,770 acre-ft. Collierville Tunnel diverts at McKay's Point Reservoir to Utica Canal (station 11295240) and Collierville Powerplant (station 11295250). Discharge, including extremes, represents flow through dam's release valve, mini-hydro generator, and flow over spillway. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Northern California Power Agency, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2409.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 28,000 ft^3/s, Jan. 2, 1997; minimum daily, 3.4 ft^3/s, Nov. 25, 1989.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	22	20	21	20	21	18	18	18	19	18	24
2	27	22	20	20	20	21	18	18	18	19	18	23
3	27	22	19	20	20	20	19	19	18	18	18	22
4	24	22	20	20	20	20	18	18	18	18	18	24
5	23	22	20	20	20	20	18	18	18	18	19	25
6	23	22	21	20	20	20	18	18	18	18	20	25
7	23	21	21	20	19	21	18	18	18	19	20	25
8	23	20	21	20	20	21	18	18	18	18	20	25
9	23	21	21	20	21	21	18	18	18	18	21	26
10	23	20	20	21	21	20	18	19	18	18	21	26
11	24	20	20	21	20	20	18	18	19	18	23	25
12	24	20	19	20	20	19	19	18	18	18	24	22
13	23	20	19	20	20	18	18	18	18	19	24	21
14	23	20	20	20	21	18	18	18	18	18	24	22
15	23	21	21	20	20	18	18	17	18	18	25	22
16	22	20	20	20	20	18	18	18	18	19	26	22
17	23	21	20	20	20	18	18	18	18	19	26	22
18	23	21	20	20	20	18	18	18	19	19	25	22
19	23	20	20	20	20	18	18	19	18	19	24	22
20	23	20	20	20	20	18	18	18	18	19	24	21
21	23	20	20	20	20	19	18	18	18	20	23	22
22	23	20	21	20	20	19	18	18	18	20	23	22
23	23	20	21	20	20	19	18	18	17	20	24	22
24	23	20	20	20	20	18	18	18	18	20	23	22
25	22	20	21	21	20	18	18	18	18	20	23	22
26	22	20	20	21	20	18	18	18	18	20	23	22
27	22	20	19	20	20	18	18	18	18	21	23	22
28	22	19	20	20	20	18	18	18	18	21	24	22
29	23	19	21	20	---	18	18	19	19	21	25	22
30	22	20	21	20	---	18	19	18	19	21	25	22
31	22	---	21	20	---	18	---	18	---	20	24	---
TOTAL	721	615	627	625	562	589	543	561	543	593	698	686
MEAN	23.3	20.5	20.2	20.2	20.1	19.0	18.1	18.1	18.1	19.1	22.5	22.9
MAX	27	22	21	21	21	21	19	19	19	21	26	26
MIN	22	19	19	20	19	18	18	17	17	18	18	21
AC-FT	1430	1220	1240	1240	1110	1170	1080	1110	1080	1180	1380	1360

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)

MEAN	22.1	20.5	33.1	139	27.0	41.0	32.3	66.4	25.6	19.8	20.7	22.2
MAX	27.6	25.9	210	1622	102	253	189	338	63.5	23.1	24.5	27.5
(WY)	1992	1994	1997	1997	1996	1995	1995	1995	1995	1994	1994	1991
MIN	19.1	6.06	5.55	7.93	17.4	15.8	18.0	18.0	18.0	18.0	10.6	18.2
(WY)	1996	1990	1990	1990	1990	1990	1999	1999	2000	1999	1989	1998

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1989 - 2003	
ANNUAL TOTAL	7343		7363			
ANNUAL MEAN	20.1		20.2		39.5	
HIGHEST ANNUAL MEAN					173	1997
LOWEST ANNUAL MEAN					16.9	1990
HIGHEST DAILY MEAN	28	Sep 28	27	Oct 1	21600	Jan 2 1997
LOWEST DAILY MEAN	18	Jan 8	17	May 15	3.4	Nov 25 1989
ANNUAL SEVEN-DAY MINIMUM	18	Jan 8	18	May 11	4.2	Nov 15 1989
MAXIMUM PEAK FLOW			27	Oct 2	28000	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	14560		14600		28610	
10 PERCENT EXCEEDS	24		23		24	
50 PERCENT EXCEEDS	19		20		19	
90 PERCENT EXCEEDS	18		18		18	

11295300 NORTH FORK STANISLAUS RIVER BELOW BEAVER CREEK, NEAR HATHAWAY PINES, CA

LOCATION.—Lat 38° 12'26", long 120° 18'58", in SW 1/4 SW 1/4 sec.10, T.4 N., R.15 E., Calaveras County, Hydrologic Unit 18040010, Stanislaus National Forest, at confluence with Beaver Creek, and 2.8 mi northeast of Hathaway Pines.

DRAINAGE AREA.—224 mi^2.

PERIOD OF RECORD.—February 1990 to current year.

REVISED RECORD.—WDR CA-91-3: 1990.

GAGE.—Discharge computed as the sum of North Fork Stanislaus River below McKay's Point Dam (station 11295270) and Beaver Creek below diversion dam (station 11295230). Elevation of gage is 2,230 ft above NGVD of 1929, from topographic map.

REMARKS.—Records consist of release and spill from McKay's Point Reservoir (station 11295260) and Beaver Creek Diversion Reservoir (station 11295220). See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Northern California Power Agency, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2409.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 25,200 ft^3/s, Jan. 2, 1997; minimum daily, 5.1 ft^3/s, Dec. 22, 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	27	27	39	39	39	37	37	37	33	29	e29
2	30	27	27	39	39	39	37	36	36	33	32	e27
3	30	27	27	39	39	39	37	37	36	32	29	e27
4	28	27	27	38	39	38	37	36	36	32	28	e28
5	27	27	27	39	38	39	37	37	36	31	28	e29
6	27	27	28	38	38	39	37	37	36	31	28	e30
7	27	29	28	39	38	39	36	37	36	31	28	e30
8	27	52	28	39	44	39	37	37	36	31	28	e30
9	27	43	28	39	39	39	37	36	36	30	28	e30
10	27	46	28	39	39	39	37	37	37	30	28	e31
11	27	39	28	39	39	39	37	37	37	30	e34	e30
12	28	38	27	39	38	38	39	37	37	29	e29	29
13	27	38	31	39	38	37	40	37	36	29	e28	27
14	27	37	39	39	39	37	37	37	36	29	e29	27
15	27	34	39	39	39	37	37	36	36	28	e30	27
16	26	32	39	39	39	37	36	36	36	29	e31	27
17	27	31	39	39	39	37	37	36	37	28	e31	27
18	27	31	39	39	39	36	37	37	37	28	e30	27
19	27	30	38	39	39	36	37	37	37	28	e29	27
20	27	30	38	39	38	37	36	37	36	28	e28	27
21	27	29	39	39	38	37	36	37	36	28	e28	27
22	27	29	39	38	38	37	37	36	36	29	e30	27
23	27	28	36	39	39	37	37	37	36	28	e28	27
24	27	28	37	39	39	37	37	57	36	28	e28	27
25	27	28	36	39	39	36	37	78	37	28	e28	27
26	27	27	36	39	38	37	37	155	37	28	e28	27
27	27	27	36	39	39	35	36	37	36	29	e28	27
28	27	27	38	39	39	36	37	37	35	29	e29	27
29	27	27	39	39	---	36	37	37	34	28	e29	26
30	27	27	39	38	---	37	37	36	34	29	e29	27
31	27	---	39	38	---	37	---	36	---	29	e29	---
TOTAL	848	949	1046	1204	1088	1162	1110	1317	1084	913	899	835
MEAN	27.4	31.6	33.7	38.8	38.9	37.5	37.0	42.5	36.1	29.5	29.0	27.8
MAX	31	52	39	39	44	39	40	155	37	33	34	31
MIN	26	27	27	38	38	35	36	36	34	28	28	26
AC-FT	1680	1880	2070	2390	2160	2300	2200	2610	2150	1810	1780	1660

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

MEAN	29.5	32.4	61.9	224	67.1	96.5	76.3	122	56.3	32.2	29.6	29.1
MAX	33.5	42.3	394	2233	223	533	374	629	192	40.2	36.7	34.7
(WY)	1992	1999	1997	1997	1996	1995	1995	1995	1998	1998	1998	1998
MIN	25.9	25.7	23.0	23.7	27.0	33.4	36.1	34.7	27.7	27.2	26.1	25.9
(WY)	1991	1991	1991	1991	1991	1990	1990	1992	1992	2001	1990	1990

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	12285		12455			
ANNUAL MEAN	33.7		34.1		73.3	
HIGHEST ANNUAL MEAN					275	1997
LOWEST ANNUAL MEAN					31.7	1992
HIGHEST DAILY MEAN	60	Apr 3	155	May 26	25200	Jan 2 1997
LOWEST DAILY MEAN	26	Oct 16	26	Oct 16	5.1	Dec 22 1994
ANNUAL SEVEN-DAY MINIMUM	27	Oct 13	27	Oct 13	22	Dec 25 1990
ANNUAL RUNOFF (AC-FT)	24370		24700		53130	
10 PERCENT EXCEEDS	38		39		58	
50 PERCENT EXCEEDS	37		36		36	
90 PERCENT EXCEEDS	27		27		27	

e Estimated.

11295900 PINECREST LAKE AT PINECREST, CA

LOCATION.—Lat 38° 11'59", long 119° 59'11", in NE 1/4 SW 1/4 sec.15, T.4 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on south side of intake tower, 400 ft upstream from dam on South Fork Stanislaus River, and 0.7 mi north of Pinecrest.

DRAINAGE AREA.—26.5 mi^2.

PERIOD OF RECORD.—October 1985 to current year. Unpublished records for water years 1981–85 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder since July 14, 1992. Oct. 1, 1985, to July 13, 1992, nonrecording gage read once daily. Datum of gage is NGVD of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.—Reservoir is formed by concrete-faced, rockfill dam, completed in 1916; storage began in 1916. Capacity, 18,312 acre-ft, between elevations 5,498.7 ft, outlet drain, and 5,617.5 ft, top of flash boards in spillway. Released water flows down South Fork Stanislaus River to diversion dam for Philadelphia Canal (station 11297000) for use at Spring Gap Powerplant on Middle Fork Stanislaus River. Figures given, including extremes, represent total contents. Records from July 14, 1992, including extremes, represent total contents at 2400 hours. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2130. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 18,582 acre-ft, June 5, 1997, elevation, 5,618.39 ft; minimum, 380 acre-ft, estimated, Jan. 30, Feb. 24, 25, 2002, elevation unknown.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 18,400 acre-ft, June 19 to July 1, maximum elevation, 5,617.73 ft, June 21; minimum, 4,220 acre-ft, Mar. 10, 11, minimum elevation, 5,555.86 ft, Mar. 10.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated 1938)

5,520	792	5,550	3,534	5,570	6,395	5,600	13,537
5,530	1,558	5,560	4,738	5,580	8,576	5,618.5	18,615
5,540	2,475						

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11600	7500	7060	5330	5380	4610	7300	11500	18100	18400	17900	16900
2	11500	7360	6980	5310	5390	4560	7520	11600	18200	18300	17900	16800
3	11300	7220	6880	5310	5380	4510	7680	11700	18200	18300	18000	16800
4	11200	7080	6780	5320	5350	4460	7790	11800	18100	18200	18000	16700
5	11100	6940	6690	5330	5320	4410	7860	11900	18100	18200	18000	16700
6	10900	6790	6590	5330	5290	4360	7930	12100	18100	18100	18000	16600
7	10800	6710	6490	5330	5240	4320	8040	12200	18100	18100	18000	16600
8	10700	7820	6390	5330	5200	4280	8230	12300	18100	18000	18000	16500
9	10600	8290	6310	5320	5150	4250	8440	12300	18100	18000	18000	16500
10	10400	8350	6230	5330	5090	4220	8680	12400	18000	18000	18000	16200
11	10300	8350	6120	5310	5050	4220	8960	12500	18000	18000	18000	16000
12	10200	8350	6000	5280	5010	4270	9290	12800	18000	18000	17900	15700
13	10000	8340	5960	5250	5030	4350	9550	13200	18000	18000	17900	15500
14	9920	8300	6030	5210	5040	4480	9750	13700	18000	18000	17800	15300
15	9780	8230	5980	5170	5040	4720	9910	14200	18000	18000	17800	15200
16	9650	8150	5970	5150	5040	4810	10000	14700	18000	17900	17700	15000
17	9530	8060	5930	5140	5020	4870	10200	15300	18100	17900	17600	14800
18	9390	7980	5870	5140	4990	4900	10300	16100	18300	17800	17600	14600
19	9260	7880	5800	5140	4950	4910	10400	16600	18400	17800	17500	14500
20	9130	7830	5740	5140	4920	4930	10500	17200	18400	17800	17500	14300
21	9000	7780	5680	5130	4890	4980	10700	18000	18400	17800	17400	14100
22	8860	7740	5620	5120	4850	5080	10700	18200	18400	17800	17400	13900
23	8730	7690	5560	5150	4820	5240	10800	18200	18400	17800	17300	13800
24	8600	7630	5520	5160	4800	5350	11000	18200	18400	17800	17300	13600
25	8470	7600	5490	5170	4780	5450	11100	18100	18400	17800	17200	13400
26	8330	7510	5450	5190	4740	5840	11200	18100	18400	17700	17200	13200
27	8190	7420	5420	5230	4710	6060	11200	18200	18400	17700	17200	13100
28	8050	7330	5420	5260	4660	6190	11300	18300	18400	17600	17100	12900
29	7910	7240	5410	5260	---	6370	11400	18300	18400	17600	17000	12700
30	7780	7160	5380	5280	---	6660	11400	18200	18400	17700	17000	12500
31	7630	---	5360	5330	---	7010	---	18100	---	17800	16900	---
MAX	11600	8350	7060	5330	5390	7010	11400	18300	18400	18400	18000	16900
MIN	7630	6710	5360	5120	4660	4220	7300	11500	18000	17600	16900	12500
a	5575.83	5573.66	5564.27	5564.10	5559.38	5572.96	5591.81	5616.90	5617.69	5615.79	5612.71	5596.12
b	-4070	-470	-1800	-30	-670	+2350	+4390	+6700	+300	-600	-900	-4400

CAL YR 2002 MAX 18500 MIN 380 b +2110
WTR YR 2003 MAX 18400 MIN 4220 b +800

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11296500 SOUTH FORK STANISLAUS RIVER AT STRAWBERRY, CA

LOCATION.—Lat 38° 11'51", long 120° 00'27", in SW 1/4 SW 1/4 sec.16, T.4 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on right bank, 0.4 mi downstream from bridge on State Highway 108 at Strawberry, 0.6 mi downstream from Herring Creek, and 1.2 mi downstream from Pinecrest Lake.

DRAINAGE AREA.—44.8 mi^2.

PERIOD OF RECORD.—October 1911 to January 1917, August 1938 to current year. Monthly discharge only for October 1913 and yearly estimates for 1912–13, published in WSP 1315-A. Published as "near Confidence" 1911–13.

REVISED RECORDS.—WSP 1215: 1945(M). WSP 1515: 1916, 1943(M). WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 5,235.1 ft above NGVD of 1929 from river-profile survey. October 1911 to January 1917, nonrecording gage at site 1 mi downstream at different datum.

REMARKS.—Low and medium flows regulated beginning in 1916 by Pinecrest Lake (station 11295900) 1.2 mi upstream. No diversion upstream from station. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2130.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,820 ft^3/s, Jan. 2, 1997, gage height, 12.34 ft, from rating curve extended above 1,100 ft^3/s, on basis of contracted-opening measurement of peak flow at bridge 0.3 mi downstream from station; minimum daily, 1.3 ft^3/s, Nov. 22, 1946.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	67	54	42	71	57	84	59	906	70	35	28
2	66	67	54	43	68	58	64	60	916	73	32	28
3	67	67	53	43	65	59	56	62	959	67	33	31
4	67	66	54	43	63	58	64	66	935	65	18	45
5	67	66	55	43	63	57	65	64	849	66	14	56
6	67	66	55	45	63	57	61	66	857	64	13	55
7	67	67	55	49	62	58	62	67	726	65	13	55
8	67	122	54	50	61	58	72	66	695	38	13	61
9	66	120	54	50	60	59	81	63	731	24	11	81
10	66	47	54	51	60	59	76	63	616	23	11	89
11	66	62	53	50	59	59	70	66	529	22	11	88
12	66	62	53	50	59	61	78	87	480	21	11	88
13	66	62	54	50	61	68	65	135	419	22	11	92
14	66	62	59	51	58	59	60	162	407	28	35	94
15	66	66	58	51	57	64	53	183	405	29	37	93
16	66	65	57	52	58	53	49	214	400	28	37	92
17	66	64	55	52	57	49	49	227	318	28	34	92
18	65	63	56	53	58	54	50	240	266	27	28	92
19	65	62	56	54	59	59	49	252	220	27	28	91
20	65	62	56	54	59	59	53	287	215	28	28	91
21	65	63	56	54	59	59	52	397	198	28	28	91
22	65	56	55	54	59	66	57	869	176	26	28	91
23	65	53	52	58	59	72	60	999	153	26	28	91
24	66	53	42	59	59	59	65	1040	122	26	28	91
25	69	53	42	58	59	58	65	995	115	25	28	91
26	69	54	42	60	58	101	63	899	118	25	28	90
27	69	55	42	63	58	97	62	1010	116	24	28	90
28	68	55	43	65	57	77	63	1190	111	24	28	90
29	67	54	43	62	---	74	61	1240	93	24	28	91
30	67	54	42	62	---	80	60	1220	80	28	28	91
31	67	---	43	66	---	89	---	1010	---	29	28	---
TOTAL	2059	1935	1601	1637	1689	1997	1869	13358	13131	1100	761	2349
MEAN	66.4	64.5	51.6	52.8	60.3	64.4	62.3	431	438	35.5	24.5	78.3
MAX	69	122	59	66	71	101	84	1240	959	73	37	94
MIN	65	47	42	42	57	49	49	59	80	21	11	28
AC-FT	4080	3840	3180	3250	3350	3960	3710	26500	26050	2180	1510	4660

11296500 SOUTH FORK STANISLAUS RIVER AT STRAWBERRY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	61.3	52.6	58.8	56.8	54.2	67.7	130	420	379	112	48.3	60.1
MAX	121	344	338	429	229	212	386	874	1066	683	127	99.2
(WY)	1983	1951	1951	1997	1982	1986	1982	1969	1983	1983	1983	1968
MIN	6.43	12.0	6.30	11.0	5.91	5.24	29.0	36.8	37.3	9.17	12.8	8.09
(WY)	1945	1943	1969	1987	1987	1977	1977	1977	1992	1977	1988	1984

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1938 - 2003	
ANNUAL TOTAL	35052.6		43486			
ANNUAL MEAN	96.0		119		125	
HIGHEST ANNUAL MEAN					259	1983
LOWEST ANNUAL MEAN					26.6	1977
HIGHEST DAILY MEAN	726	May 18	1240	May 29	4680	Jan 2 1997
LOWEST DAILY MEAN	9.1	Aug 7	11	Aug 9	1.3	Nov 22 1946
ANNUAL SEVEN-DAY MINIMUM	10	Aug 7	12	Aug 7	2.3	Nov 9 1942
MAXIMUM PEAK FLOW			1540	May 29	7820	Jan 2 1997
MAXIMUM PEAK STAGE			5.78	May 29	12.34	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	69530		86250		90810	
10 PERCENT EXCEEDS	165		204		323	
50 PERCENT EXCEEDS	63		61		61	
90 PERCENT EXCEEDS	21		28		21	

11297200 SOUTH FORK STANISLAUS RIVER NEAR STRAWBERRY, CA

LOCATION.—Lat 38° 10'40", long 120° 02'45", in NW 1/4 NW 1/4 sec.30, T.4 N., R.18 E., Tuolumne County, Hydrologic Unit 18040010, on right bank, 400 ft downstream from diversion dam, and 2.8 mi southwest of Strawberry.

DRAINAGE AREA.—48.5 mi^2.

PERIOD OF RECORD.—October 1985 to current year (low-flow records only). Unpublished records for water years 1970, 1976–85 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 4,915 ft above NGVD of 1929, from topographic map.

REMARKS.—No records computed above 50 ft^3/s. Flow regulated by Pinecrest Lake (station 11295900). Most of the water is diverted at diversion dam 400 ft upstream to Philadelphia Canal (station 11297000). See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2130.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	44	4.9	7.6	28	6.9	46	19	---	16	7.6	e11
2	45	43	4.8	8.8	24	8.1	19	20	---	19	7.6	e11
3	45	43	4.7	9.8	18	9.6	14	26	---	12	7.6	e11
4	45	43	5.3	10	14	8.5	17	34	---	14	15	11
5	45	42	5.7	10	13	7.4	18	27	---	12	13	8.0
6	45	42	5.8	8.9	13	7.3	14	30	---	9.9	12	8.0
7	44	45	5.6	5.0	11	7.6	14	31	---	12	11	7.6
8	44	---	5.2	5.5	9.8	7.8	26	31	---	10	11	12
9	44	---	5.3	6.0	8.7	8.5	39	25	---	8.5	9.9	35
10	44	19	5.2	8.0	8.1	9.4	36	24	---	7.9	9.3	46
11	43	38	5.0	6.4	7.8	8.5	24	26	---	7.4	9.4	46
12	43	38	5.1	5.8	7.2	10	40	50	---	7.4	10	46
13	43	40	6.9	5.5	13	21	34	---	---	7.4	10	49
14	43	39	13	5.3	8.0	18	24	---	---	7.7	14	---
15	42	44	13	4.9	6.8	29	15	---	---	7.4	8.8	---
16	42	42	15	5.0	9.6	11	8.2	---	---	7.6	8.6	47
17	42	41	11	5.6	7.1	5.4	7.7	---	---	7.7	8.2	47
18	42	40	26	6.6	8.5	8.8	8.8	---	---	7.8	e11	46
19	41	40	36	7.5	10	11	7.0	---	---	7.6	e11	46
20	41	41	35	8.0	9.2	11	12	---	---	8.6	e11	46
21	41	43	35	8.4	8.6	11	11	---	---	8.3	e11	45
22	41	18	34	8.3	8.8	18	15	---	---	7.6	e11	46
23	40	4.9	29	13	9.1	30	18	---	---	7.5	e11	46
24	42	4.5	8.0	14	10	14	25	---	---	7.4	e11	45
25	46	4.8	8.1	12	11	11	28	---	---	7.6	e11	45
26	45	4.9	8.2	14	8.8	---	27	---	---	7.6	e11	44
27	45	5.5	8.5	17	8.3	---	24	---	---	7.5	e11	44
28	45	4.8	9.9	19	7.8	35	26	---	---	7.4	e11	45
29	45	4.8	10	18	---	29	23	---	---	7.4	e11	46
30	44	4.8	8.4	17	---	36	20	---	30	7.6	e11	46
31	44	---	8.9	21	---	50	---	---	---	7.5	e11	---
TOTAL	1347	---	386.5	301.9	307.2	---	640.7	---	---	281.3	327.0	---
MEAN	43.5	---	12.5	9.74	11.0	---	21.4	---	---	9.07	10.5	---
MAX	46	---	36	21	28	---	46	---	---	19	15	---
MIN	40	---	4.7	4.9	6.8	---	7.0	---	---	7.4	7.6	---
AC-FT	2670	---	767	599	609	---	1270	---	---	558	649	---
a	1540	1910	2570	2870	3050	3330	3230	3480	3450	1600	1100	2900

CAL YR 2002 a 26000
WTR YR 2003 a 31020

e Estimated.
a Diversion, in acre-feet, to Philadelphia Canal (station 11297000), provided by Pacific Gas & Electric Co.

11297700 LYONS RESERVOIR NEAR LONG BARN, CA

LOCATION.—Lat 38° 05'38", long 120° 09'59", in SW 1/4 NE 1/4 sec.24, T.3 N., R.16 E., Tuolumne County, Hydrologic Unit 18040010, at left abutment of dam, and 1.6 mi west of Long Barn.

DRAINAGE AREA.—66.8 mi^2.

PERIOD OF RECORD.—October 1985 to current year. Unpublished records for water years 1981–85 are available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder. Prior to Dec. 10, 1990, nonrecording gage read three times weekly. Datum of gage is 4,134 ft above NGVD of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.—Reservoir is formed by concrete arch dam completed in 1930; storage began in 1930. Usable capacity, 4,850 acre-ft, between gage heights 0.0 ft, invert of outlet, and 86.0 ft, top of spillway gates. Dead storage, 2.5 acre-ft. Part of the released water is diverted to Tuolumne Canal (station 11297500) near the base of the dam. Records from Dec. 10, 1990, including extremes, represent total contents at 2400 hours. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2130. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents observed, 6,292 acre-ft, June 4, 5, 7, 9, 10, 1989, gage height, 90.4 ft, maximum gage height, 90.47 ft, June 15, 2000; minimum observed, 832 acre-ft, Nov. 27, 1995, gage height, 48.51 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 5,510 acre-ft, June 26–28, maximum gage height, 90.02 ft, June 27; minimum, 1,370 acre-ft, Oct. 2–7, gage height, 57.28 ft.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Based on survey by Pacific Gas & Electric Co. in 1996)

20	34.2	40	474	60	1,592	80	3,913
25	94.4	50	908	70	2,598	90	5,507
30	186						

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1380	2250	3530	3960	3870	3450	3550	3970	4280	5440	3560	1970
2	1370	2300	3510	3960	3880	3420	3570	3970	4390	5400	3520	1910
3	1370	2340	3490	3970	3880	3400	3570	3990	4620	5350	3450	1850
4	1370	2380	3470	3980	3860	3380	3580	4000	4660	5300	3400	1800
5	1370	2420	3450	3990	3840	3350	3590	3980	4610	5250	3350	1730
6	1370	2480	3440	3990	3820	3320	3610	3980	4610	5200	3290	1670
7	1370	2550	3420	3940	3790	3290	3630	3970	4540	5140	3230	1610
8	1460	2930	3400	3940	3760	3260	3680	3980	4520	5090	3190	1550
9	1470	3220	3370	3940	3720	3230	3750	3980	4530	5030	3140	1510
10	1490	3250	3360	3970	3690	3190	3840	3970	4460	4970	3080	1500
11	1500	3290	3330	3960	3650	3160	3890	3960	4410	4910	3030	1500
12	1510	3330	3310	3950	3610	3130	3980	3970	4370	4850	2980	1500
13	1530	3370	3300	3950	3630	3100	4060	3980	4330	4790	2930	1490
14	1590	3410	3340	3950	3630	3110	4020	4000	4310	4720	2880	1500
15	1660	3450	3410	3940	3610	3200	3990	4000	4300	4660	2830	1510
16	1730	3490	3730	3930	3630	3220	3980	4010	4300	4590	2780	1510
17	1800	3530	3830	3920	3630	3220	3970	4020	4370	4520	2720	1520
18	1870	3570	3870	3900	3620	3210	3960	4020	4610	4460	2670	1520
19	1920	3610	3940	3890	3620	3200	3960	4020	4830	4390	2610	1530
20	1940	3650	3970	3870	3600	3200	3950	4040	5000	4330	2560	1540
21	1940	3690	3980	3860	3590	3190	3960	4090	5170	4270	2510	1550
22	1950	3720	3980	3850	3570	3180	3950	4240	5300	4200	2460	1560
23	1960	3700	3990	3840	3550	3230	3950	4260	5400	4140	2410	1570
24	1970	3680	3970	3840	3530	3240	3970	4270	5470	4070	2360	1580
25	2000	3660	3950	3840	3530	3240	4000	4240	5500	4000	2310	1590
26	2030	3640	3930	3840	3510	3270	3990	4220	5510	3940	2270	1590
27	2060	3620	3910	3850	3490	3380	3980	4290	5510	3870	2210	1600
28	2100	3600	3930	3860	3470	3410	3990	4330	5510	3800	2160	1610
29	2130	3570	3950	3860	---	3430	3980	4330	5500	3740	2120	1620
30	2170	3550	3950	3860	---	3450	3970	4310	5470	3680	2070	1630
31	2210	---	3960	3860	---	3490	---	4300	---	3620	2020	---
MAX	2210	3720	3990	3990	3880	3490	4060	4330	5510	5440	3560	1970
MIN	1370	2250	3300	3840	3470	3100	3550	3960	4280	3620	2020	1490
a	66.45	77.50	80.34	79.62	76.91	77.02	80.39	82.55	89.79	77.95	64.64	60.38
b	+840	+1340	+410	-100	-390	+20	+480	+330	+1170	-1850	-1600	-390

CAL YR 2002 MAX 5560 MIN 1200 b -70
WTR YR 2003 MAX 5510 MIN 1370 b +260

a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.

11298000 SOUTH FORK STANISLAUS RIVER NEAR LONG BARN, CA

LOCATION.—Lat 38° 05'33", long 120° 10'04", in NE 1/4 NW 1/4 sec.25, T.3 N., R.16 E., Tuolumne County, Hydrologic Unit 18040010, Stanislaus National Forest, on left bank, 600 ft downstream from Lyons Dam, 1.9 mi west of Long Barn, and 15 mi northeast of Sonora.

DRAINAGE AREA.—66.9 mi^2.

PERIOD OF RECORD.—October 1937 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.—WSP 1215: 1938(M). WSP 1930: Drainage area.

GAGE.—Water-stage recorder and rectangular weir. Elevation of gage is 4,175 ft above NGVD of 1929, from topographic map. Prior to Sept. 30, 1997, at site 300 ft downstream at different datum.

REMARKS.—Flow regulated by Lyons Reservoir (station 11297700) 600 ft upstream and Pinecrest Lake (station 11295900). Tuolumne Canal (station 11297500) diverts at Lyons Dam. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2130.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 12,900 ft^3/s, Jan. 2, 1997, gage height, 13.03 ft, from rating curve extended above 2,400 ft^3/s, on basis of computation of peak flow over Lyons Dam; no flow at times in 1937–39, 1952.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	2.6	2.6	4.4	2.9	2.7	2.8	35	890	3.8	2.6	2.9
2	2.5	2.7	2.6	4.1	2.9	2.7	2.9	30	782	2.6	2.5	2.7
3	2.6	2.7	2.6	4.5	2.8	2.7	2.9	61	762	2.6	2.5	2.6
4	2.6	2.7	2.6	8.1	2.8	2.7	2.8	136	881	2.5	2.5	2.6
5	2.6	2.7	2.6	15	2.8	2.7	2.9	90	807	2.4	2.5	2.6
6	2.6	2.7	2.6	18	2.8	2.7	2.8	60	794	2.4	2.4	2.6
7	2.6	2.6	2.6	14	2.8	2.7	2.8	54	676	2.4	2.4	2.6
8	2.6	2.9	2.6	11	2.8	2.7	2.7	67	587	2.6	2.5	2.6
9	2.6	2.6	2.7	9.8	2.8	2.7	2.7	66	623	2.6	2.5	2.5
10	2.6	2.5	2.7	39	2.8	2.7	2.7	56	571	2.5	2.5	2.6
11	2.6	2.5	2.7	35	2.8	2.7	2.6	39	478	2.5	2.5	2.8
12	2.6	2.4	2.7	22	2.8	2.7	11	41	429	2.6	2.5	2.8
13	2.6	2.4	2.7	14	2.8	2.7	314	84	370	2.7	2.5	2.8
14	2.8	2.5	2.8	7.8	2.8	2.7	249	162	340	2.7	2.5	2.7
15	2.9	2.4	2.6	4.4	2.8	2.8	156	152	352	2.6	2.5	2.7
16	2.9	2.4	2.6	3.8	2.8	2.7	82	218	338	2.6	2.5	2.7
17	2.9	2.4	2.5	3.5	2.8	2.7	47	215	230	2.6	2.5	2.7
18	2.9	2.5	2.5	2.9	2.8	2.7	49	244	63	2.6	2.5	2.7
19	2.8	2.7	2.5	2.9	2.8	2.7	30	242	11	2.6	2.5	2.7
20	2.7	2.7	7.3	2.9	2.8	2.8	24	277	16	2.6	2.5	2.7
21	2.6	2.7	21	2.9	2.8	2.9	24	327	14	2.5	2.5	2.7
22	2.6	2.7	15	2.8	2.8	2.9	23	805	11	2.5	2.5	2.6
23	2.6	2.7	12	2.8	2.8	2.9	23	1140	8.8	2.4	2.5	2.6
24	2.5	2.7	12	2.7	2.8	2.9	31	1180	5.0	2.4	2.5	2.6
25	2.5	2.7	3.4	2.6	2.8	2.8	92	1140	9.6	2.4	2.5	2.6
26	2.5	2.7	2.8	2.6	2.8	2.8	147	999	20	2.4	2.5	2.7
27	2.4	2.7	2.9	2.5	2.8	2.8	98	1020	24	2.4	2.5	2.7
28	2.4	2.6	2.8	2.8	2.8	2.8	100	1210	20	2.3	2.4	2.7
29	2.7	2.4	2.8	2.9	---	2.8	84	1290	15	2.3	2.4	2.7
30	2.7	2.5	3.1	2.9	---	2.8	52	1320	7.2	2.3	2.7	2.7
31	2.6	---	4.1	2.9	---	2.8	---	996	---	2.5	2.9	---
TOTAL	81.6	78.0	139.0	257.5	78.6	85.4	1666.6	13756	10134.6	78.9	77.8	80.2
MEAN	2.63	2.60	4.48	8.31	2.81	2.75	55.6	444	338	2.55	2.51	2.67
MAX	2.9	2.9	21	39	2.9	2.9	314	1320	890	3.8	2.9	2.9
MIN	2.4	2.4	2.5	2.5	2.8	2.7	2.6	30	5.0	2.3	2.4	2.5
AC-FT	162	155	276	511	156	169	3310	27290	20100	156	154	159
a	1520	992	1310	1880	1800	1970	2030	2310	2300	2370	2130	2210

a Diversion, in acre-feet, to Tuolumne Canal (station 11297500), provided by Pacific Gas & Electric Co.

11298000 SOUTH FORK STANISLAUS RIVER NEAR LONG BARN, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.47	10.1	23.4	37.8	46.2	55.5	98.5	364	316	62.3	3.31	2.20
MAX	14.7	324	399	625	306	291	501	875	1042	602	37.7	5.45
(WY)	1983	1951	1951	1997	1982	1938	1982	1969	1998	1998	1983	1995
MIN	0.000	0.023	0.077	0.013	0.000	0.23	0.97	1.02	1.00	0.92	0.83	0.71
(WY)	1938	1939	1939	1939	1939	1939	1977	1977	1977	1949	1940	1949

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1938 - 2003	
ANNUAL TOTAL	11731.7		26514.2			
ANNUAL MEAN	32.1		72.6		84.5	
HIGHEST ANNUAL MEAN					234	1983
LOWEST ANNUAL MEAN					1.50	1977
HIGHEST DAILY MEAN	543	May 30	1320	May 30	6040	Jan 2 1997
LOWEST DAILY MEAN	2.4	Jul 18	2.3	Jul 28	0.00	Oct 1 1937
ANNUAL SEVEN-DAY MINIMUM	2.4	Nov 11	2.4	Jul 24	0.00	Oct 1 1937
MAXIMUM PEAK FLOW			1720	May 30	12900	Jan 2 1997
MAXIMUM PEAK STAGE			5.57	May 30	13.03	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	23270		52590		61220	
ANNUAL DIVERSION (AC-FT) a	23790		22840			
10 PERCENT EXCEEDS	47		158		284	
50 PERCENT EXCEEDS	2.8		2.7		2.6	
90 PERCENT EXCEEDS	2.5		2.5		1.4	

a Diversion, in acre-feet, to Tuolumne Canal (station 11297500), provided by Pacific Gas & Electric Co.

11298700 ANGELS CREEK BELOW UTICA DITCH DIVERSION DAM, NEAR MURPHYS, CA

LOCATION.—Lat 38° 07'51", long 120° 29'03", in NW 1/4 NW 1/4 sec.7, T.3 N., R.14 E., Calaveras County, Hydrologic Unit 18040010, on right bank, 120 ft downstream from diversion dam, and 1.2 mi southwest of Murphys.

DRAINAGE AREA.—6.01 mi^2.

PERIOD OF RECORD.—October 1990 to September 1999, October 2000 to current year (low-flow records only).

GAGE.—Water-stage recorder and 90° V-notch weir. Elevation of gage is 2,040 ft above NGVD of 1929, from topographic map.

REMARKS.—No records computed above 2.5 ft^3/s. Flow consists of fishery release and spill over diversion dam. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were collected by Utica Power Authority, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2019.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	2.1	2.1	2.2	2.0	2.4	---	2.1	1.1	1.4	1.4	2.5
2	2.3	2.1	2.1	2.1	2.1	2.4	---	1.3	1.1	1.3	1.4	1.3
3	2.0	2.1	2.1	2.1	2.1	2.4	---	1.3	1.2	1.4	1.4	1.2
4	2.0	2.1	2.1	2.1	2.1	2.4	---	---	---	1.5	1.3	1.2
5	2.0	2.1	2.1	2.1	2.1	2.4	---	1.5	---	1.5	1.3	1.2
6	2.0	2.3	2.1	2.1	2.1	2.4	---	1.3	---	1.5	1.4	1.1
7	2.0	1.7	2.1	2.1	2.1	1.8	---	1.9	2.3	1.4	1.4	1.2
8	1.9	---	2.1	2.1	2.1	1.4	---	---	1.4	1.4	1.4	1.2
9	2.0	1.9	2.1	2.1	2.1	1.4	2.2	---	1.4	1.4	1.4	1.2
10	2.0	2.1	2.1	2.1	2.1	1.4	2.1	---	1.4	1.4	1.4	1.1
11	2.0	2.2	2.1	2.1	2.1	1.4	2.1	---	1.2	1.4	1.4	1.1
12	1.9	2.1	2.1	2.1	2.1	1.4	---	---	1.2	1.4	1.4	1.1
13	2.0	2.1	2.1	2.1	2.4	1.4	---	2.1	1.2	1.4	1.4	1.1
14	2.0	2.1	---	2.1	2.1	1.6	---	1.3	1.2	1.4	1.4	1.2
15	2.0	2.1	---	2.1	2.1	---	---	1.3	1.2	1.4	1.4	1.1
16	2.0	2.1	---	2.1	2.3	1.8	---	1.2	1.2	1.4	1.4	1.1
17	2.1	2.1	---	2.1	2.3	2.0	2.1	1.2	1.6	1.4	1.3	1.1
18	2.1	2.1	---	2.1	2.4	1.9	1.5	1.2	1.2	1.4	1.4	1.1
19	2.1	2.1	---	2.1	2.5	1.9	1.0	1.2	1.1	1.4	1.3	1.1
20	2.1	2.1	2.4	2.1	2.5	1.9	1.0	1.2	1.2	1.4	1.4	1.1
21	2.1	2.1	2.4	2.1	2.4	1.9	1.5	1.2	1.2	1.3	1.4	2.1
22	2.1	2.1	2.2	2.1	2.4	1.9	2.0	1.2	1.3	1.3	1.4	---
23	2.1	2.1	2.1	2.1	2.4	1.9	1.6	1.3	1.3	1.4	1.3	---
24	2.1	2.1	2.1	2.1	2.4	1.8	1.2	1.3	1.3	1.4	1.3	---
25	2.1	2.1	2.1	2.1	2.4	2.0	1.4	1.2	1.3	1.4	1.4	---
26	2.1	2.1	2.1	2.1	2.4	---	1.6	1.2	1.4	1.4	1.4	---
27	2.1	2.1	2.1	2.1	2.4	---	2.1	1.2	1.5	1.4	1.3	---
28	2.1	2.0	2.2	2.1	2.4	---	---	1.2	1.5	1.4	1.4	---
29	2.1	2.1	---	2.1	---	---	---	1.1	1.4	1.4	1.4	---
30	2.3	2.1	2.2	2.1	---	---	---	1.1	1.5	1.4	1.4	---
31	2.1	---	2.3	2.1	---	---	---	1.1	---	1.4	---	---
TOTAL	64.0	---	---	65.2	62.9	---	---	---	---	43.4	---	---
MEAN	2.06	---	---	2.10	2.25	---	---	---	---	1.40	---	---
MAX	2.3	---	---	2.2	2.5	---	---	---	---	1.5	---	---
MIN	1.9	---	---	2.1	2.0	---	---	---	---	1.3	---	---
AC-FT	127	---	---	129	125	---	---	---	---	86	---	---

11299000 NEW MELONES RESERVOIR NEAR SONORA, CA

LOCATION.—Lat 37° 57'02", long 120° 30'49", in NW 1/4 SE 1/4 sec.11, T.1 N., R.13 E., Calaveras County, Hydrologic Unit 18040010, at right abutment of New Melones Dam on Stanislaus River, 0.1 mi downstream from the old Melones Dam, and 7.6 mi southwest of Sonora.

DRAINAGE AREA.—904 mi^2.

PERIOD OF RECORD.—1926 (year-end contents only, published in WSP 1315-A), June 1927 to current year. Prior to October 1970, published as "Melones Reservoir at Melones Dam". October 1970 to September 1978, published as "Melones Lake near Sonora".

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Feb. 28, 1961, nonrecording gage, and Mar. 1, 1961, to Nov. 26, 1978, water-stage recorder at site on left side of old Melones Dam, at same datum.

REMARKS.—Reservoir is formed by earth and rockfill dam completed in November 1978. Dam is downstream from the original concrete dam which was completed in December 1926. Usable capacity, 2,420,000 acre-ft, between elevations 543.0 ft, invert entrance to outlet tunnel, and 1,088.0 ft, gross pool elevation. No dead storage. When elevation is above 808.0 ft, water is released through New Melones Powerplant (station 11299200) to Tulloch Reservoir (station 11299995) where it is used for irrigation. Records for the 1971 water year represent contents at 1630 hours. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of Stanislaus River Basin.

COOPERATION.—Records were provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD (Subsequent to completion of New Melones Dam in 1978).—Maximum contents, 2,400,000 acre-ft, July 8–10, 1983, elevation, 1,086.42 ft; minimum since reservoir first filled in July 1983, 83,630 acre-ft, Oct. 1, 1992, elevation, 721.15 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 1,492,000 acre-ft, June 11, elevation, 1,002.22 ft; minimum, 1,276,000 acre-ft, Oct. 11–14, elevation, 977.75 ft, Oct. 13.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by U.S. Army Corps of Engineers, dated September 1978)

700	53,900	760	160,500	880	611,500	1,000	1,471,000
710	66,950	780	212,300	900	723,000	1,020	1,662,000
720	81,800	800	272,800	920	846,500	1,040	1,867,000
730	98,530	820	342,400	940	982,600	1,060	2,087,000
740	117,200	840	421,800	960	1,132,000	1,088	2,420,000
750	137,800	860	511,200	980	1,295,000		

RESERVOIR STORAGE, ACRE-FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1278000	1289000	1305000	1360000	1406000	1428000	1425000	1427000	1462000	1444000	1366000	1303000
2	1277000	1290000	1305000	1360000	1407000	1430000	1423000	1426000	1464000	1443000	1364000	1302000
3	1277000	1291000	1306000	1362000	1408000	1429000	1423000	1426000	1469000	1440000	1362000	1301000
4	1277000	1290000	1307000	1364000	1410000	1429000	1424000	1429000	1474000	1438000	1359000	1300000
5	1277000	1289000	1308000	1366000	1410000	1430000	1424000	1431000	1478000	1435000	1357000	1300000
6	1278000	1289000	1308000	1368000	1411000	1430000	1424000	1432000	1482000	1433000	1355000	1299000
7	1278000	1291000	1309000	1370000	1413000	1429000	1423000	1433000	1485000	1430000	1352000	1298000
8	1278000	1294000	1310000	1372000	1412000	1428000	1422000	1434000	1488000	1427000	1350000	1297000
9	1277000	1297000	1311000	1374000	1413000	1429000	1422000	1435000	1490000	1425000	1348000	1296000
10	1277000	1298000	1311000	1375000	1413000	1428000	1421000	1436000	1491000	1421000	1345000	1295000
11	1276000	1299000	1312000	1377000	1413000	1428000	1421000	1438000	1492000	1419000	1343000	1295000
12	1276000	1298000	1312000	1379000	1414000	1427000	1420000	1441000	1491000	1417000	1341000	1294000
13	1276000	1298000	1314000	1381000	1417000	1428000	1425000	1442000	1491000	1414000	1338000	1293000
14	1276000	1298000	1317000	1383000	1417000	1428000	1428000	1443000	1490000	1411000	1336000	1291000
15	1277000	1298000	1320000	1385000	1417000	1429000	1430000	1443000	1489000	1409000	1334000	1290000
16	1278000	1298000	1326000	1386000	1419000	1430000	1429000	1444000	1487000	1408000	1332000	1288000
17	1280000	1299000	1331000	1386000	1420000	1430000	1429000	1442000	1486000	1405000	1331000	1286000
18	1281000	1298000	1333000	1388000	1419000	1429000	1429000	1441000	1484000	1403000	1329000	1285000
19	1282000	1298000	1336000	1390000	1420000	1428000	1429000	1445000	1481000	1401000	1327000	1284000
20	1282000	1299000	1337000	1392000	1420000	1427000	1429000	1446000	1479000	1397000	1325000	1282000
21	1282000	1298000	1340000	1392000	1421000	1427000	1429000	1442000	1477000	1395000	1323000	1282000
22	1283000	1297000	1341000	1395000	1420000	1426000	1429000	1444000	1474000	1393000	1321000	1282000
23	1284000	1298000	1343000	1397000	1421000	1426000	1428000	1447000	1472000	1390000	1319000	1282000
24	1285000	1299000	1345000	1399000	1421000	1426000	1427000	1449000	1467000	1388000	1317000	1282000
25	1284000	1300000	1346000	1399000	1424000	1427000	1427000	1451000	1464000	1386000	1316000	1282000
26	1283000	1301000	1348000	1401000	1426000	1426000	1427000	1452000	1461000	1383000	1314000	1282000
27	1282000	1301000	1348000	1401000	1426000	1428000	1427000	1452000	1459000	1380000	1312000	1283000
28	1284000	1302000	1350000	1401000	1427000	1428000	1427000	1454000	1455000	1377000	1310000	1284000
29	1285000	1303000	1353000	1403000	---	1425000	1428000	1456000	1451000	1375000	1307000	1281000
30	1286000	1304000	1355000	1405000	---	1426000	1427000	1458000	1447000	1371000	1305000	1280000
31	1288000	---	1358000	1405000	---	1425000	---	1459000	---	1369000	1304000	---
MAX	1288000	1304000	1358000	1405000	1427000	1430000	1430000	1459000	1492000	1444000	1366000	1303000
MIN	1276000	1289000	1305000	1360000	1406000	1425000	1420000	1426000	1447000	1369000	1304000	1280000
a	979.21	981.14	987.40	992.72	995.12	994.94	995.17	998.72	997.38	988.60	981.08	978.31
b	+10000	+16000	+54000	+47000	+22000	-2000	+2000	+32000	-12000	-78000	-65000	-24000
c	3149	1388	791	624	1074	2061	1816	4007	6384	7895	5999	5254
d	30150	6890	13470	18050	30850	69810	97830	119300	152100	129700	106200	62640

CAL YR 2002 b -158000
WTR YR 2003 b +2000

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.
c Total evaporation, in acre-feet, published as provided; not reviewed by U.S. Geological Survey.
d Discharge, in acre-feet, through New Melones Powerplant (station 11299200), provided by U.S. Bureau of Reclamation.

11299600 BLACK CREEK NEAR COPPEROPOLIS, CA

LOCATION.—Lat 37° 57'40", long 120° 36'51", in SE 1/4 SE 1/4, sec.2, T.1 N., R.12 E., Calaveras County, Hydrologic Unit 18040010, on left bank, 100 ft upstream from O'Byrnes Ferry Road Bridge, 1,300 ft upstream from Copper Creek, and 2.1 mi southeast of Copperopolis.

DRAINAGE AREA.—14.4 mi^2.

PERIOD OF RECORD.—August 1983 to current year.

REVISED RECORDS.—WDR CA-86-3: 1984(M).

GAGE.—Water-stage recorder. Datum of gage is 746.13 ft above NGVD of 1929.

REMARKS.—Records fair. No regulation or diversion upstream from station. See schematic diagram of Stanislaus River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,200 ft^3/s, Feb. 19, 1986, gage height, 9.10 ft, from rating curve extended above 2,500 ft^3/s, on basis of contracted-opening measurement of peak flow; no flow at times each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 16	0830	609	4.35	Mar. 15	1130	50	2.98
Dec. 31	0715	66	3.09				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.13	18	1.7	1.2	1.9	3.8	0.26	0.00	0.00	0.00
2	0.00	0.00	0.14	9.9	1.6	1.1	2.5	3.8	0.21	0.00	0.00	0.00
3	0.00	0.00	0.14	7.1	1.5	1.1	1.8	4.7	0.17	0.00	0.00	0.00
4	0.00	0.00	0.14	5.5	1.3	1.2	2.7	4.0	0.14	0.00	0.00	0.00
5	0.00	0.00	0.14	4.5	1.3	1.1	2.8	3.1	0.12	0.00	0.00	0.00
6	0.00	0.00	0.14	4.0	1.2	1.2	2.0	2.8	0.12	0.00	0.00	0.00
7	0.00	0.00	0.14	3.5	1.2	1.2	1.8	2.5	0.11	0.00	0.00	0.00
8	0.00	0.98	0.14	3.2	1.1	1.1	1.6	3.0	0.11	0.00	0.00	0.00
9	0.00	1.3	0.14	3.1	1.1	1.1	1.5	3.9	0.10	0.00	0.00	0.00
10	0.00	0.28	0.17	17	1.00	1.1	1.4	2.5	0.08	0.00	0.00	0.00
11	0.00	0.16	0.16	12	1.00	0.96	1.4	2.1	0.09	0.00	0.00	0.00
12	0.00	0.12	0.16	8.3	1.1	0.86	1.8	1.9	0.09	0.00	0.00	0.00
13	0.00	0.11	0.58	6.6	2.8	0.82	3.7	1.8	0.09	0.00	0.00	0.00
14	0.00	0.09	3.6	5.6	1.5	0.97	2.1	1.6	0.07	0.00	0.00	0.00
15	0.00	0.08	6.9	4.9	1.2	15	1.8	1.5	0.07	0.00	0.00	0.00
16	0.00	0.08	105	4.4	4.3	5.4	1.7	1.3	0.06	0.00	0.00	0.00
17	0.00	0.08	42	4.1	2.3	3.4	1.7	1.2	0.05	0.00	0.00	0.00
18	0.00	0.08	9.2	3.7	1.8	2.8	1.5	1.0	0.04	0.00	0.00	0.00
19	0.00	0.08	10	3.4	1.9	2.5	1.4	0.94	0.04	0.00	0.00	0.00
20	0.00	0.08	18	3.2	1.8	2.3	1.3	0.84	0.04	0.00	0.00	0.00
21	0.00	0.08	17	3.0	1.5	2.0	1.6	0.74	0.02	0.00	0.00	0.00
22	0.00	0.08	8.9	2.7	1.4	1.9	2.1	0.66	0.01	0.00	0.00	0.00
23	0.00	0.08	5.5	2.7	1.4	2.7	1.4	0.59	0.01	0.00	0.00	0.00
24	0.00	0.08	3.9	2.5	1.6	2.1	2.6	0.52	0.00	0.00	0.00	0.00
25	0.00	0.09	3.2	2.4	1.5	1.7	3.6	0.49	0.00	0.00	0.00	0.00
26	0.00	0.09	2.8	2.4	1.3	1.6	5.0	0.48	0.00	0.00	0.00	0.00
27	0.00	0.09	2.5	2.2	1.3	1.5	3.2	0.44	0.00	0.00	0.00	0.00
28	0.00	0.10	4.5	2.1	1.3	1.4	10	0.39	0.00	0.00	0.00	0.00
29	0.00	0.11	27	2.0	---	1.3	6.2	0.33	0.00	0.00	0.00	0.00
30	0.00	0.12	12	1.8	---	1.3	4.6	0.30	0.00	0.00	0.00	0.00
31	0.00	---	34	1.7	---	1.2	---	0.29	---	0.00	0.00	---
TOTAL	0.00	4.44	318.32	157.5	44.00	65.11	78.7	53.51	2.10	0.00	0.00	0.00
MEAN	0.000	0.15	10.3	5.08	1.57	2.10	2.62	1.73	0.070	0.000	0.000	0.000
MAX	0.00	1.3	105	18	4.3	15	10	4.7	0.26	0.00	0.00	0.00
MIN	0.00	0.00	0.13	1.7	1.0	0.82	1.3	0.29	0.00	0.00	0.00	0.00
AC-FT	0.00	8.8	631	312	87	129	156	106	4.2	0.00	0.00	0.00

11299600 BLACK CREEK NEAR COPPEROPOLIS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.13	3.76	10.4	30.7	41.5	20.4	5.25	2.28	0.43	0.044	0.000	0.005
MAX	1.80	53.1	98.8	144	171	96.6	32.4	13.6	3.63	0.46	0.005	0.11
(WY)	1992	1984	1997	1997	1998	1995	1998	1998	1998	1998	1998	1983
MIN	0.000	0.000	0.000	0.000	0.16	0.62	0.62	0.17	0.000	0.000	0.000	0.000
(WY)	1986	1991	1991	1991	1991	1988	1988	1992	1988	1984	1984	1984

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1983 - 2003	
ANNUAL TOTAL	1817.98		723.68			
ANNUAL MEAN	4.98		1.98		9.41	
HIGHEST ANNUAL MEAN					28.6	1998
LOWEST ANNUAL MEAN					0.32	1988
HIGHEST DAILY MEAN	205	Jan 2	105	Dec 16	1400	Feb 17 1986
LOWEST DAILY MEAN	0.00	Jun 14	0.00	Oct 1	0.00	Sep 16 1983
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 14	0.00	Oct 1	0.00	Jun 28 1984
MAXIMUM PEAK FLOW			609	Dec 16	5200	Feb 19 1986
MAXIMUM PEAK STAGE			4.35	Dec 16	9.10	Feb 19 1986
ANNUAL RUNOFF (AC-FT)	3610		1440		6820	
10 PERCENT EXCEEDS	9.8		3.9		13	
50 PERCENT EXCEEDS	0.14		0.14		0.22	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

11299995 TULLOCH RESERVOIR NEAR KNIGHTS FERRY, CA

LOCATION.—Lat 37° 52'34", long 120° 36'12", in Rancheria del Rio Estanislao Grant, T.1 S., R.12 E., Tuolumne County, Hydrologic Unit 18040010, in center of Tulloch Dam on Stanislaus River, 1.9 mi upstream from Goodwin Dam, and 5.3 mi northeast of Knights Ferry.

DRAINAGE AREA.—980 mi^2.

PERIOD OF RECORD.—November 1957 to current year.

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Oakdale and South San Joaquin Irrigation Districts).

REMARKS.—Reservoir is formed by gravity-type concrete dam completed in October 1957. Usable capacity, 56,840 acre-ft, between elevations 431.0 ft, normal minimum water surface, and 511.0 ft, top of radial gates. Dead storage, 11,560 acre-ft. Reservoir is used for irrigation and power. Water passes down Stanislaus River, first passing through Tulloch Powerplant (station 11299996) at dam. Part of flow is diverted at Goodwin Dam to Oakdale Canal (station 11301000) and South San Joaquin Canal (station 11300500). Records, including extremes, represent total contents at 2400 hours.

COOPERATION.—Records were provided by Oakdale and South San Joaquin Irrigation Districts, in connection with Federal Energy Regulatory Commission project no. 2067.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 69,500 acre-ft, Jan. 7, 1965, elevation, 512.0 ft; minimum, 4,580 acre-ft, Oct. 3, 1960, elevation, 404.0 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 66,000 acre-ft, May 18, July 1, elevation, 509.24 ft, May 18; minimum, 53,700 acre-ft, Nov. 11, Dec. 26, elevation, 498.46 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated October 1956)

404	4,580	430	11,100	460	23,600	490	45,300
411	6,020	445	16,400	475	33,100	512	69,500
420	8,200						

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62100	55200	54000	53900	56100	55300	57300	60800	64700	66000	65500	64900
2	62100	54600	55600	55900	55900	54300	58300	61500	65700	64900	65700	65300
3	61700	53900	55100	55600	55500	55800	58400	61400	65400	65400	65100	65200
4	61300	54800	54600	55200	54600	55900	58500	61500	65600	65400	65200	64800
5	61000	56000	54100	54900	56000	55900	58500	61400	65600	65000	64900	64800
6	60400	55300	55500	54500	55500	55700	57800	61700	65100	64600	65500	64900
7	59600	54800	55000	54700	54400	55600	58400	61900	65400	64800	65600	65200
8	59900	55400	54400	54500	55500	56200	58400	62200	65000	64900	65100	65400
9	59800	54900	54000	54100	54400	54100	58600	62300	64800	65100	65300	65700
10	59900	54300	55500	55500	55300	55300	58800	62400	65100	65700	65300	65400
11	59900	53700	55000	55200	56300	55300	58700	62200	65100	65600	65200	65200
12	59900	54800	56300	54900	55800	55200	58900	61500	65200	64900	65000	64800
13	60200	55000	55800	55000	54800	55200	59500	61800	65000	65100	65200	65000
14	60900	54800	55500	54700	55500	54900	59000	62400	64500	65400	65600	64800
15	60600	55100	55000	54300	56100	56200	58100	62700	64400	65300	64900	64800
16	60400	54400	55800	54000	55200	55400	59800	63000	64900	64800	65000	65300
17	60100	53800	55800	55500	54200	55300	59800	64600	64800	65200	64800	65400
18	59900	54700	55400	55100	55900	55300	60000	66000	64900	65300	64700	65300
19	59800	54600	55200	54800	54800	56400	59900	62500	65600	64700	64700	65200
20	60400	53900	55900	54500	55500	56200	59800	61200	65400	65700	64600	65300
21	59400	55500	55700	55600	54800	56000	59800	65400	65400	65500	65000	64000
22	58100	56200	55300	55200	56200	56000	59800	65000	64700	65200	65300	64000
23	57600	56400	54900	55100	56300	55800	59900	65000	65200	64900	65300	63600
24	56300	55800	54500	54600	56400	56500	60500	65300	65800	64900	65400	63300
25	57200	55200	54100	55300	55500	56300	60700	64900	65500	64400	64900	63200
26	58400	54600	53700	54800	54500	57400	61300	64800	64900	64700	64700	62800
27	58500	56200	55100	55200	56100	55000	60800	65900	64400	64600	65100	62200
28	57400	55700	54700	55700	56200	55000	61600	65900	64400	65600	65200	60600
29	56700	55100	54600	55000	---	57800	60800	65100	64800	64600	65800	62500
30	56100	54600	54300	54700	---	57200	60800	65300	65300	65400	65600	62100
31	55400	---	54200	55300	---	57100	---	65000	---	65500	65600	---
MAX	62100	56400	56300	55900	56400	57800	61600	66000	65800	66000	65800	65700
MIN	55400	53700	53700	53900	54200	54100	57300	60800	64400	64400	64600	60600
a	500.11	499.29	498.92	500.03	500.81	501.62	504.93	508.45	508.67	508.82	508.94	506.03
b	-6800	-800	-400	+1100	+900	+900	+3700	+4200	+300	+200	+100	-3500
c	38390	18740	17530	18680	20330	66970	94200	106000	111700	115600	108400	70490

CAL YR 2002 b -2100
WTR YR 2003 b -100

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.
c Diversion, in acre-feet, through Tulloch Powerplant (station 11299996), provided by Oakdale and South San Joaquin Irrigation Districts.

11299997 STANISLAUS RIVER BELOW TULLOCH POWERPLANT, NEAR KNIGHTS FERRY, CA

LOCATION.—Lat 37° 52'34", long 120° 36'15", in Rancheria del Rio Estanislao Grant, T.1 S., R.12 E., on Calaveras–Tuolumne County line, Hydrologic Unit 18040010, temperature recorder in south corner of Tulloch Powerplant at downstream side of Tulloch Dam, 5.2 mi northeast of Knights Ferry.

DRAINAGE AREA.—980 mi^2.

PERIOD OF RECORD.—June 1972 to current year.
WATER TEMPERATURE: June 1972 to current year.

PERIOD OF DAILY RECORD.—June 1972 to current year.
WATER TEMPERATURE: June 1972 to current year.

INSTRUMENTATION.—Water-temperature recorder since June 1972.

REMARKS.—Water-temperature records rated excellent except for Oct. 5–8, Dec. 13–18, Feb. 19 to Mar. 10, Mar. 21 to Apr. 1, Apr. 15–21, June 30 to July 14, Sept. 22–27, which are rated good; and Apr. 2, 3, Sept. 28–30, which are rated fair. Interruption in record was due to malfunction of recording instrument. Water temperature is affected by regulation from Tulloch Powerplant.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum recorded, 27.5° C, Aug. 30, 1977; minimum recorded, 5.0° C, Jan. 13, 1973.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 14.0° C, Aug. 27–29, but may have been higher during period of missing record; minimum recorded, 10.5° C, many days December to February.

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.5	12.5	12.5	12.5	12.0	11.5	10.5	10.5	10.5	10.5	11.0	11.0
2	12.5	12.5	12.5	12.5	12.0	11.5	10.5	10.5	11.0	10.5	11.0	11.0
3	12.5	12.5	12.5	12.5	12.0	11.5	10.5	10.5	11.0	10.5	11.0	11.0
4	12.5	12.5	12.5	12.5	12.0	11.5	10.5	10.5	11.0	10.5	11.0	11.0
5	12.5	12.5	13.0	12.5	12.0	11.5	10.5	10.5	11.0	10.5	11.0	11.0
6	12.5	12.5	12.5	12.5	12.0	11.5	10.5	10.5	11.0	10.5	11.5	11.0
7	12.5	12.5	12.5	12.5	12.0	11.5	10.5	10.5	11.0	10.5	11.5	11.0
8	12.5	12.5	12.5	12.0	12.0	11.5	10.5	10.5	11.0	10.5	11.5	11.0
9	13.0	12.5	12.5	12.5	12.0	11.5	10.5	10.5	11.0	10.5	11.5	11.0
10	12.5	12.5	12.5	12.5	12.0	11.5	10.5	10.5	11.0	10.5	11.5	11.0
11	12.5	12.5	12.5	12.5	12.0	11.5	10.5	10.5	11.0	10.5	11.5	11.0
12	12.5	12.5	12.5	12.5	12.0	11.5	10.5	10.5	11.0	11.0	11.5	11.0
13	12.5	12.5	12.5	12.5	11.5	11.5	10.5	10.5	11.0	11.0	11.0	11.0
14	12.5	12.5	12.5	12.0	11.5	11.5	10.5	10.5	11.0	11.0	11.5	11.0
15	12.5	12.5	12.5	12.0	11.5	11.5	10.5	10.5	11.0	10.5	11.5	11.0
16	12.5	12.5	12.5	12.0	11.5	11.5	10.5	10.5	11.0	10.5	11.5	11.0
17	12.5	12.5	12.5	12.0	11.5	11.5	10.5	10.5	11.0	10.5	11.5	11.0
18	12.5	12.5	12.5	12.0	11.5	11.5	10.5	10.5	11.0	10.5	11.5	11.0
19	12.5	12.5	12.5	12.0	11.5	11.5	10.5	10.5	11.0	11.0	11.5	11.0
20	12.5	12.5	12.0	12.0	11.5	11.5	10.5	10.5	11.0	11.0	11.5	11.0
21	12.5	12.5	12.0	12.0	11.5	11.0	10.5	10.5	11.0	11.0	11.0	11.0
22	12.5	12.5	12.0	12.0	11.5	11.0	10.5	10.5	11.0	11.0	11.0	11.0
23	12.5	12.5	12.0	12.0	11.0	11.0	10.5	10.5	11.0	11.0	11.0	11.0
24	12.5	12.5	12.0	12.0	11.0	11.0	10.5	10.5	11.0	11.0	11.0	11.0
25	12.5	12.5	12.0	12.0	11.0	11.0	10.5	10.5	11.0	11.0	11.0	11.0
26	13.0	12.5	12.0	12.0	11.0	11.0	10.5	10.5	11.0	11.0	11.0	11.0
27	13.0	12.5	12.0	12.0	11.0	11.0	10.5	10.5	11.0	11.0	11.0	11.0
28	13.0	12.5	12.0	12.0	11.0	10.5	10.5	10.5	11.0	11.0	11.0	11.0
29	12.5	12.5	12.0	12.0	11.0	10.5	10.5	10.5	---	---	11.0	11.0
30	12.5	12.5	12.0	12.0	11.0	10.5	10.5	10.5	---	---	11.0	11.0
31	12.5	12.5	---	---	11.0	10.5	10.5	10.5	---	---	11.0	11.0
MONTH	13.0	12.5	13.0	12.0	12.0	10.5	10.5	10.5	11.0	10.5	11.5	11.0

11299997 STANISLAUS RIVER BELOW TULLOCH POWERPLANT, NEAR KNIGHTS FERRY, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.5	---	---	13.5	13.5
2	11.0	11.0	11.5	11.5	---	12.0	12.5	12.5	---	---	13.5	13.5
3	11.0	11.0	11.5	11.5	12.0	---	12.5	12.5	---	---	13.5	13.5
4	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.5	---	---	13.5	13.5
5	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.5	---	---	13.5	13.5
6	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.5	---	---	13.5	13.5
7	11.0	11.0	11.5	11.5	12.5	12.0	12.5	12.5	---	---	13.5	13.5
8	11.0	11.0	11.5	11.5	12.5	12.0	12.5	12.5	---	---	13.5	13.5
9	11.0	11.0	11.5	11.5	12.5	12.5	12.5	12.5	---	---	13.5	13.5
10	11.5	11.0	11.5	11.5	12.5	12.5	12.5	12.5	---	---	13.5	13.5
11	11.5	11.0	11.5	11.5	12.5	12.5	13.0	12.5	---	---	13.5	13.5
12	11.0	11.0	11.5	11.5	12.5	12.5	13.0	12.5	---	---	13.5	13.5
13	11.0	11.0	11.5	11.5	12.5	12.0	13.0	12.5	---	---	13.5	13.5
14	11.5	11.0	11.5	11.5	12.5	12.0	13.0	13.0	---	---	13.5	13.5
15	11.5	11.0	12.0	11.5	12.5	12.5	13.0	13.0	---	---	13.5	13.5
16	11.5	11.0	12.0	11.5	12.5	12.5	13.0	13.0	---	---	13.5	13.5
17	11.5	11.0	12.0	11.5	12.5	12.5	13.0	13.0	---	---	13.5	13.0
18	11.5	11.0	12.0	12.0	12.5	12.5	13.0	13.0	---	---	13.5	13.0
19	11.5	11.0	12.0	12.0	12.5	12.5	13.0	13.0	---	---	13.5	13.5
20	11.5	11.5	12.0	12.0	12.5	12.5	13.0	13.0	---	---	13.5	13.0
21	11.5	11.5	12.5	11.5	12.5	12.5	13.0	13.0	---	---	13.5	13.5
22	11.5	11.5	11.5	11.5	12.5	12.5	13.0	13.0	---	13.0	13.5	13.0
23	11.5	11.5	11.5	11.5	12.5	12.5	13.0	13.0	13.5	13.0	13.5	13.0
24	11.5	11.5	11.5	11.5	12.5	12.5	13.0	13.0	13.5	13.5	13.5	13.0
25	11.5	11.5	11.5	11.5	12.5	12.5	13.0	13.0	13.5	13.5	13.5	13.0
26	11.5	11.5	11.5	11.5	12.5	12.0	13.0	13.0	13.5	13.5	13.5	13.0
27	11.5	11.5	12.0	11.5	12.5	12.0	13.0	13.0	14.0	13.5	13.5	13.5
28	11.5	11.0	12.5	12.0	12.5	12.0	13.0	13.0	14.0	13.5	13.5	13.0
29	11.5	11.0	12.0	12.0	13.0	12.5	13.0	13.0	14.0	13.5	13.5	13.0
30	11.5	11.5	12.0	12.0	13.0	12.5	---	---	13.5	13.5	13.5	13.5
31	---	---	12.0	12.0	---	---	---	---	13.5	13.5	---	---
MONTH	11.5	11.0	12.5	11.5	---	---	---	---	---	---	13.5	13.0

11300500 SOUTH SAN JOAQUIN CANAL NEAR KNIGHTS FERRY, CA

LOCATION.—Lat 37° 51'16", long 120° 38'14", in Rancheria del Rio Estanislao Grant, Calaveras County, Hydrologic Unit 18040010, on left bank, 0.8 mi downstream from headgate at Goodwin Dam, and 3.0 mi northeast of Knights Ferry.

PERIOD OF RECORD.—May 1914 to current year. Monthly and yearly discharge only for some periods, published in WSP 1315-A.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 334.18 ft above NGVD of 1929 (levels by Oakdale Irrigation District). Prior to Mar. 12, 1915, nonrecording gage 100 ft downstream. Mar. 12, 1915, to July 1, 1921, nonrecording gage at present site and datum.

REMARKS.—Canal diverts from right bank of Stanislaus River at Goodwin Dam for irrigation in Oakdale and South San Joaquin Irrigation District.

COOPERATION.—Records were provided by Oakdale and South San Joaquin Irrigation District, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2067.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 1,320 ft^3/s, Aug. 10–17, 1978; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	233	5.3	2.9	3.6	2.7	2.6	883	463	884	983	1130	826
2	227	5.4	2.9	3.5	2.8	2.6	771	456	864	1020	1120	584
3	206	5.3	2.8	3.5	3.7	226	599	463	795	1060	1090	364
4	206	5.1	2.7	3.5	3.8	393	468	464	783	1080	1070	325
5	205	5.4	3.1	3.5	3.8	395	483	476	803	1090	1060	320
6	218	5.4	3.8	3.5	12	472	505	497	829	1100	1000	318
7	222	5.2	3.8	3.5	16	550	526	513	833	1100	998	282
8	234	4.9	3.5	3.5	16	553	545	560	820	1120	1010	273
9	245	1.9	2.9	3.4	15	555	609	613	820	1110	1000	263
10	241	0.00	2.9	3.7	8.8	555	609	658	819	1110	1000	252
11	206	0.00	2.9	3.8	5.7	555	612	672	898	1040	997	527
12	173	0.00	2.9	3.6	4.6	555	622	674	940	1010	927	707
13	117	0.00	2.9	3.5	3.4	556	626	676	942	996	881	709
14	37	0.00	2.9	3.5	3.3	557	627	796	942	975	868	729
15	6.0	0.00	2.9	3.5	3.1	557	619	866	934	965	866	735
16	5.7	0.00	4.0	3.5	2.6	671	613	874	932	973	847	738
17	5.5	0.00	5.2	3.5	2.6	731	696	878	927	999	852	742
18	5.3	0.00	5.2	3.5	2.7	733	750	865	941	1000	860	740
19	5.2	0.00	4.3	3.5	2.7	733	750	862	965	1000	860	737
20	4.9	0.00	3.6	3.5	2.7	734	752	923	965	1020	896	738
21	4.9	0.86	3.5	3.3	2.7	735	762	959	987	1010	882	739
22	5.6	3.6	3.5	2.4	2.7	735	747	964	992	997	883	623
23	7.0	3.7	3.5	2.6	2.7	736	739	971	985	1060	900	351
24	4.8	3.3	3.4	2.9	2.6	666	665	972	966	1090	894	239
25	3.7	3.3	3.3	2.9	2.6	622	508	995	943	1100	894	230
26	3.5	3.0	3.4	2.7	2.6	622	488	994	943	1100	971	230
27	3.3	2.9	3.5	2.8	2.4	642	517	1010	974	1100	1020	233
28	3.0	2.9	3.6	2.9	2.5	662	469	1030	995	1110	1010	259
29	2.7	2.9	3.8	2.9	---	683	456	973	998	1110	901	283
30	2.3	2.9	3.8	2.9	---	716	473	927	985	1110	821	281
31	3.3	---	3.8	2.7	---	842	---	907	---	1120	819	---
TOTAL	2846.7	73.26	107.2	101.6	138.8	17747.2	18489	23951	27404	32658	29327	14377
MEAN	91.8	2.44	3.46	3.28	4.96	572	616	773	913	1053	946	479
MAX	245	5.4	5.2	3.8	16	842	883	1030	998	1120	1130	826
MIN	2.3	0.00	2.7	2.4	2.4	2.6	456	456	783	965	819	230
AC-FT	5650	145	213	202	275	35200	36670	47510	54360	64780	58170	28520

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2003, BY WATER YEAR (WY)

MEAN	154	52.7	29.7	75.6	118	249	688	891	936	881	768	489
MAX	490	408	404	363	456	1087	1160	1265	1259	1260	1251	1031
(WY)	1981	1999	1999	1987	1985	1972	1984	1975	1978	1967	1978	1967
MIN	0.000	0.000	0.000	0.000	0.000	0.000	41.9	84.0	147	78.2	70.9	5.55
(WY)	1920	1920	1920	1916	1916	1930	1995	1977	1924	1924	1924	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1914 - 2003	
ANNUAL TOTAL	180853.96		167220.76			
ANNUAL MEAN	495		458		450	
HIGHEST ANNUAL MEAN					684	1984
LOWEST ANNUAL MEAN					114	1977
HIGHEST DAILY MEAN	1110	Jul 12	1130	Aug 1	1320	Aug 10 1978
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Nov 10	0.00	Oct 30 1914
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Nov 10	0.00	Oct 30 1914
ANNUAL RUNOFF (AC-FT)	358700		331700		325800	
10 PERCENT EXCEEDS	1040		1000		1080	
50 PERCENT EXCEEDS	733		483		331	
90 PERCENT EXCEEDS	0.00		2.8		0.00	

11301000 OAKDALE CANAL NEAR KNIGHTS FERRY, CA

LOCATION.—Lat 37° 51'32", long 120° 37'56", in SW 1/4 SE 1/4 sec.10, T.1 S., R.12 E., Tuolumne County, Hydrologic Unit 18040010, on left bank, 0.3 mi downstream from headgate at Goodwin Dam, and 3.4 mi northeast of Knights Ferry.

PERIOD OF RECORD.—May 1914 to current year. Records for water years 1933–36 incomplete; monthly and yearly estimates published in WSP 1315-A.

GAGE.—Water-stage recorder. Elevation of gage is 350 ft above NGVD of 1929, from topographic map. Prior to Apr. 29, 1916, nonrecording gage at site 1,000 ft upstream at different datum. Apr. 29, 1916, to July 3, 1925, nonrecording gage and July 4, 1925, to Apr. 3, 1949, water-stage recorder at present site at datum 0.18 ft higher.

REMARKS.—Canal diverts water from left bank of Stanislaus River at Goodwin Dam 0.3 mi upstream for irrigation in Oakdale Irrigation District.

COOPERATION.—Records were provided by Oakdale and South San Joaquin Irrigation District, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2067.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 556 ft^3/s, July 8–11, 1967; maximum discharge, 595 ft^3/s, June 10, 1991, gage height, 10.09 ft, result of damage to canal due to vandalism; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	347	0.00	0.00	0.00	0.00	0.00	160	149	397	467	474	420
2	338	0.00	0.00	0.00	0.00	0.00	34	127	383	467	457	425
3	326	0.00	0.00	0.00	0.00	0.00	37	97	388	432	443	432
4	294	0.00	0.00	0.00	0.00	0.00	68	96	410	417	407	441
5	266	0.00	0.00	0.00	0.00	0.00	99	109	410	440	428	441
6	274	0.00	0.00	0.00	0.00	0.00	125	140	421	455	454	441
7	331	0.00	0.00	0.00	0.00	0.00	158	200	431	455	467	427
8	341	0.00	0.00	0.00	0.00	0.00	198	233	431	454	467	421
9	336	0.00	0.00	0.00	0.00	0.00	214	245	431	437	467	421
10	336	0.00	0.00	0.00	0.00	0.00	236	280	412	439	467	387
11	336	0.00	0.00	0.00	0.00	0.00	262	314	372	476	458	378
12	330	0.00	0.00	0.00	0.00	0.00	276	349	350	488	447	379
13	312	0.00	0.00	0.00	0.00	0.00	255	358	367	475	447	368
14	16	0.00	0.00	0.00	0.00	0.00	204	358	420	461	448	351
15	0.00	0.00	0.00	0.00	0.00	0.00	184	358	420	461	458	340
16	0.00	0.00	0.00	0.00	0.00	0.00	179	336	420	469	468	326
17	0.00	0.00	0.00	0.00	0.00	0.00	156	318	420	486	461	338
18	0.00	0.00	0.00	0.00	0.00	0.00	156	318	421	483	445	345
19	0.00	0.00	0.00	0.00	0.00	35	184	338	421	483	445	345
20	0.00	0.00	0.00	0.00	0.00	101	174	356	425	483	445	344
21	0.00	0.00	0.00	0.00	0.00	119	183	354	442	484	445	344
22	0.00	0.00	0.00	0.00	0.00	179	196	353	447	484	445	321
23	0.00	0.00	0.00	0.00	0.00	214	208	354	425	484	445	297
24	0.00	0.00	0.00	0.00	0.00	211	219	376	380	484	445	298
25	0.00	0.00	0.00	0.00	0.00	217	184	395	363	484	458	298
26	0.00	0.00	0.00	0.00	0.00	230	155	389	396	484	463	298
27	0.00	0.00	0.00	0.00	0.00	245	165	376	413	484	457	298
28	0.00	0.00	0.00	0.00	0.00	255	164	390	427	485	434	298
29	0.00	0.00	0.00	0.00	---	255	132	403	455	484	415	287
30	0.00	0.00	0.00	0.00	---	255	132	403	467	485	409	278
31	0.00	---	0.00	0.00	---	247	---	403	---	485	410	---
TOTAL	4183.00	0.00	0.00	0.00	0.00	2563.00	5097	9275	12365	14555	13879	10787
MEAN	135	0.000	0.000	0.000	0.000	82.7	170	299	412	470	448	360
MAX	347	0.00	0.00	0.00	0.00	255	276	403	467	488	474	441
MIN	0.00	0.00	0.00	0.00	0.00	0.00	34	96	350	417	407	278
AC-FT	8300	0.00	0.00	0.00	0.00	5080	10110	18400	24530	28870	27530	21400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2003, BY WATER YEAR (WY)

MEAN	98.8	4.67	0.98	1.58	2.05	47.7	227	358	375	375	342	257
MAX	404	51.5	15.8	71.0	77.9	364	496	544	552	554	547	518
(WY)	1979	1940	1987	1987	1976	1972	1962	1965	1965	1967	1967	1958
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.004	97.5	49.8	25.8	0.62	1.20
(WY)	1995	1915	1916	1916	1915	1918	1983	1915	1924	1924	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1914 - 2003	
ANNUAL TOTAL	74567.00		72704.00			
ANNUAL MEAN	204		199		177	
HIGHEST ANNUAL MEAN					277	1979
LOWEST ANNUAL MEAN					52.8	1924
HIGHEST DAILY MEAN	483	Jul 12	488	Jul 12	556	Jul 8 1967
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 15	0.00	Jun 21 1914
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 15	0.00	Oct 16 1914
ANNUAL RUNOFF (AC-FT)	147900		144200		128100	
10 PERCENT EXCEEDS	450		457		476	
50 PERCENT EXCEEDS	289		183		71	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CA

LOCATION.—Lat 37° 51'06", long 120° 38'13", in Rancheria del Rio Estanislao Grant, Calaveras County, Hydrologic Unit 18040010, on right bank 250 ft upstream from Owl Creek, 0.9 mi downstream from Goodwin Dam, and 2.9 mi northeast of Knights Ferry.

DRAINAGE AREA.—986 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—February 1957 to current year. Records equivalent to those published as "Stanislaus River at Knights Ferry", 1903–14, and as "Stanislaus River near Knights Ferry", 1915–32, if adjusted for diversions in Stanislaus and San Joaquin Water Co.'s Canal and Oakdale and South San Joaquin Canals.

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 252.83 ft above NGVD of 1929.

REMARKS.—Flow regulated by New Melones Reservoir (station 11299000) since 1978 and Tulloch Reservoir (station 11299995) since 1957. South San Joaquin Canal (station 11300500) and Oakdale Canal (station 11301000) divert at Goodwin Dam.

COOPERATION.—Records were provided by Oakdale and South San Joaquin Irrigation District, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2067.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 40,200 ft^3/s, Dec. 24, 1964, gage height, 28.85 ft in gage well, 31.2 ft outside, from floodmarks; minimum daily, 0.12 ft^3/s, Feb. 8, 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 23, 1955, reached a stage of 37.7 ft, from floodmarks, discharge, 62,900 ft^3/s, by computation of flow over Goodwin Dam.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	196	248	279	258	493	495	583	1420	1000	574	379	272
2	221	249	266	232	491	491	587	1430	1000	532	377	270
3	221	251	269	233	492	495	627	1220	1000	532	397	273
4	219	250	272	235	492	492	685	916	1000	532	358	271
5	218	251	272	234	523	491	670	570	1060	528	329	272
6	216	245	275	230	580	503	661	573	1190	531	318	273
7	215	270	273	232	582	493	711	577	1190	498	275	273
8	219	296	274	233	584	491	757	572	1190	395	279	274
9	218	296	273	231	585	486	756	578	1190	376	278	268
10	220	295	270	230	592	488	755	576	1190	361	275	271
11	225	297	269	237	599	490	761	576	1200	322	272	275
12	219	291	271	234	592	493	760	575	1190	326	276	270
13	219	301	272	233	587	488	692	656	1220	320	279	271
14	220	297	272	234	587	492	607	707	1250	323	275	269
15	217	299	275	234	588	489	610	702	1250	334	277	261
16	223	299	268	237	590	489	612	719	1250	366	279	253
17	224	301	270	235	584	470	610	867	1260	393	278	253
18	220	295	268	232	590	437	609	956	1250	380	273	251
19	219	298	264	230	590	434	609	948	1260	372	273	250
20	289	297	266	230	569	435	613	956	1250	397	273	250
21	537	296	268	233	538	436	622	747	1250	423	275	253
22	695	293	267	236	544	434	622	571	1250	422	271	251
23	691	293	270	235	542	435	732	575	1260	399	275	251
24	690	293	269	257	541	437	1150	578	1250	378	271	250
25	695	295	269	273	537	433	1430	577	1250	370	270	234
26	693	296	269	270	515	432	1420	578	1250	375	270	223
27	693	294	269	810	497	424	1420	699	1250	402	270	228
28	551	295	268	972	490	432	1420	926	1250	405	272	224
29	333	295	267	519	---	437	1420	992	1250	378	274	220
30	251	296	269	342	---	483	1420	1000	1030	384	277	226
31	250	---	275	417	---	578	---	1000	---	375	275	---
TOTAL	10517	8572	8378	9248	15494	14603	24931	24337	35680	12703	9020	7680
MEAN	339	286	270	298	553	471	831	785	1189	410	291	256
MAX	695	301	279	972	599	578	1430	1430	1260	574	397	275
MIN	196	245	264	230	490	424	583	570	1000	320	270	220
AC-FT	20860	17000	16620	18340	30730	28970	49450	48270	70770	25200	17890	15230

11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1978, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	128	215	690	1194	1103	1060	1154	1651	1249	96.4	4.18	17.8
MAX	749	681	3521	5040	4309	3265	3686	6233	5100	1063	22.5	231
(WY)	1976	1966	1965	1969	1969	1969	1967	1969	1967	1967	1967	1969
MIN	.19	4.56	.40	11.5	2.19	4.74	2.48	1.52	1.35	1.60	1.09	.51
(WY)	1977	1977	1978	1977	1960	1960	1972	1961	1961	1960	1960	1960

SUMMARY STATISTICS	WATER YEARS 1957 - 1978	
ANNUAL MEAN	725	
HIGHEST ANNUAL MEAN	2131	1969
LOWEST ANNUAL MEAN	6.47	1977
HIGHEST DAILY MEAN	29400	Dec 24 1964
LOWEST DAILY MEAN	.14	Oct 6 1976
ANNUAL SEVEN-DAY MINIMUM	.15	Oct 13 1976
MAXIMUM PEAK FLOW	40200	Dec 24 1964
MAXIMUM PEAK STAGE	28.85	Dec 24 1964
ANNUAL RUNOFF (AC-FT)	525500	
10 PERCENT EXCEEDS	2300	
50 PERCENT EXCEEDS	43	
90 PERCENT EXCEEDS	1.9	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	494	410	700	943	1181	1250	927	961	728	549	491	400
MAX	1738	2246	4581	6005	6036	4905	1936	2046	1798	1861	1791	1634
(WY)	1999	1984	1984	1997	1997	1986	1998	1998	1998	1998	1998	1998
MIN	172	161	140	132	140	143	236	275	185	229	157	155
(WY)	1991	1991	1992	1990	1990	1991	1991	1991	1984	1984	1991	1991

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1984 - 2003	
ANNUAL TOTAL	164999		181163			
ANNUAL MEAN	452		496		751	
HIGHEST ANNUAL MEAN					1893	1997
LOWEST ANNUAL MEAN					185	1991
HIGHEST DAILY MEAN	1490	Apr 17	1430	Apr 25	6840	Feb 26 1997
LOWEST DAILY MEAN	170	Sep 29	196	Oct 1	51	Oct 10 1990
ANNUAL SEVEN-DAY MINIMUM	172	Sep 24	215	Oct 1	85	Oct 10 1990
MAXIMUM PEAK FLOW			1470	Apr 25	7350	Jan 3 1997
MAXIMUM PEAK STAGE			10.21	Apr 25	15.59	Jan 3 1997
ANNUAL RUNOFF (AC-FT)	327300		359300		544100	
10 PERCENT EXCEEDS	877		1010		1530	
50 PERCENT EXCEEDS	313		378		392	
90 PERCENT EXCEEDS	218		234		188	

11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—February 1966 to current year.
WATER TEMPERATURE: February 1966 to current year.

PERIOD OF DAILY RECORD.—February 1966 to current year.
WATER TEMPERATURE: February 1966 to current year.

INSTRUMENTATION.—Water-temperature recorder since February 1966.

REMARKS.—Water-temperature records rated excellent except for Apr. 19–21, which are rated good. Temperature recorder located 2,300 ft upstream from gaging station. Water temperature is affected by regulation from Goodwin Dam.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum recorded, 30.5° C, July 25, 1974; minimum recorded, 5.5° C, Feb. 3, 1972.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 14.0° C, many days May to September; minimum recorded, 10.0° C, several days December to February.

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.0	12.5	12.5	12.0	12.0	11.5	10.5	10.0	11.0	10.5	11.0	10.5
2	13.0	12.0	12.5	12.0	12.0	11.5	11.0	10.5	11.0	10.5	11.0	10.5
3	13.0	12.0	12.5	12.0	12.0	11.0	11.0	10.5	11.0	10.5	11.0	10.5
4	13.0	12.5	12.5	12.0	12.0	11.0	11.0	10.5	11.0	10.5	11.0	10.5
5	13.5	12.5	12.5	12.0	12.0	11.0	11.0	10.5	11.0	10.5	11.0	10.5
6	13.5	12.5	12.5	12.0	11.5	11.0	11.0	10.5	11.0	10.5	11.5	10.5
7	13.5	12.5	12.5	12.5	11.5	11.0	10.5	10.0	11.0	10.5	11.5	10.5
8	13.5	12.5	13.0	12.5	11.5	11.0	10.5	10.0	11.0	10.5	11.5	10.5
9	13.5	12.5	13.0	12.5	11.5	11.0	10.5	10.0	11.0	10.5	11.5	10.5
10	13.5	12.5	12.5	12.5	11.5	11.0	10.5	10.5	11.0	10.5	11.5	10.5
11	13.0	12.5	12.5	12.0	11.5	11.0	11.0	10.5	11.0	10.5	12.0	11.0
12	13.0	12.5	13.0	12.5	11.5	11.0	11.0	10.5	11.0	10.5	12.0	11.0
13	13.0	12.5	13.0	12.5	11.5	11.5	11.0	10.5	11.0	11.0	12.0	11.0
14	13.0	12.5	12.5	12.0	11.5	11.5	11.0	10.5	11.0	11.0	11.5	11.0
15	13.5	12.5	12.5	12.0	11.5	11.5	11.0	10.5	11.0	11.0	11.5	11.0
16	13.5	13.0	12.5	12.0	11.5	11.5	11.0	10.0	11.0	11.0	11.0	10.5
17	13.5	12.5	12.5	12.0	11.5	11.0	10.5	10.0	11.0	10.5	11.0	10.5
18	13.5	12.5	12.5	12.0	11.5	11.0	10.5	10.0	11.0	10.5	11.5	10.5
19	13.5	12.5	12.5	12.0	11.0	11.0	10.5	10.0	11.0	10.5	11.5	10.5
20	13.0	12.5	12.5	12.0	11.0	11.0	10.5	10.0	10.5	10.0	11.5	11.0
21	13.0	12.5	12.5	12.0	11.5	11.0	11.0	10.5	11.0	10.5	11.5	10.5
22	13.0	12.5	12.5	12.0	11.0	10.5	11.0	10.5	11.0	10.5	11.5	10.5
23	13.0	12.5	12.5	12.0	11.0	10.5	11.5	11.0	11.0	10.5	11.5	11.0
24	13.0	12.5	12.0	12.0	10.5	10.5	11.0	11.0	11.0	10.5	11.5	11.0
25	13.0	12.5	12.0	12.0	10.5	10.0	11.0	11.0	11.0	10.5	12.0	10.5
26	13.0	12.5	12.0	11.5	11.0	10.5	11.5	11.0	11.0	10.5	11.5	11.0
27	13.0	12.5	12.0	11.5	11.0	10.5	11.0	11.0	11.0	10.5	11.5	10.5
28	13.0	12.5	12.0	11.5	11.0	11.0	11.0	10.5	11.0	10.5	11.5	10.5
29	13.0	12.5	12.0	11.5	11.0	10.5	11.0	10.5	---	---	11.5	10.5
30	13.0	12.5	12.0	11.5	10.5	10.5	11.0	10.5	---	---	12.0	10.5
31	13.0	12.0	---	---	11.0	10.5	11.0	11.0	---	---	11.5	11.0
MONTH	13.5	12.0	13.0	11.5	12.0	10.0	11.5	10.0	11.0	10.0	12.0	10.5

11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.0	10.5	12.0	11.0	13.0	12.0	13.0	12.0	14.0	13.0	14.0	13.0
2	11.0	10.5	11.5	11.0	13.0	12.0	13.0	12.0	13.5	13.0	14.0	13.0
3	11.5	10.5	12.0	11.5	13.0	12.0	13.0	12.0	14.0	13.0	14.0	13.5
4	11.0	10.5	12.0	11.0	13.0	12.0	13.5	12.0	13.5	12.5	14.0	13.0
5	11.5	10.5	12.0	11.0	13.0	12.0	13.5	12.0	13.5	12.5	14.0	13.0
6	11.5	10.5	12.0	11.0	13.0	12.0	13.5	12.0	13.5	12.5	14.0	13.0
7	12.0	10.5	12.0	11.0	13.0	12.0	13.5	12.0	13.5	12.5	14.0	13.0
8	12.0	11.0	11.5	11.0	13.5	12.5	13.5	12.0	13.5	12.5	14.0	13.0
9	12.0	11.0	12.0	11.0	13.5	12.5	13.5	12.0	13.5	12.5	13.5	13.0
10	12.0	11.0	12.5	11.0	13.5	12.5	13.5	12.5	13.5	12.5	14.0	13.0
11	11.5	11.0	12.5	11.0	13.5	12.5	13.5	12.0	13.5	12.5	14.0	13.0
12	11.5	11.0	12.5	11.0	13.5	12.5	13.5	12.5	13.5	12.5	14.0	13.0
13	11.5	11.0	12.5	11.5	13.5	12.5	13.5	12.5	13.5	12.5	14.0	13.0
14	11.5	11.0	12.0	11.5	13.5	12.5	13.5	12.5	13.5	12.5	14.0	13.0
15	12.0	11.0	12.5	11.5	13.5	12.5	13.5	12.5	13.5	12.5	14.0	13.0
16	11.5	11.0	12.5	11.5	13.5	12.5	13.5	12.5	13.5	12.5	14.0	13.0
17	12.0	11.0	12.5	11.5	13.5	12.5	13.5	12.5	14.0	12.5	14.0	13.0
18	12.0	11.0	12.5	11.5	13.5	12.5	13.5	12.5	14.0	12.5	14.0	13.0
19	12.0	11.0	12.5	11.5	13.5	12.5	13.5	12.5	14.0	12.5	14.0	13.0
20	11.5	11.0	13.0	12.0	13.5	12.5	13.5	12.5	14.0	12.5	14.0	13.0
21	11.5	11.0	13.0	12.0	13.5	12.5	14.0	13.0	14.0	13.0	14.0	13.0
22	12.0	11.0	12.5	11.5	13.5	12.5	14.0	12.5	13.5	13.0	14.0	13.0
23	12.0	11.0	12.5	11.5	13.5	12.5	13.5	13.0	14.0	12.5	14.0	13.0
24	11.5	11.0	12.5	11.5	13.5	12.5	13.5	12.5	14.0	13.0	14.0	13.5
25	12.0	11.5	12.5	11.5	13.5	12.5	14.0	12.5	14.0	13.0	14.0	13.5
26	12.0	11.5	12.5	11.5	13.5	12.5	14.0	12.5	14.0	13.0	14.0	13.5
27	12.0	11.0	12.5	11.5	13.5	12.5	14.0	12.5	14.0	13.0	14.0	13.5
28	11.5	11.0	14.0	12.0	13.5	12.5	14.0	13.0	14.0	13.0	14.0	13.5
29	12.0	11.0	13.0	12.0	13.5	12.5	14.0	13.0	14.0	13.0	14.0	13.5
30	12.0	11.0	13.0	12.0	14.0	12.5	14.0	13.0	14.0	13.0	14.0	13.5
31	---	---	13.0	12.0	---	---	13.5	13.0	14.0	13.0	---	---
MONTH	12.0	10.5	14.0	11.0	14.0	12.0	14.0	12.0	14.0	12.5	14.0	13.0

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	Depth at sample location, feet (81903)	Temperature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR				
03...*	0813	2.00	10.6	5.00
03...*	0814	2.00	10.6	15.0
03...*	0815	2.20	10.6	25.0
03...*	0816	1.50	10.6	35.0
03...*	0817	1.70	10.6	45.0
03...*	0818	2.40	10.6	55.0
03...*	0819	2.50	10.6	65.0
03...*	0820	2.80	10.6	75.0
03...*	0821	2.80	10.6	85.0
03...*	0822	1.70	10.6	95.0
AUG				
19...*	1357	1.40	13.7	5.00
19...*	1358	2.50	13.6	14.0
19...*	1359	2.00	13.6	23.0
19...*	1400	1.80	13.6	32.0
19...*	1401	1.60	13.6	41.0
19...*	1402	1.30	13.6	50.0
19...*	1403	1.20	13.6	59.0
19...*	1404	1.00	13.6	68.0
19...*	1405	1.70	13.6	77.0
19...*	1406	2.00	13.6	86.0

* Instantaneous discharge at time of cross-sectional measurement: Apr. 3, 604 ft^3/s; Aug. 19, 278 ft^3/s.

11302500 STANISLAUS RIVER AT OAKDALE, CA

LOCATION.—Lat 37° 46'38", long 120° 51'07", in Eight Square Leagues on Stanislaus River Grant, Stanislaus County, Hydrologic Unit 18040002, on left bank at State Highway 120 bridge, at Oakdale.

DRAINAGE AREA.—1,032 mi^2.

PERIOD OF RECORD.—August 1985 to current year.
WATER TEMPERATURE: August 1985 to current year.

PERIOD OF DAILY RECORD.—August 1985 to current year.
WATER TEMPERATURE: August 1985 to current year.

INSTRUMENTATION.—Water-temperature recorder since Aug. 28, 1985.

REMARKS.—Water-temperature records rated excellent except for May 24 to June 2, Aug. 14–19, 23–25, which are rated good. Water temperature can be affected by releases from Woodward Reservoir Dam.

EXTREMES FOR PERIOD OF DAILY RECORD.—
WATER TEMPERATURE: Maximum recorded, 26.0° C, June 21, 22, 1992; minimum recorded, 5.0° C, Dec. 22–25, 1990.

EXTREMES FOR CURRENT YEAR.—
WATER TEMPERATURE: Maximum recorded, 20.5° C, Aug. 26; minimum recorded, 9.0° C, Dec. 24, 25.

TEMPERATURE, WATER, DEGREES CELSIUS,WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.5	15.0	12.5	11.0	12.0	11.0	10.5	9.5	12.0	11.5	12.5	10.5
2	15.5	14.0	12.0	11.0	11.5	10.5	11.0	10.0	11.5	10.0	12.5	10.5
3	15.5	13.5	12.5	11.0	11.5	10.5	11.0	10.0	11.0	9.5	12.0	10.5
4	16.0	14.0	12.5	11.0	11.5	10.5	11.0	10.0	11.0	9.5	12.5	10.5
5	16.5	14.5	12.5	11.0	11.5	10.5	11.0	10.5	10.5	9.5	12.5	10.5
6	17.0	14.5	12.5	11.0	11.5	10.5	11.0	10.5	11.0	9.5	13.0	10.5
7	17.0	15.0	13.0	12.0	11.5	11.0	10.5	9.5	11.0	9.5	13.0	10.5
8	17.5	15.0	14.0	13.0	11.5	10.5	10.5	10.0	10.5	9.5	13.0	11.0
9	17.0	15.0	14.0	13.5	11.5	10.5	10.5	10.0	10.5	9.5	13.0	11.0
10	16.5	15.5	14.0	13.0	11.5	10.5	11.0	10.5	11.0	9.5	13.5	11.5
11	16.0	14.5	13.5	12.5	11.5	11.0	11.0	10.5	11.0	10.0	13.5	12.0
12	16.0	14.0	13.5	12.5	11.5	11.0	11.5	10.5	11.0	10.5	14.0	12.0
13	16.0	14.0	14.0	13.0	11.5	11.0	12.0	11.0	12.5	11.0	14.0	12.5
14	16.0	14.0	13.0	12.5	12.0	11.5	11.0	10.5	12.0	11.5	14.5	12.5
15	15.5	14.0	12.5	12.0	12.0	11.5	12.0	10.5	12.0	11.0	14.0	12.5
16	15.5	14.0	13.0	12.0	12.5	11.5	11.0	9.5	12.0	11.5	13.5	12.0
17	15.0	13.5	12.5	12.0	12.0	11.0	10.5	10.0	11.5	10.5	13.0	11.0
18	15.0	13.5	12.5	11.5	11.5	10.5	10.5	10.0	11.5	10.0	13.5	11.0
19	15.0	13.5	12.5	11.5	10.5	10.0	10.5	10.0	11.0	10.5	13.5	11.0
20	15.0	13.5	12.5	11.5	10.5	10.0	10.0	10.0	11.5	10.0	14.0	12.0
21	15.0	13.5	12.5	11.5	11.5	10.5	11.0	10.0	11.5	10.0	14.5	12.0
22	14.0	13.0	13.0	12.0	11.0	10.0	11.5	10.5	12.0	10.5	14.0	12.0
23	14.0	12.5	12.5	12.0	10.0	9.5	12.0	11.0	12.0	10.5	13.5	12.5
24	13.5	12.5	12.5	12.0	10.0	9.0	12.0	11.5	12.0	11.5	14.5	12.0
25	13.5	12.5	13.0	12.0	9.5	9.0	11.5	11.5	12.5	11.0	14.5	12.0
26	13.5	12.0	12.0	11.0	10.5	9.5	12.0	11.0	12.0	10.5	14.5	12.5
27	13.5	12.0	11.5	10.5	11.5	10.5	12.0	11.5	12.0	11.0	14.0	12.0
28	13.5	12.0	11.5	10.5	12.0	11.0	11.5	11.0	12.0	10.5	14.0	11.5
29	13.5	12.0	11.5	10.5	11.0	10.5	11.5	10.0	---	---	14.5	12.0
30	13.5	12.0	11.5	11.0	10.5	10.5	11.5	11.0	---	---	15.0	12.5
31	12.5	11.5	---	---	11.0	10.0	12.0	11.0	---	---	14.5	12.5
MONTH	17.5	11.5	14.0	10.5	12.5	9.0	12.0	9.5	12.5	9.5	15.0	10.5

11302500 STANISLAUS RIVER AT OAKDALE, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS,WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.5	11.5	13.0	11.5	16.0	13.5	17.0	14.5	18.5	16.0	20.0	17.5
2	12.0	10.5	12.5	11.5	16.0	13.5	17.0	14.5	18.0	16.5	19.5	17.5
3	13.0	10.5	13.0	11.5	16.5	13.5	17.5	15.0	19.0	15.5	20.0	18.0
4	12.5	11.5	13.5	12.0	16.0	13.5	17.5	14.5	19.0	16.5	20.0	18.0
5	13.0	10.5	14.5	11.5	16.0	13.5	18.0	15.0	19.0	16.5	20.0	17.5
6	13.0	11.0	15.0	12.5	15.5	13.5	17.5	15.0	19.0	16.5	19.0	17.0
7	14.0	11.0	15.0	12.5	15.5	13.5	17.5	15.0	19.0	16.5	18.5	16.5
8	14.0	11.5	14.0	12.5	16.0	13.5	18.0	15.0	19.5	16.5	18.5	16.5
9	14.0	12.0	14.5	11.5	16.0	13.5	19.0	15.5	19.5	17.0	17.5	16.5
10	14.0	12.0	15.0	12.0	15.5	13.5	19.5	16.0	19.5	17.0	18.5	16.0
11	13.5	12.0	15.5	12.5	15.5	13.5	20.0	16.5	19.5	17.0	19.0	16.5
12	13.0	12.0	15.5	13.0	15.5	13.5	20.0	17.0	19.5	17.0	19.0	16.5
13	13.5	11.5	16.0	13.0	15.5	13.5	20.0	17.0	19.0	16.5	19.0	17.0
14	14.0	11.5	15.0	13.0	15.5	13.5	20.0	17.0	19.0	16.5	18.5	16.5
15	13.0	11.5	15.0	12.5	16.0	13.5	20.0	17.0	19.5	17.0	18.5	16.5
16	13.0	12.0	15.0	13.0	16.0	14.0	20.0	17.0	19.0	16.5	18.0	16.0
17	13.5	12.0	15.0	13.0	16.0	13.5	19.5	17.0	19.5	16.5	17.5	15.5
18	14.0	11.5	14.5	12.5	15.5	13.5	19.5	17.0	19.5	17.0	17.5	15.5
19	14.5	12.0	15.0	12.5	15.5	13.0	19.5	17.0	20.0	17.5	18.0	15.5
20	13.5	12.0	15.5	13.0	15.5	13.5	19.5	17.0	20.0	17.0	18.0	15.5
21	13.0	12.0	16.0	13.0	15.5	13.5	19.5	17.0	18.5	17.5	18.5	16.0
22	13.0	11.5	17.0	14.5	15.5	13.5	19.5	17.0	19.0	17.0	18.5	16.5
23	14.0	12.0	17.0	14.5	15.5	13.5	18.5	16.5	19.5	17.0	18.5	16.5
24	13.5	11.5	17.0	14.5	15.5	13.5	19.0	16.0	20.0	17.5	18.5	16.5
25	12.5	11.0	16.0	14.0	15.5	13.5	19.5	17.0	20.0	17.5	18.0	16.0
26	13.0	11.5	16.5	14.0	16.0	13.5	20.0	17.0	20.5	18.0	18.0	16.0
27	13.5	11.5	17.0	14.0	16.0	13.5	20.0	17.0	20.0	18.0	18.5	16.0
28	13.0	11.5	16.5	13.5	16.0	13.5	19.5	17.0	19.5	17.0	18.5	16.5
29	12.5	11.0	16.0	14.5	16.0	13.5	20.0	17.0	19.0	16.5	18.5	16.0
30	13.5	11.5	15.5	13.5	16.0	13.5	19.5	17.5	19.0	16.5	18.0	16.0
31	---	---	16.0	13.5	---	---	18.5	17.0	19.5	17.0	---	---
MONTH	14.5	10.5	17.0	11.5	16.5	13.0	20.0	14.5	20.5	15.5	20.0	15.5

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	Depth at sample location, feet (81903)	Temperature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR				
04...*	0727	2.50	11.3	10.0
04...*	0729	3.20	11.3	28.0
04...*	0730	2.80	11.3	46.0
04...*	0731	1.90	11.3	64.0
04...*	0732	3.30	11.3	82.0
04...*	0733	3.20	11.3	100
04...*	0734	2.70	11.3	118
04...*	0735	3.10	11.3	136
04...*	0736	2.00	11.3	154
04...*	0737	1.00	11.3	172
AUG				
19...*	1519	1.80	19.3	12.0
19...*	1520	2.60	19.3	29.0
19...*	1522	1.60	19.3	46.0
19...*	1523	1.00	19.3	63.0
19...*	1524	1.30	19.3	80.0
19...*	1525	2.50	19.3	97.0
19...*	1526	1.60	19.3	114
19...*	1527	2.20	19.3	131
19...*	1528	1.40	19.3	148
19...*	1529	1.00	19.4	165

* Instantaneous discharge at time of cross-sectional measurement: Unknown.

11303000 STANISLAUS RIVER AT RIPON, CA

LOCATION.—Lat 37° 43'47", long 121° 06'34", in NW 1/4 SE 1/4 sec.29, T.2 S., R.8 E., Stanislaus County, Hydrologic Unit 18040002, on left bank, 15 ft downstream from railroad bridge, 1.1 mi southeast of Ripon, and 15 mi upstream from mouth.

DRAINAGE AREA.—1,075 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1940 to current year. April to September 1940 in reports of California Department of Water Resources.

GAGE.—Water-stage recorder. Datum of gage is 0.72 ft above NGVD of 1929. October 1940 to Nov. 17, 1953, at site 100 ft upstream at same datum.

REMARKS.—Records good. Flow regulated by reservoirs and powerplants upstream from station. South San Joaquin and Oakdale Canals (stations 11300500 and 11301000) divert at Goodwin Dam 34 mi upstream for irrigation in the vicinity of Oakdale. See REMARKS for "Stanislaus River below Goodwin Dam, near Knights Ferry" (station 11302000).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 62,500 ft^3/s, Dec. 24, 1955, gage height, 63.25 ft; minimum daily, 0.11 ft^3/s, Aug. 4–6, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Feb. 12, 1938, reached a stage of 64.4 ft, from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	292	299	307	336	421	497	581	1380	982	1150	427	335
2	272	288	302	325	489	596	609	1390	1000	781	432	319
3	305	286	293	295	488	560	602	1410	999	692	455	307
4	288	327	290	288	489	522	621	1250	998	662	459	307
5	292	303	291	284	492	503	662	1000	1000	651	406	318
6	302	326	292	282	507	497	660	731	1050	653	381	326
7	293	309	296	279	557	508	666	679	1170	630	387	329
8	307	360	293	278	565	500	690	662	1180	607	350	357
9	338	408	293	279	568	501	729	648	1200	534	339	326
10	297	380	295	288	572	522	733	647	1200	502	352	331
11	312	338	292	316	576	497	740	657	1200	460	356	330
12	321	324	290	313	585	494	759	647	1210	421	329	319
13	310	317	310	294	592	494	769	637	1210	415	332	327
14	306	318	346	285	585	509	735	684	1240	416	324	327
15	297	315	345	282	583	571	660	737	1290	410	327	328
16	271	315	381	279	591	564	650	736	1300	391	333	315
17	267	315	504	279	589	534	652	749	1280	414	338	310
18	328	316	444	278	581	498	649	844	1270	454	344	306
19	291	313	393	275	586	463	646	935	1280	449	329	296
20	275	312	388	272	589	463	644	949	1280	411	321	317
21	282	311	393	272	576	456	667	962	1280	431	333	327
22	417	310	367	272	546	459	661	812	1290	464	355	326
23	580	309	341	274	544	459	646	664	1320	474	357	308
24	607	308	322	272	543	465	716	645	1300	462	343	305
25	620	309	313	280	544	459	1030	652	1280	426	350	301
26	629	309	308	295	538	457	1280	659	1280	416	342	302
27	635	309	305	295	529	459	1330	646	1280	424	323	292
28	636	308	306	594	506	459	1380	705	1270	450	316	294
29	559	307	315	798	---	463	1380	886	1290	436	320	289
30	413	306	327	594	---	466	1370	949	1300	407	323	279
31	322	---	338	415	---	497	---	976	---	413	333	---
TOTAL	11664	9555	10280	10168	15331	15392	23917	25928	36229	15906	11016	9453
MEAN	376	318	332	328	548	497	797	836	1208	513	355	315
MAX	636	408	504	798	592	596	1380	1410	1320	1150	459	357
MIN	267	286	290	272	421	456	581	637	982	391	316	279
AC-FT	23140	18950	20390	20170	30410	30530	47440	51430	71860	31550	21850	18750

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2003, BY WATER YEAR (WY)

MEAN	401	470	877	1190	1271	1397	1495	1982	1405	519	374	355
MAX	1951	4518	7602	6273	6499	5094	5047	7703	5531	3633	2834	2041
(WY)	1999	1951	1951	1997	1997	1943	1983	1952	1967	1983	1983	1983
MIN	6.34	20.3	26.0	77.8	64.3	47.5	41.0	42.8	25.1	9.88	0.63	2.95
(WY)	1978	1978	1978	1977	1977	1977	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1941 - 2003	
ANNUAL TOTAL	183495		194839			
ANNUAL MEAN	503		534		976	
HIGHEST ANNUAL MEAN					2548	1983
LOWEST ANNUAL MEAN					44.9	1977
HIGHEST DAILY MEAN	1470	Apr 22	1410	May 3	47000	Dec 24 1955
LOWEST DAILY MEAN	249	Sep 26	267	Oct 17	0.11	Aug 4 1977
ANNUAL SEVEN-DAY MINIMUM	266	Sep 23	274	Jan 18	0.13	Aug 2 1977
MAXIMUM PEAK FLOW			1430	May 3	62500	Dec 24 1955
MAXIMUM PEAK STAGE			43.08	May 3	63.25	Dec 24 1955
ANNUAL RUNOFF (AC-FT)	364000		386500		707300	
10 PERCENT EXCEEDS	942		1010		2530	
50 PERCENT EXCEEDS	439		431		408	
90 PERCENT EXCEEDS	293		292		143	

11303000 STANISLAUS RIVER AT RIPON, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1985–88, 1993 to current year. Data for the period October 1985 to March 1987 are available in U.S. Geological Survey Open-File Report 88-479. Data for the period April 1987 to September 1988 are available in U.S. Geological Survey Open-File Report 91-74.
CHEMICAL DATA: Water years 1985–88, 1994.
SPECIFIC CONDUCTANCE: Water years 1986–89, July 1997 to current year.
WATER TEMPERATURE: Water years 1986–89, October 1994 to current year.
SEDIMENT DATA: Water year 1985–88, 1994.

PERIOD OF DAILY RECORD.—Water years 1986–89, October 1994 to current year.
SPECIFIC CONDUCTANCE: Water years 1986–89, July 1997 to current year.
WATER TEMPERATURE: Water years 1986–89, October 1994 to current year.

INSTRUMENTATION.—Water-temperature recorder from October 1994 to June 1997, water-quality monitor since July 1997.

REMARKS.—Specific conductance records rated excellent except for Oct. 20 to Nov. 19, Dec. 15–20, Jan. 9–13, 17–31, Feb. 12 to Mar. 6, Apr. 2–24, May 11 to June 5, July 30 to Aug. 28, Sept. 12–22, 29, 30, which are rated good; Nov. 10–18, Mar. 7–12, Aug. 16–20, which are rated fair; and Oct. 1–3, which are rated poor. Water-temperature records rated excellent. Interruptions in record were due to malfunction of the recording instrument. Specific conductance and water temperature may be affected by upstream regulation.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum recorded, 226 microsiemens, Feb. 26, 1988; minimum recorded, 38 microsiemens, Mar. 2, 1989.
WATER TEMPERATURE: Maximum recorded, 27.5° C, July 21, 1989; minimum recorded, 2.5° C, Dec. 11, 22, 1997.

EXTREMES FOR CURRENT YEAR.—
SPECIFIC CONDUCTANCE: Maximum recorded, 147 microsiemens, Jan. 9, but may have been higher during periods of missing record; minimum recorded, 60 microsiemens, June 4, but may have been lower during periods of missing record.
WATER TEMPERATURE: Maximum recorded, 25.0° C, July 20, Aug. 26, but may have been higher during periods of missing record; minimum recorded, 8.5° C, Dec. 24, 25.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	101	112	109	110	106	127	121	124	114	112	111
2	---	102	111	109	110	107	131	121	114	110	112	99
3	---	104	111	107	114	110	137	131	118	114	107	101
4	---	---	108	89	115	110	137	133	117	114	109	102
5	---	---	105	93	114	109	135	131	117	115	111	109
6	---	---	107	96	113	109	136	131	119	111	113	108
7	---	---	115	98	112	109	136	131	111	108	108	101
8	---	---	120	108	113	109	136	132	111	108	101	101
9	---	---	139	105	112	109	147	130	110	107	102	100
10	130	97	131	115	111	108	---	130	110	107	104	99
11	111	98	118	113	113	109	137	120	110	108	104	100
12	119	98	113	108	113	109	136	120	114	107	100	96
13	126	101	109	108	129	109	---	135	110	107	98	96
14	116	103	112	107	116	101	---	---	110	107	105	94
15	120	108	108	103	111	101	---	---	114	110	108	87
16	118	113	106	103	118	104	---	---	118	113	103	88
17	124	115	106	104	118	103	---	129	116	114	105	96
18	116	95	106	103	120	103	134	130	115	113	103	99
19	118	103	106	103	126	109	138	133	114	113	109	103
20	124	113	108	105	124	111	140	135	113	111	110	97
21	126	107	109	106	122	119	145	136	112	111	103	98
22	111	87	110	107	127	120	137	136	114	111	101	97
23	92	83	111	107	124	120	136	135	112	108	105	96
24	95	92	111	108	126	122	136	134	118	108	100	96
25	92	88	111	108	132	119	134	128	115	113	100	95
26	88	81	111	108	122	118	132	126	115	114	101	96
27	81	80	111	107	123	118	130	126	114	113	99	97
28	82	79	110	106	134	119	128	96	114	111	99	96
29	89	79	110	106	126	114	97	94	---	---	100	96
30	101	89	111	106	119	114	110	97	---	---	99	95
31	110	101	---	---	123	109	121	110	---	---	101	80
MONTH	---	---	139	89	134	101	---	---	124	107	113	80

11303000 STANISLAUS RIVER AT RIPON, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	84	76	66	64	64	62	---	---	88	82	---	---
2	85	76	67	64	64	62	---	---	87	82	---	---
3	82	76	66	65	68	64	---	---	88	84	---	---
4	83	72	70	65	68	60	---	---	88	82	---	---
5	73	72	74	69	63	61	---	---	87	82	---	---
6	75	72	81	74	63	62	---	---	89	87	99	85
7	77	72	84	80	63	61	---	---	90	86	111	99
8	74	68	80	78	63	62	---	---	92	87	110	99
9	70	69	79	78	64	63	---	---	94	90	113	95
10	71	69	80	77	---	---	---	---	94	91	---	100
11	73	69	80	77	---	---	---	---	93	88	---	103
12	73	70	80	76	---	---	---	---	94	89	---	93
13	74	70	80	79	---	---	---	---	93	88	---	100
14	75	71	79	73	---	---	---	---	94	88	---	101
15	81	75	73	71	---	---	---	---	99	87	107	92
16	79	76	71	71	---	---	---	---	95	86	109	97
17	79	76	72	70	---	---	---	---	91	86	112	101
18	80	76	71	66	---	---	---	---	91	87	109	93
19	82	76	67	65	---	---	81	76	94	87	104	94
20	80	78	68	66	---	---	85	78	101	89	---	103
21	83	78	67	66	---	---	87	77	106	88	110	93
22	81	77	76	66	---	---	82	74	119	86	---	93
23	80	78	79	76	---	---	79	74	104	89	---	---
24	80	68	77	74	---	---	79	74	104	86	---	---
25	68	62	76	73	---	---	82	78	100	85	---	---
26	64	62	75	72	---	---	85	79	99	85	---	---
27	64	63	74	73	---	---	83	79	111	86	---	---
28	67	63	75	67	---	---	88	82	---	87	---	---
29	64	63	68	64	---	---	85	80	---	---	---	122
30	65	64	64	63	---	---	87	82	---	---	---	119
31	---	---	64	63	---	---	88	81	---	---	---	---
MONTH	85	62	84	63	---	---	---	---	---	---	---	---

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.0	16.5	12.5	11.5	11.5	10.0	10.5	9.5	13.0	12.0	13.0	11.5
2	17.0	15.0	12.5	10.5	11.5	10.5	10.5	9.5	12.0	11.0	13.0	11.5
3	17.0	14.5	12.0	11.0	11.5	10.0	11.0	10.0	11.5	10.0	12.5	11.5
4	17.5	15.0	13.0	11.0	11.0	10.0	11.0	10.0	11.0	10.0	13.0	11.5
5	18.0	15.5	12.5	11.0	11.0	10.0	11.5	10.0	10.5	9.5	13.0	11.0
6	18.5	16.5	13.0	11.5	11.0	10.0	11.5	11.0	10.0	9.0	13.5	11.5
7	19.0	17.0	14.0	12.5	11.5	10.5	11.0	10.0	10.5	9.5	13.5	12.0
8	19.5	17.0	15.0	13.5	11.0	10.5	10.5	10.0	10.5	9.0	14.0	12.0
9	19.5	17.5	15.5	14.0	10.5	10.0	10.5	10.0	10.5	9.0	14.0	12.5
10	18.5	17.5	15.0	14.0	11.0	10.0	11.5	10.5	10.5	9.0	14.5	13.0
11	18.0	16.0	14.5	13.5	11.0	10.5	11.5	11.0	10.5	10.0	15.5	13.5
12	17.5	15.5	14.0	13.5	11.5	11.0	12.0	11.0	11.0	10.0	16.0	14.0
13	17.5	15.5	14.5	13.5	11.5	11.0	12.5	11.5	12.0	11.0	15.5	14.5
14	17.5	16.0	14.0	13.0	12.5	11.5	12.0	11.5	13.0	12.0	16.0	14.5
15	17.5	15.5	13.5	13.0	12.5	12.0	12.5	11.5	13.0	12.0	16.5	14.5
16	17.0	15.0	14.0	13.0	12.5	12.0	11.5	10.5	13.0	12.0	15.0	13.5
17	16.5	15.0	13.5	12.5	12.5	12.0	10.5	10.5	12.5	11.5	14.0	12.5
18	17.0	15.0	13.0	12.0	12.0	10.5	10.5	10.0	12.0	10.5	14.0	12.0
19	16.5	15.0	12.5	11.5	10.5	9.5	10.5	10.0	11.5	11.0	14.5	12.5
20	16.5	15.0	13.0	12.0	10.0	9.5	10.0	9.5	12.0	10.0	15.0	13.5
21	16.5	14.5	13.0	12.0	11.0	10.0	10.5	9.5	12.5	10.5	16.0	13.5
22	15.5	14.5	13.0	12.0	11.0	10.0	11.0	10.0	12.5	11.0	16.0	14.0
23	15.0	14.0	13.0	12.0	10.0	9.0	12.5	11.0	12.5	11.0	15.5	14.5
24	14.0	13.0	13.0	12.5	9.5	8.5	13.0	12.0	12.5	12.0	15.5	13.5
25	14.0	13.0	13.5	12.5	9.0	8.5	12.5	12.0	13.5	12.0	16.0	13.5
26	14.0	13.0	12.5	11.5	10.0	9.0	13.0	12.0	13.0	11.5	16.5	15.0
27	14.0	13.0	11.5	10.5	11.0	10.0	13.0	12.0	13.0	12.0	16.0	14.0
28	14.0	13.0	11.0	10.0	12.0	11.0	12.5	12.0	12.5	11.5	15.5	13.5
29	14.0	13.0	11.5	10.0	11.5	11.0	12.0	11.0	---	---	16.0	14.0
30	14.0	13.0	11.0	10.5	11.0	10.5	11.5	11.0	---	---	17.0	14.5
31	13.5	12.0	---	---	11.0	10.0	12.0	11.5	---	---	17.0	15.5
MONTH	19.5	12.0	15.5	10.0	12.5	8.5	13.0	9.5	13.5	9.0	17.0	11.0

11303000 STANISLAUS RIVER AT RIPON, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.0	13.5	14.0	13.0	18.5	16.5	---	---	23.0	20.5	---	---
2	13.5	12.0	13.5	13.0	18.5	17.0	---	---	22.0	21.0	---	---
3	13.5	11.5	13.5	12.5	19.0	17.0	---	---	22.5	19.5	---	---
4	13.5	12.5	14.0	13.0	18.5	17.0	---	---	22.0	20.0	---	---
5	13.5	12.0	15.0	13.0	18.5	16.5	---	---	23.0	20.0	---	---
6	13.5	12.0	16.0	14.0	18.0	16.5	---	---	23.0	20.5	20.5	18.0
7	14.5	12.5	16.5	15.0	17.5	16.0	---	---	23.0	20.0	20.0	17.5
8	15.5	13.5	16.0	14.5	18.0	16.0	---	---	23.0	20.5	20.5	17.5
9	16.0	14.0	16.0	14.0	18.0	16.5	---	---	23.5	20.5	20.5	18.0
10	15.5	14.0	16.5	14.0	---	---	---	---	23.5	20.5	21.0	18.5
11	15.5	14.0	17.0	15.0	---	---	---	---	23.5	20.5	21.5	19.0
12	15.0	13.5	18.0	15.5	---	---	---	---	23.5	20.5	21.5	19.0
13	14.0	13.0	18.5	16.0	---	---	---	---	23.0	20.5	21.5	19.5
14	15.0	13.0	18.0	16.5	---	---	---	---	23.0	20.5	21.5	19.0
15	14.5	13.0	17.5	15.5	---	---	---	---	23.0	20.5	21.0	19.0
16	14.5	13.5	17.0	15.5	---	---	---	---	23.5	20.5	21.0	18.5
17	15.0	13.5	17.5	15.5	---	---	---	---	23.5	20.5	21.0	19.0
18	15.0	13.0	17.0	15.5	---	---	24.5	---	23.5	21.0	21.0	19.0
19	16.0	13.5	16.5	15.0	---	---	24.5	22.5	24.0	21.0	21.5	19.0
20	15.5	14.5	17.0	15.0	---	---	25.0	22.5	24.0	21.0	21.5	19.5
21	15.0	13.5	18.0	16.0	---	---	24.5	22.5	23.0	21.5	21.5	19.5
22	14.5	13.0	19.0	16.5	---	---	24.5	22.0	22.0	20.5	21.5	19.0
23	15.5	13.0	20.5	18.0	---	---	23.5	22.0	22.5	20.0	22.0	19.5
24	15.0	13.5	20.0	18.5	---	---	23.0	21.0	23.5	20.5	22.0	19.5
25	13.5	12.5	19.5	17.5	---	---	23.5	21.0	24.0	21.5	21.5	19.5
26	13.5	12.0	19.0	17.5	---	---	24.0	21.5	25.0	22.0	21.5	19.0
27	14.5	13.0	20.0	17.5	---	---	24.5	22.0	24.0	21.5	20.0	18.5
28	14.5	13.5	20.0	18.0	---	---	24.5	22.0	---	21.0	19.0	18.0
29	13.5	12.5	19.0	17.5	---	---	24.0	22.0	---	---	19.0	16.5
30	14.0	12.0	18.0	16.5	---	---	24.0	22.5	---	---	18.5	17.0
31	---	---	18.0	16.0	---	---	23.5	22.0	---	---	---	---
MONTH	16.0	11.5	20.5	12.5	---	---	---	---	---	---	---	---

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	Depth at sample location, feet (81903)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR					
04...*	0947	4.00	81	12.4	5.00
04...*	0949	4.90	80	12.4	14.0
04...*	0952	4.00	79	12.4	23.0
04...*	0954	4.10	78	12.4	32.0
04...*	0956	4.00	78	12.4	41.0
04...*	0957	4.00	78	12.4	50.0
04...*	0959	4.10	78	12.5	59.0
04...*	1000	4.10	78	12.5	68.0
04...*	1003	2.80	78	12.5	77.0
04...*	1004	1.90	78	12.5	86.0
AUG					
20...*	1511	1.00	87	23.4	3.00
20...*	1517	3.00	88	23.4	9.00
20...*	1518	4.30	87	23.4	15.0
20...*	1520	3.00	87	23.4	21.0
20...*	1521	3.80	87	23.4	27.0
20...*	1523	3.40	87	23.4	33.0
20...*	1524	3.50	87	23.4	39.0
20...*	1525	3.20	88	23.4	45.0
20...*	1526	2.70	88	23.4	51.0
20...*	1528	2.40	87	23.4	57.0

* Instantaneous discharge at time of cross-sectional measurement: Apr. 4, 607 ft^3/s; Aug. 20, 323 ft^3/s.

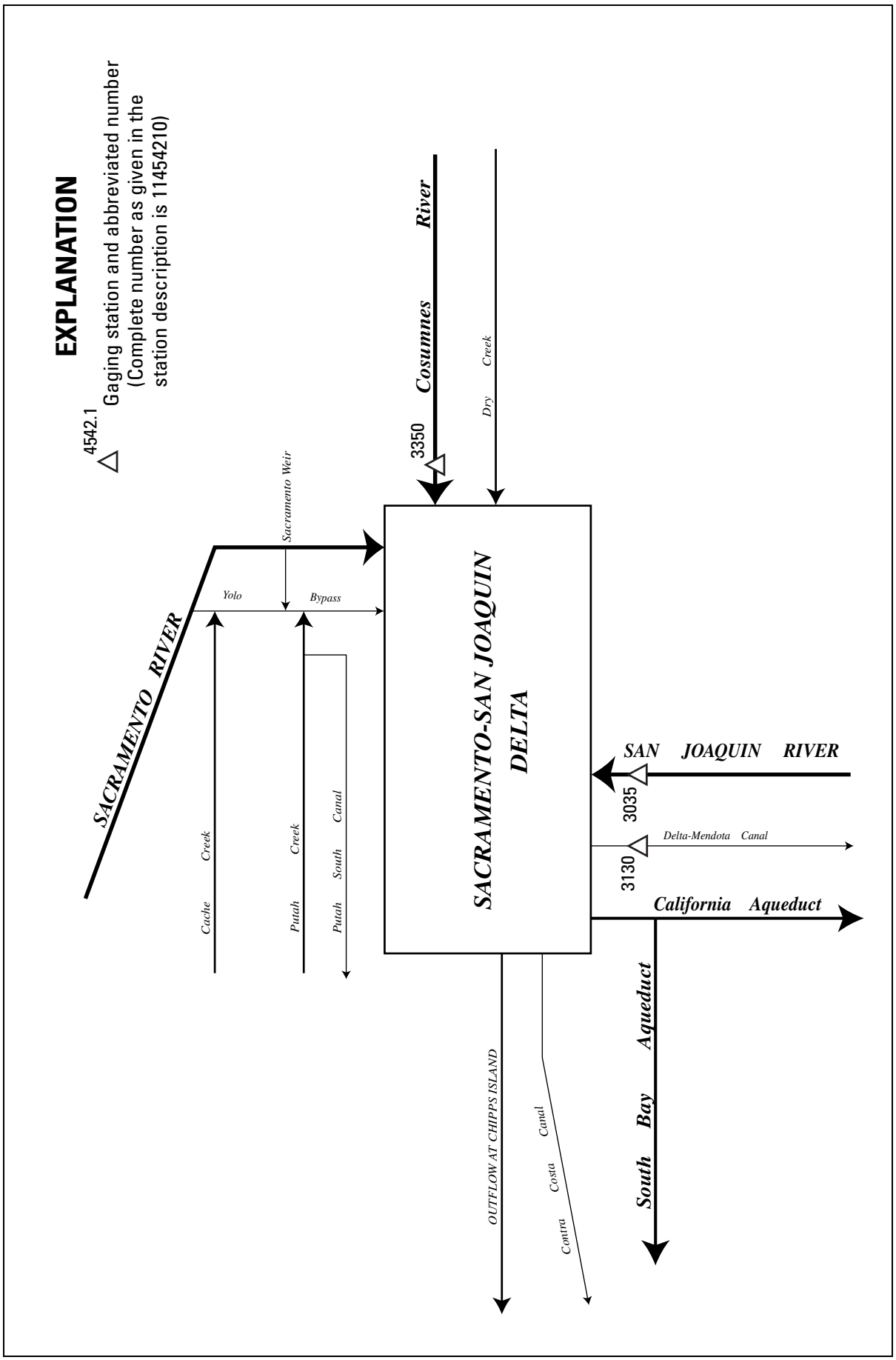


Figure 31. Principal inflows and diversions, Sacramento–San Joaquin Delta.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA

LOCATION.—Lat 37° 40'34", long 121° 15'55", in El Pescadero Grant, San Joaquin County, Hydrologic Unit 18040003, on left bank, 12 ft downstream from Durham Ferry highway bridge, 2.6 mi downstream from Stanislaus River, and 3.2 mi northeast of Vernalis.

DRAINAGE AREA.—13,536 mi^2, includes about 2,100 mi^2 in James Bypass.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—July 1922 to current year (1922–23 and 1925–29, low-flow records only).

REVISED RECORDS.—WSP 831: 1936. WSP 931: 1940. WSP 1930: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is NGVD of 1929. See WSP 2130 for history of changes prior to Nov. 30, 1967.

REMARKS.—Records good. Natural flow of stream affected by storage reservoirs, power developments, ground-water withdrawals, and diversions for irrigation; low flows consist mainly of return flow from irrigated areas. See schematic diagram of Sacramento–San Joaquin Delta.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge recorded, 79,000 ft^3/s, Dec. 9, 1950, elevation, 32.81 ft, present datum, including flow through breaks in levee; maximum elevation, 34.88 ft, Jan. 5, 1997; minimum discharge, 19 ft^3/s, Aug. 10, 1961.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1330	1790	1460	2260	1740	2020	1950	3280	2000	2090	1240	1330
2	1250	1720	1450	2320	1750	2050	2010	3260	1980	1780	1270	1310
3	1250	1720	1440	2280	1770	2120	2050	3330	1920	1500	1410	1230
4	1320	1680	1440	2200	1770	2130	2030	3490	1840	1450	1480	1190
5	1340	1700	1440	2140	1780	2050	2080	3460	1870	1480	1430	1180
6	1310	1700	1460	2080	1800	2070	2010	3320	1920	1500	1350	1240
7	1310	1740	1460	1990	1810	2130	2050	3210	2070	1530	1270	1330
8	1280	1860	1450	1910	1820	2210	1970	3240	2150	1440	1300	1400
9	1290	2150	1470	1830	1820	2240	1920	3290	2200	1340	1290	1310
10	1250	2060	1480	1810	1820	2260	1850	3270	2130	1270	1330	1230
11	1250	1990	1480	1840	1820	2200	1880	3370	2080	1210	1360	1260
12	1320	1940	1460	1890	1830	2200	1970	3360	1990	1240	1310	1260
13	1430	1880	1480	2040	1880	2280	2260	3190	1980	1270	1220	1280
14	1480	1830	1600	2040	1870	2270	2600	2830	2010	1270	1190	1310
15	1440	1810	1680	2020	1850	2470	2840	2600	2150	1180	1130	1450
16	1420	1760	1740	1950	1880	2620	3000	2430	2200	1160	1140	1380
17	1350	1720	2090	1910	1910	2540	3090	2270	2150	1180	1230	1250
18	1570	1700	2500	1860	1900	2500	3160	2210	2120	1190	1310	1220
19	1840	1670	2470	1810	1920	2420	3180	2290	2030	1250	1220	1270
20	1990	1650	2690	1780	1940	2320	3350	2160	1970	1210	1160	1250
21	2060	1650	2940	1740	1970	2230	3470	2020	1960	1210	1140	1330
22	2050	1630	3010	1710	1960	2180	3390	2010	2000	1190	1210	1330
23	2250	1590	2880	1690	1940	2200	3300	1960	2020	1130	1280	1280
24	2410	1560	2740	1680	1950	2180	3050	1940	2020	1160	1390	1300
25	2560	1550	2610	1670	2000	2100	3070	1950	1990	1190	1440	1290
26	2590	1520	2460	1660	2030	2060	3200	2020	1980	1170	1340	1360
27	2510	1490	2340	1660	2050	2010	3240	1900	2040	1290	1260	1420
28	2330	1460	2250	1700	2030	1980	3320	1810	2050	1290	1220	1390
29	2190	1460	2220	1970	---	1980	3420	1890	2090	1310	1260	1450
30	2010	1460	2220	2020	---	1970	3320	2000	2100	1250	1240	1420
31	1870	---	2230	1840	---	2000	---	2020	---	1210	1280	---
TOTAL	52850	51440	61640	59300	52610	67990	80030	81380	61010	40940	39700	39250
MEAN	1705	1715	1988	1913	1879	2193	2668	2625	2034	1321	1281	1308
MAX	2590	2150	3010	2320	2050	2620	3470	3490	2200	2090	1480	1450
MIN	1250	1460	1440	1660	1740	1970	1850	1810	1840	1130	1130	1180
AC-FT	104800	102000	122300	117600	104400	134900	158700	161400	121000	81200	78740	77850

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2003, BY WATER YEAR (WY)

MEAN	2292	2312	3581	5110	7191	7461	7083	7572	6401	2604	1436	1772
MAX	13320	10680	25130	30380	35060	40040	36450	31770	36650	19230	9035	11310
(WY)	1984	1984	1951	1997	1997	1983	1983	1983	1938	1983	1983	1983
MIN	246	430	506	804	758	444	200	380	118	92.8	124	179
(WY)	1978	1978	1978	1962	1991	1961	1961	1961	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1924 - 2003	
ANNUAL TOTAL	680681		688140			
ANNUAL MEAN	1865		1885		4550	
HIGHEST ANNUAL MEAN					21280	1983
LOWEST ANNUAL MEAN					575	1977
HIGHEST DAILY MEAN	5960	Jan 4	3490	May 4	70000	Dec 9 1950
LOWEST DAILY MEAN	991	Sep 5	1130	Jul 23	30	Aug 10 1961
ANNUAL SEVEN-DAY MINIMUM	1060	Aug 8	1180	Jul 20	59	Jul 19 1961
MAXIMUM PEAK FLOW			3540	May 4	79000	Dec 9 1950
MAXIMUM PEAK STAGE			11.27	May 4	34.88	Jan 5 1997
ANNUAL RUNOFF (AC-FT)	1350000		1365000		3296000	
10 PERCENT EXCEEDS	3000		2610		12300	
50 PERCENT EXCEEDS	1740		1870		2090	
90 PERCENT EXCEEDS	1150		1250		690	

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1951 to current year.
CHEMICAL DATA: Water years 1951 to 1999, October 2000 to current year.
BIOLOGICAL DATA: Water years 1974–81.
SPECIFIC CONDUCTANCE: Water years 1951–63, 1973–82, 1985 to current year.
WATER TEMPERATURE: Water years 1951 to current year.
TURBIDITY: Water years 1972–84.
SEDIMENT DATA: Water years 1957 to current year.

PERIOD OF DAILY RECORD.—March 1951 to current year.
CHEMICAL DATA: March 1951 to May 1963.
SPECIFIC CONDUCTANCE: March 1951 to May 1963, January 1973 to October 1981, June 1985 to current year.
WATER TEMPERATURE: March 1951 to current year.
SUSPENDED-SEDIMENT DISCHARGE: November 1956 to current year.

INSTRUMENTATION.—Conductivity recorder, January 1973 to October 1981. Temperature recorder, October 1961 to September 1963 and December 1972 to May 1985. Water-quality monitor since June 1985.

REMARKS.—Specific conductance records are rated excellent except for Oct. 1–8, Nov. 28 to Dec. 4, Dec. 18 to Jan. 2, Jan. 8–18, Apr. 8–17, May 25 to June 4, June 22 to July 2, Aug. 10–12, Aug. 27 to Sept. 3, Sept. 18–30, which are rated good; Jan. 19–25, Apr. 18–24, Aug. 13–15, which are rated fair; and Jan. 26 to Feb. 5, Apr. 25 to May 7, Aug. 16–20, which are rated poor. Water-temperature records rated excellent except for Jan. 29 to Feb. 5, Aug. 31 to Sept. 3, which are rated good. Mean daily specific-conductance records, January 1973 to October 1981, provided by U.S. Bureau of Reclamation. Maximum and minimum specific-conductance values, June 1985 to September 1988, are available in files of the U.S. Geological Survey. Interruptions in record were due to malfunction of recording instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.—
SPECIFIC CONDUCTANCE: Maximum daily, 2,350 microsiemens, Aug. 11, 1961; minimum daily, 60 microsiemens, June 21, 1953.
WATER TEMPERATURE: Maximum recorded, 35.5° C, Aug. 9, 1990; minimum recorded, 2.0° C, Dec. 26, 1987.
SEDIMENT CONCENTRATION: Maximum daily mean, 1,590 mg/L, Dec. 25, 1964; minimum daily mean, 6 mg/L, Jan. 1, 1991.
SEDIMENT LOAD: Maximum daily, 54,100 tons, Dec. 25, 1964; minimum daily, 2 tons, Aug. 10, 1961.

EXTREMES FOR CURRENT YEAR.—
SPECIFIC CONDUCTANCE: Maximum recorded, 1,230 microsiemens, Jan. 28, but may have been higher during periods of missing record; minimum recorded, 358 microsiemens, Oct. 26.
WATER TEMPERATURE: Maximum recorded, 30.0° C, July 20, 21; minimum recorded, 8.5° C, Dec. 24–26.
SEDIMENT CONCENTRATION: Maximum daily mean, 333 mg/L, Dec. 20; minimum daily mean, 26 mg/L, Nov. 28, Dec. 3.
SEDIMENT LOAD: Maximum daily, 2,430 tons, Dec. 20; minimum daily, 96 tons, Aug. 16.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	Transparency Secchi disc, inches (00077)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)
OCT									
06...	1200	2490	--	--	--	761	8.6	94	8.0
NOV									
02...	1400	2440	--	--	--	--	--	--	--
03...	1200	2440	--	--	--	765	8.6	86	7.8
DEC									
08...	1100	1760	--	--	--	767	10.5	93	8.0
JAN									
06...	1000	1620	--	--	--	--	--	--	--
12...	0850	1720	--	--	--	--	--	--	--
19...	0900	2140	--	--	--	--	--	--	--
19...	1440	2120	--	--	--	--	--	--	--
24...	1500	2650	--	--	--	--	--	--	--
25...	0010	2740	--	--	--	--	--	--	--
25...	1100	3140	--	--	--	--	--	--	--
25...	2000	3400	--	--	--	--	--	--	--
26...	0730	3430	--	--	--	--	--	--	--
26...	1730	3860	--	--	--	--	--	--	--
27...	0820	732	--	--	--	--	--	--	--
27...	1600	3550	--	--	--	--	--	--	--
FEB									
04...	1330	2410	--	--	--	--	--	--	--
09...	1310	2140	--	--	--	--	--	--	--
11...	2200	2140	--	--	--	--	--	--	--
12...	1230	2320	--	--	--	--	--	--	--
12...	2100	2530	--	--	--	--	--	--	--
13...	0530	2750	--	--	--	--	--	--	--
13...	1200	3480	--	--	--	--	--	--	--
13...	2300	4350	--	--	--	--	--	--	--
14...	0650	4460	--	--	--	--	--	--	--
14...	1700	5770	--	--	--	--	--	--	--
15...	0230	7290	--	--	--	--	--	--	--
15...	1000	7900	--	--	--	--	--	--	--
15...	1815	8740	--	--	--	--	--	--	--
16...	0545	8820	--	--	--	--	--	--	--
16...	1600	8540	--	--	--	--	--	--	--
17...	0930	9200	--	--	--	--	--	--	--
17...	1930	10100	--	--	--	--	--	--	--
18...	1005	11700	--	--	--	--	--	--	--
18...	1930	12100	--	--	--	--	--	--	--
22...	2040	12300	--	--	--	--	--	--	--
23...	1340	12600	--	--	--	--	--	--	7.8
24...	0900	13300	--	--	--	--	--	--	--
25...	1030	13900	--	--	--	766	9.7	89	--
26...	0920	13300	--	--	--	--	--	--	--
MAR									
09...	1100	16400	--	--	--	767	9.4	87	7.4
APR									
26...	1330	5930	--	--	--	--	--	--	7.7
MAY									
19...	1500	4040	--	--	--	--	--	--	--
30...	1420	3420	--	--	--	758	6.9	77	8.3
JUN									
14...	1100	3330	--	--	--	759	8.7	100	8.0
15...	1415	3070	--	--	--	--	--	--	--
JUL									
12...	1730	1870	--	.084	.059	762	11.7	145	8.6
26...	1530	1860	10.0	.084	.065	760	12.9	158	9.0
AUG									
08...	1445	1780	--	--	--	--	--	--	--
09...	1600	1770	19.0	.068	.052	760	12.8	159	8.6
23...	0930	2610	17.0	--	--	759	8.3	95	8.0
SEP									
07...	1030	2270	17.0	.070	.053	759	8.5	94	8.0
20...	1030	2280	12.0	.068	.051	753	7.7	91	7.6

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Hard-ness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard-ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)
OCT									
06...	499	19.5	120	37	27.3	12.6	2.26	2	50.6
NOV									
02...	--	17.0	--	--	--	--	--	--	--
03...	517	15.5	140	38	30.7	15.2	2.13	2	66.6
DEC									
08...	788	10.0	170	59	36.4	19.4	2.31	3	91.7
JAN									
06...	847	--	--	--	--	--	--	--	--
12...	832	--	--	--	--	--	--	--	--
19...	700	--	--	--	--	--	--	--	--
19...	689	--	--	--	--	--	--	--	--
24...	661	--	--	--	--	--	--	--	--
25...	652	--	--	--	--	--	--	--	--
25...	630	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
26...	580	12.5	120	47	25.3	14.3	3.48	3	65.9
26...	588	--	--	--	--	--	--	--	--
27...	554	--	--	--	--	--	--	--	--
27...	638	--	--	--	--	--	--	--	--
FEB									
04...	890	--	--	--	--	--	--	--	--
09...	905	--	--	--	--	--	--	--	--
11...	843	--	--	--	--	--	--	--	--
12...	835	--	--	--	--	--	--	--	--
12...	748	--	--	--	--	--	--	--	--
13...	803	--	--	--	--	--	--	--	--
13...	736	--	--	--	--	--	--	--	--
13...	540	--	--	--	--	--	--	--	--
14...	568	--	--	--	--	--	--	--	--
14...	497	--	--	--	--	--	--	--	--
15...	333	--	--	--	--	--	--	--	--
15...	255	--	--	--	--	--	--	--	--
15...	256	--	--	--	--	--	--	--	--
16...	248	--	--	--	--	--	--	--	--
16...	264	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
23...	236	--	--	--	--	--	--	--	--
24...	269	--	--	--	--	--	--	--	--
25...	240	11.5	--	--	--	--	--	--	--
26...	252	11.5	--	--	--	--	--	--	--
MAR									
09...	200	12.0	52	12	11.4	5.72	1.53	1	18.6
APR									
26...	306	18.0	74	21	16.6	7.81	1.53	2	29.9
MAY									
19...	--	20.0	--	--	--	--	--	--	--
30...	505	20.5	110	34	24.5	12.2	1.68	2	49.8
JUN									
14...	434	22.0	98	35	22.2	10.4	1.74	2	42.9
15...	--	24.5	--	--	--	--	--	--	--
JUL									
12...	600	26.0	140	48	30.9	15.4	2.52	2	63.4
26...	550	25.5	120	44	26.9	13.6	2.61	2	54.9
AUG									
08...	--	24.5	--	--	--	--	--	--	--
09...	615	26.0	140	54	32.0	15.1	2.44	2	60.9
23...	430	22.0	100	34	22.4	10.7	1.95	2	43.5
SEP									
07...	504	20.0	120	47	27.3	12.3	2.16	2	51.5
20...	459	23.0	110	23	24.4	11.6	2.16	2	44.7

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Sodium, percent (00932)	Alka-linity, wat flt Gran, field, mg/L as CaCO3 (29802)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti-tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)
OCT									
06...	47	83.0	57.0	<.1	16.6	57.6	283	.40	296
NOV									
02...	--	--	--	--	--	--	--	--	--
03...	50	101	76.7	.1	16.9	71.2	350	.51	374
DEC									
08...	54	112	113	.1	16.2	103	459	.64	473
JAN									
06...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
26...	53	75.0	72.5	.1	11.9	74.8	320	.47	343
26...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
MAR									
09...	43	40.0	17.1	<.1	12.4	23.7	117	.18	134
APR									
26...	46	53.0	32.3	<.1	12.1	38.9	175	.24	179
MAY									
19...	--	--	--	--	--	--	--	--	--
30...	49	77.0	61.2	<.1	13.7	56.4	271	.38	282
JUN									
14...	48	63.0	49.6	<.1	13.1	58.6	244	.35	257
15...	--	--	--	--	--	--	--	--	--
JUL									
12...	49	93.0	74.7	<.1	13.0	82.6	349	.50	364
26...	49	79.0	64.1	<.1	10.9	68.1	296	.44	320
AUG									
08...	--	--	--	--	--	--	--	--	--
09...	48	88.0	75.9	.1	13.0	75.1	337	.50	364
23...	48	66.0	47.9	<.1	11.9	57.0	242	.34	250
SEP									
07...	48	72.0	58.5	<.1	14.3	59.4	277	.40	293
20...	47	86.0	53.0	<.1	14.6	45.3	256	.38	277

< Actual value is known to be less than value shown.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Residue vola-tile, sus-pended, mg/L (00535)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)
OCT									
06...	--	--	--	.52	<.02	2.04	.022	.12	.139
NOV									
02...	--	--	--	--	--	--	--	--	--
03...	--	--	.29	.51	.08	2.11	.026	.10	.119
DEC									
08...	--	--	.29	.47	.07	1.90	.016	.06	.081
JAN									
06...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
26...	--	--	.46	1.0	.14	1.44	.025	.13	.171
26...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	--	--	.52	1.0	.13	1.89	.024	.15	.186
13...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	--	--	1.1	2.5	.41	1.42	.036	.33	.38
15...	--	--	--	--	--	--	--	--	--
15...	--	--	.95	2.0	.23	.91	.023	.25	.29
15...	--	--	--	--	--	--	--	--	--
16...	--	--	.69	1.3	.12	.82	.021	.20	.23
16...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
23...	--	--	.25	.44	.05	.58	.014	.08	.095
24...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
MAR									
09...	--	--	.32	.43	.03	.59	<.010	.06	.086
APR									
26...	--	--	.19	.42	<.02	.87	<.010	.06	.078
MAY									
19...	--	--	--	--	--	--	--	--	--
30...	--	--	.18	.46	<.02	1.25	.010	.07	.082
JUN									
14...	--	--	.20	.51	<.02	1.55	.025	.08	.098
15...	--	--	--	--	--	--	--	--	--
JUL									
12...	61	<10	.28	.76	<.02	2.25	.037	.12	.138
26...	28	<10	.23	.83	<.02	1.59	.030	.08	.102
AUG									
08...	--	--	--	--	--	--	--	--	--
09...	23	<10	.28	.77	<.02	2.01	.029	.10	.128
23...	59	<10	.20	.54	<.02	1.40	.020	.09	.107
SEP									
07...	46	<10	.20	.62	<.02	1.86	.018	.10	.125
20...	34	<10	.21	.48	<.02	1.94	.025	.11	.120

< Actual value is known to be less than value shown.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Phos-phorus, water, unfltrd mg/L (00665)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
OCT									
06...	.206	--	--	--	--	--	234	e9	15.8
NOV									
02...	--	--	--	--	--	--	--	--	--
03...	.182	--	--	--	--	--	297	11	15.1
DEC									
08...	.111	--	--	--	--	--	390	22	39.0
JAN									
06...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
26...	.34	--	--	--	--	--	308	19	3.3
26...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--
FEB									
04...	--	--	--	--	--	--	--	--	--
09...	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
13...	.35	--	--	7.1	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--
14...	.90	--	--	11.5	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
15...	.69	--	--	16.9	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
16...	.48	--	--	12.8	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--
23...	.131	--	--	--	--	--	137	--	--
24...	--	--	--	--	--	--	--	--	--
25...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
MAR									
09...	.152	--	--	--	--	--	97	19	9.5
APR									
26...	.156	--	--	--	--	--	150	10	5.6
MAY									
19...	--	--	--	--	--	--	--	--	--
30...	.161	--	--	--	--	--	230	<10	13.1
JUN									
14...	.172	--	--	--	--	--	232	11	7.3
15...	--	--	--	--	--	--	--	--	--
JUL									
12...	.26	.6	3.4	--	50.3	<.1	340	<10	3.7
26...	.159	.8	2.8	--	38.6	2.2	--	e9	8.6
AUG									
08...	--	--	--	--	--	--	--	--	--
09...	.196	.5	2.7	--	e45.2	.8	--	<10	6.3
23...	.21	.5	2.5	--	10.8	.6	261	e9	5.8
SEP									
07...	.22	.6	2.5	--	--	--	256	14	6.6
20...	.206	.5	2.3	--	10.5	<.1	--	13	5.9

e Estimated.
< Actual value is known to be less than value shown.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Selenium, water, fltrd, ug/L (01145)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphosmethyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)
OCT									
06...	<2	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
NOV									
02...	--	--	--	--	--	--	--	--	--
03...	<2	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
DEC									
08...	e2	<.003	<.002	<.002	<.002	<.002	.007	<.001	<.002
JAN									
06...	--	<.003	e.004	<.002	<.002	<.002	.005	<.001	<.002
12...	--	<.003	e.006	<.002	<.002	<.002	.005	<.001	<.002
19...	--	<.003	e.005	<.002	<.002	<.002	.005	<.001	<.002
19...	--	<.003	<.002	<.002	<.002	<.002	.004	<.001	<.002
24...	--	<.003	e.005	<.002	<.002	<.002	.005	<.001	<.002
25...	--	<.003	<.005	<.002	<.002	<.002	.005	<.001	<.002
25...	--	<.003	<.005	<.002	<.002	<.002	.005	<.001	<.002
25...	--	<.003	<.005	<.002	<.002	<.002	.006	<.001	<.002
26...	<2	<.003	<.002	<.002	<.002	<.002	.005	<.001	e.002
26...	--	<.003	<.002	<.002	<.002	<.002	.005	<.001	<.002
27...	--	<.003	<.002	<.002	<.002	<.002	.004	<.001	<.002
27...	--	<.003	<.002	<.002	<.002	<.002	e.003	<.001	<.002
FEB									
04...	--	<.003	e.004	<.002	<.002	<.002	.005	<.001	<.002
09...	--	<.003	e.004	<.002	<.002	<.002	.005	<.001	<.002
11...	--	<.003	e.004	<.002	<.002	<.002	.004	<.001	<.002
12...	--	<.003	e.003	<.002	<.002	<.002	.006	<.001	<.002
12...	--	<.003	e.003	<.002	<.002	<.002	.004	<.001	<.002
13...	--	<.003	<.004	<.002	<.002	<.002	.005	<.001	<.006
13...	--	<.003	e.003	<.002	<.002	<.002	.005	<.001	<.002
13...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
14...	--	<.003	e.003	<.002	<.002	<.002	.006	<.001	<.002
14...	--	<.003	<.002	<.002	<.002	<.002	<.006	<.001	<.002
15...	--	<.003	<.002	<.002	<.002	<.002	<.005	<.001	<.002
15...	--	<.003	<.002	<.002	<.002	<.002	e.003	<.001	<.002
15...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
16...	--	<.003	<.002	<.002	<.002	<.002	e.003	<.001	<.002
16...	--	<.003	<.002	<.002	<.002	<.002	<.005	<.001	<.002
17...	--	<.003	<.002	<.002	<.002	<.002	<.005	<.001	<.002
17...	--	<.003	<.002	<.002	<.002	<.002	<.005	<.001	<.002
18...	--	<.003	<.002	<.002	<.002	<.002	<.005	<.001	<.002
18...	--	<.003	<.002	<.002	<.002	<.002	e.003	<.001	<.002
22...	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
23...	<2	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
24...	--	<.003	<.002	<.002	<.002	<.002	e.003	<.001	<.002
25...	--	<.003	<.002	<.002	<.002	<.002	e.004	<.001	<.002
26...	--	<.003	<.002	<.002	<.002	<.002	<.005	<.001	<.002
MAR									
09...	<2	<.003	<.002	<.002	<.007	<.002	e.003	<.001	<.002
APR									
26...	<2	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
MAY									
19...	--	--	--	--	--	--	--	--	--
30...	<2	<.003	<.002	<.002	<.002	<.002	<.005	<.001	<.002
JUN									
14...	e1	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
JUL									
12...	e2	<.003	<.002	<.002	<.002	<.002	.008	e.021	<.002
26...	--	--	--	--	--	--	--	--	--
AUG									
08...	--	--	--	--	--	--	--	--	--
09...	--	<.003	e.004	<.002	<.002	<.002	.005	<.001	<.002
23...	<2	--	--	--	--	--	--	--	--
SEP									
07...	<2	<.003	<.002	<.002	<.002	<.002	<.001	<.001	<.002
20...	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Diazi-non, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)
OCT									
06...	<.002	<.003	<.003	<.004	<.005	<.004	<.002	<.002	<.001
NOV									
02...	--	--	--	--	--	--	--	--	--
03...	<.002	<.003	<.003	<.004	<.005	<.004	<.002	<.002	<.001
DEC									
08...	<.002	<.003	<.003	<.004	<.005	<.004	<.002	<.002	<.001
JAN									
06...	<.002	<.003	<.003	e.003	<.005	.007	<.002	<.002	<.001
12...	<.002	<.003	<.003	.005	<.005	<.013	e.002	.017	<.001
19...	<.002	e.013	<.003	.005	<.005	.058	e.002	.030	<.001
19...	<.002	e.012	<.003	.004	<.005	.052	e.002	.027	<.001
24...	<.002	e.022	<.003	.008	<.005	.024	e.002	.053	<.005
25...	<.002	e.019	<.003	.008	<.005	.023	e.002	.056	<.001
25...	<.002	e.018	<.003	.010	<.005	.018	e.003	.062	<.001
25...	<.002	e.052	<.003	.012	<.005	.016	e.003	.094	<.001
26...	<.002	e.027	<.003	.009	<.005	.015	e.003	.061	<.001
26...	<.002	e.011	<.003	.009	<.005	.016	e.003	.031	<.001
27...	<.002	e.011	<.003	.009	<.005	.015	e.002	.027	<.001
27...	<.002	<.010	<.003	.006	<.005	.015	e.002	.016	<.001
FEB									
04...	<.002	e.005	<.003	.006	<.005	.023	<.002	.019	<.001
09...	<.002	<.003	<.003	<.004	<.005	.031	<.002	.011	<.001
11...	<.002	e.008	<.003	e.003	<.005	.131	e.001	.021	<.001
12...	<.002	e.012	<.003	<.010	<.005	.197	<.002	.015	<.001
12...	.005	e.011	<.003	e.002	<.005	.143	e.002	.025	<.001
13...	<.002	e.019	<.003	.011	<.005	.201	e.002	.074	<.001
13...	<.002	e.006	<.003	e.012	<.005	.172	<.002	.030	<.001
13...	<.002	e.007	<.003	.005	<.005	.221	e.002	.036	<.001
14...	<.002	e.009	<.003	.016	<.005	.321	e.003	.036	<.001
14...	<.002	e.007	<.003	<.010	<.005	.308	<.002	.054	<.001
15...	<.002	e.006	<.003	e.009	<.005	.111	<.002	.055	<.001
15...	<.002	e.005	<.003	e.003	<.005	.057	<.002	.016	<.001
15...	<.002	e.005	<.003	e.004	<.005	.059	<.002	.018	<.001
16...	<.002	e.007	<.003	e.003	<.005	.070	e.001	.016	<.001
16...	<.002	e.011	<.003	.005	<.005	.029	e.002	.015	<.001
17...	<.002	e.007	<.003	.005	<.005	.028	e.002	.019	<.001
17...	<.002	<.007	<.003	.005	<.005	.034	e.002	.011	<.001
18...	<.002	e.011	<.003	e.004	<.005	.046	e.002	.008	<.001
18...	<.002	e.007	<.003	.004	<.005	.065	e.002	.008	<.001
22...	<.002	<.003	<.003	.005	<.005	.128	e.002	.006	<.001
23...	<.002	e.004	<.003	.004	<.005	.098	<.002	.008	<.001
24...	<.002	e.011	<.003	e.004	<.005	.127	e.002	.009	<.001
25...	<.002	e.008	<.003	e.003	<.005	.098	e.002	.007	<.001
26...	<.002	<.003	<.003	<.004	<.005	.069	<.002	.006	<.001
MAR									
09...	<.002	<.003	e.020	.017	<.005	.034	e.002	<.002	<.001
APR									
26...	<.002	e.013	<.030	<.004	<.005	.009	<.002	.008	<.001
MAY									
19...	--	--	--	--	--	--	--	--	--
30...	<.002	<.003	<.003	<.004	<.005	<.004	<.002	.011	<.001
JUN									
14...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
JUL									
12...	<.002	<.003	<.003	.010	<.005	.028	<.002	.007	<.001
26...	--	--	--	--	--	--	--	--	--
AUG									
08...	--	--	--	--	--	--	--	--	--
09...	<.002	<.003	<.003	.006	<.005	.025	<.002	.015	<.001
23...	--	--	--	--	--	--	--	--	--
SEP									
07...	<.002	e.005	<.003	.005	<.005	.013	<.002	.006	<.001
20...	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)
OCT									
06...	<.02	.019	<.004	<.003	<.003	<.004	<.002	<.005	<.006
NOV									
02...	--	--	--	--	--	--	--	--	--
03...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
DEC									
08...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
JAN									
06...	<.02	e.003	<.004	<.003	<.003	<.004	<.002	<.005	<.006
12...	<.02	e.003	<.004	<.003	<.003	<.004	<.002	<.005	<.006
19...	<.02	e.003	<.004	<.003	<.003	<.004	<.002	<.005	<.006
19...	<.02	e.003	<.004	<.003	<.003	<.004	<.002	<.005	<.006
24...	<.02	e.003	<.004	<.003	<.003	<.004	<.002	e.004	<.006
25...	<.02	e.003	<.004	<.003	e.003	<.004	<.002	e.005	<.006
25...	<.02	e.003	<.004	<.003	.007	<.004	<.002	e.005	<.006
25...	<.02	e.003	<.004	<.003	<.003	<.004	<.002	e.005	<.006
26...	<.02	e.003	<.004	<.003	e.003	<.004	<.010	e.007	<.006
26...	<.02	e.003	<.004	<.003	.005	<.004	<.002	<.005	<.006
27...	<.02	e.003	<.004	<.003	<.003	<.004	<.002	<.005	<.006
27...	<.02	e.002	<.004	<.003	<.003	<.004	<.002	e.006	<.006
FEB									
04...	<.02	e.003	<.004	<.003	<.003	<.004	e.120	<.005	<.006
09...	<.02	e.003	<.004	<.003	<.003	<.004	<.020	<.005	<.006
11...	<.02	e.003	<.004	<.003	<.003	<.004	<.002	<.005	<.006
12...	<.02	e.003	<.004	<.003	<.003	.005	.007	<.005	<.006
12...	<.02	e.003	<.004	<.003	<.003	<.004	<.002	.006	<.006
13...	<.02	e.003	<.004	<.003	<.003	e.004	<.002	.010	<.006
13...	<.02	e.002	<.004	<.003	e.004	<.004	<.002	<.005	<.006
13...	<.02	e.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
14...	<.02	e.003	<.004	<.003	<.003	<.004	<.002	<.005	<.006
14...	<.02	.004	<.004	<.003	e.004	<.004	<.002	<.005	<.006
15...	<.02	e.003	<.004	<.003	<.003	<.004	<.002	<.005	<.006
15...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
15...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
16...	<.02	e.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
16...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
17...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
17...	<.02	e.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
18...	<.02	e.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
18...	<.02	e.001	<.004	<.003	<.003	<.004	<.002	<.005	<.006
22...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
23...	<.02	e.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
24...	<.02	e.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
25...	<.02	e.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
26...	<.02	e.001	<.004	<.003	<.003	<.004	<.002	<.005	<.006
MAR									
09...	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006
APR									
26...	<.02	.006	<.004	<.003	<.003	<.004	<.002	.017	<.006
MAY									
19...	--	--	--	--	--	--	--	--	--
30...	<.02	.012	<.004	<.003	<.003	<.004	<.002	<.005	<.006
JUN									
14...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
JUL									
12...	<.02	.031	<.004	<.003	<.003	<.004	<.002	<.005	<.006
26...	--	--	--	--	--	--	--	--	--
AUG									
08...	--	--	--	--	--	--	--	--	--
09...	<.02	.014	<.004	<.003	<.003	<.004	<.002	<.005	<.006
23...	--	--	--	--	--	--	--	--	--
SEP									
07...	<.02	.011	<.004	<.003	<.003	<.004	<.002	<.005	<.006
20...	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)
OCT									
06...	<.002	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
NOV									
02...	--	--	--	--	--	--	--	--	--
03...	<.002	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
DEC									
08...	.005	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
JAN									
06...	.009	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
12...	.007	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
19...	.012	<.004	<.004	<.003	<.006	<.004	<.004	.008	<.002
19...	.011	<.004	<.004	<.003	e.002	<.004	<.004	.007	<.002
24...	.020	<.015	<.004	.005	e.002	<.004	<.004	.019	<.002
25...	.018	<.010	<.004	<.003	<.006	<.004	<.004	.023	<.002
25...	.025	.014	<.004	.005	e.002	<.004	<.004	.033	<.002
25...	.066	.019	<.004	.007	e.002	<.004	<.004	.035	<.002
26...	.026	<.010	<.004	.004	e.002	<.004	<.004	.025	<.002
26...	.018	<.010	<.004	.005	<.006	<.004	<.004	.023	<.002
27...	.015	<.004	<.004	<.003	<.006	<.004	<.004	.015	<.002
27...	.008	<.004	<.004	<.003	<.006	<.004	<.004	.008	<.002
FEB									
04...	.010	<.004	<.004	<.003	<.006	<.004	<.004	<.009	<.002
09...	<.006	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
11...	.010	<.004	<.004	<.003	<.006	<.004	<.004	.010	<.002
12...	<.010	<.004	<.004	<.003	<.006	<.004	<.004	.010	<.002
12...	.030	.016	<.004	.005	e.002	<.004	<.004	.018	<.002
13...	.032	.007	<.004	<.008	<.006	<.004	<.004	.017	<.002
13...	e.068	.008	<.004	.011	<.006	<.004	<.004	.012	<.002
13...	.016	.016	<.004	.005	<.006	<.004	<.004	.013	<.002
14...	.024	.011	<.004	<.003	<.006	<.004	<.004	.013	<.002
14...	<.040	.008	<.004	.016	<.006	<.004	<.004	.010	<.002
15...	<.020	.011	<.004	.021	<.006	<.004	<.004	.010	<.002
15...	.011	.007	<.004	.051	<.006	<.004	<.004	<.004	<.002
15...	.010	<.004	<.004	.036	<.006	<.004	<.004	.011	<.002
16...	.009	<.004	<.004	.044	e.002	<.004	<.004	.011	<.002
16...	.006	<.004	<.004	.037	<.006	<.004	<.004	.010	<.002
17...	.012	<.004	<.004	.011	e.002	<.004	<.004	.012	<.002
17...	.004	<.004	<.004	.008	e.002	<.004	<.004	.012	<.002
18...	.005	<.004	<.004	.010	<.006	<.004	<.004	.005	<.002
18...	e.004	<.004	<.004	.006	<.006	<.004	<.004	.005	<.002
22...	.006	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
23...	.009	.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
24...	.009	<.004	<.004	e.004	<.006	<.004	<.004	.009	<.002
25...	.006	<.004	<.004	.006	<.006	<.004	<.004	.006	<.002
26...	.006	<.004	<.004	.006	<.006	<.004	<.004	<.004	<.002
MAR									
09...	e.003	<.050	<.004	<.003	<.006	<.004	<.004	<.004	<.002
APR									
26...	.009	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
MAY									
19...	--	--	--	--	--	--	--	--	--
30...	.087	<.004	.044	<.003	<.006	<.004	<.004	<.004	<.002
JUN									
14...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
JUL									
12...	.129	<.004	.011	<.003	<.006	<.004	<.004	<.004	<.002
26...	--	--	--	--	--	--	--	--	--
AUG									
08...	--	--	--	--	--	--	--	--	--
09...	.042	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
23...	--	--	--	--	--	--	--	--	--
SEP									
07...	.013	<.004	<.004	<.003	<.006	<.004	<.004	<.004	<.002
20...	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Prometon, water, fltrd, ug/L (04037)	Pronamide, water, fltrd 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)
OCT									
06...	<.02	<.003	<.007	<.004	<.01	<.010	<.01	<.007	<.01
NOV									
02...	--	--	--	--	--	--	--	--	--
03...	<.02	<.003	<.007	<.004	<.01	<.005	<.01	<.007	<.01
DEC									
08...	<.02	<.003	<.007	<.004	<.01	.270	<.01	<.007	<.01
JAN									
06...	<.02	<.003	<.007	<.004	--	.018	<.01	<.007	<.01
12...	<.02	<.003	<.007	<.004	<.01	.063	<.01	<.007	<.01
19...	M	<.003	<.007	<.004	<.01	.054	<.01	<.007	<.01
19...	M	<.003	<.007	<.004	<.01	.049	<.01	<.007	<.01
24...	M	<.003	<.007	<.004	<.01	.242	<.01	<.007	<.01
25...	M	<.003	<.007	<.004	<.01	.177	<.01	<.007	<.01
25...	M	<.003	<.007	<.004	<.01	.250	<.01	<.007	<.01
25...	e.01	<.003	<.007	<.004	<.01	.604	<.01	<.007	<.01
26...	M	<.003	<.007	<.004	<.01	.295	<.01	<.007	<.01
26...	M	<.003	<.007	<.004	<.01	.536	<.01	<.007	<.01
27...	M	<.003	<.007	<.004	<.01	.235	<.01	<.007	<.01
27...	M	<.003	<.007	<.004	<.01	.108	<.01	<.007	<.01
FEB									
04...	e.01	<.003	<.007	<.004	--	.042	<.01	<.007	<.01
09...	<.02	<.003	<.007	<.004	<.01	.034	<.01	<.007	<.01
11...	M	<.003	<.007	<.004	<.01	.051	<.01	<.007	<.01
12...	<.02	<.003	<.007	<.004	<.01	.039	<.01	<.007	<.01
12...	e.01	<.003	<.007	<.004	<.01	.175	<.01	<.007	<.01
13...	<.02	<.003	<.007	<.004	<.01	.103	<.01	<.007	<.01
13...	e.01	<.003	<.007	<.004	<.01	.076	<.01	<.007	<.01
13...	<.02	<.003	<.007	<.004	<.01	.426	<.01	<.007	<.01
14...	<.02	<.003	<.007	<.004	<.01	.427	<.01	<.007	<.01
14...	<.02	<.003	<.007	<.004	<.01	.390	<.01	<.007	<.01
15...	e.01	<.003	<.007	<.004	<.01	.525	<.01	<.007	<.01
15...	<.02	<.003	<.007	<.004	<.01	.398	<.01	<.007	<.01
15...	<.02	<.003	<.007	<.004	<.01	.460	<.01	<.007	<.01
16...	<.02	<.003	<.007	<.004	<.01	.410	<.01	<.007	<.01
16...	M	<.003	<.007	<.004	<.01	.321	<.01	<.007	<.01
17...	<.02	<.003	<.007	<.004	<.01	.152	<.01	<.007	<.01
17...	<.02	<.003	<.007	<.004	<.01	.123	<.01	<.007	<.01
18...	<.02	<.003	<.007	<.004	<.01	.107	<.01	<.007	<.01
18...	<.02	<.003	<.007	<.004	<.01	.125	<.01	<.007	<.01
22...	<.02	<.003	<.007	<.004	<.01	.044	<.01	<.007	<.01
23...	<.02	<.003	<.007	<.004	<.01	.044	<.01	<.007	<.01
24...	<.02	<.003	<.007	<.004	<.01	.103	<.01	<.007	<.01
25...	<.02	<.003	<.007	<.004	<.01	.114	<.01	<.007	<.01
26...	<.02	<.003	<.007	<.004	<.01	.083	<.01	<.007	<.01
MAR									
09...	M	<.003	<.007	<.004	<.01	.043	<.01	<.007	<.01
APR									
26...	<.02	<.003	<.007	<.004	<.01	.016	<.01	<.007	<.01
MAY									
19...	--	--	--	--	--	--	--	--	--
30...	<.02	<.003	<.007	<.004	<.01	.011	<.01	<.007	<.01
JUN									
14...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
JUL									
12...	<.02	<.003	<.007	<.004	<.01	.013	<.01	<.007	<.01
26...	--	--	--	--	--	--	--	--	--
AUG									
08...	--	--	--	--	--	--	--	--	--
09...	<.02	<.003	<.007	<.004	<.01	.011	<.01	<.007	<.01
23...	--	--	--	--	--	--	--	--	--
SEP									
07...	<.02	<.003	<.007	<.004	<.01	<.010	<.01	<.007	<.01
20...	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than value shown.
M Presence of material verified, but not quantified.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
OCT			
06...	<.002	<.001	<.002
NOV			
02...	--	--	--
03...	<.002	<.001	<.002
DEC			
08...	<.002	<.001	<.002
JAN			
06...	<.002	<.001	<.002
12...	<.002	<.001	e.001
19...	<.002	<.001	e.002
19...	<.002	<.001	e.002
24...	<.002	<.001	e.004
25...	<.002	<.001	e.003
25...	<.002	<.001	e.004
25...	<.002	<.001	.006
26...	<.002	<.001	e.004
26...	<.002	<.001	e.003
27...	<.002	<.001	e.002
27...	<.002	<.001	e.001
FEB			
04...	<.002	<.001	.007
09...	<.002	<.001	.007
11...	<.002	<.001	e.002
12...	<.002	<.001	.006
12...	<.002	<.001	e.003
13...	<.002	<.001	.009
13...	<.002	<.001	.006
13...	<.002	<.001	e.003
14...	<.002	<.001	.008
14...	<.002	<.001	.006
15...	<.002	<.001	.006
15...	<.002	<.001	e.002
15...	<.002	<.001	e.002
16...	<.002	<.001	e.002
16...	<.002	<.001	.005
17...	<.002	<.001	.004
17...	<.002	<.001	e.003
18...	<.002	<.001	e.003
18...	<.002	<.001	.004
22...	<.002	<.001	e.003
23...	<.002	<.001	e.004
24...	<.002	<.001	.005
25...	<.002	<.001	e.003
26...	<.002	<.001	e.002
MAR			
09...	<.002	<.001	e.002
APR			
26...	<.002	<.001	.009
MAY			
19...	--	--	--
30...	.007	<.001	.006
JUN			
14...	--	--	--
15...	--	--	--
JUL			
12...	<.002	<.001	.007
26...	--	--	--
AUG			
08...	--	--	--
09...	<.002	<.001	e.004
23...	--	--	--
SEP			
07...	<.002	<.001	<.002
20...	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)
OCT									
16...	1020	1460	759	10.5	109	7.6	687	17.0	--
NOV									
08...	1130	1850	753	10.7	106	7.3	735	14.5	--
DEC									
11...	1140	1480	765	10.2	92	7.3	819	11.0	--
17...	1720	2200	755	2.5	24	7.4	723	12.5	160
18...	0700	2500	767	--	--	--	--	--	130
18...	1600	2540	--	--	--	--	--	--	130
19...	0830	2460	--	--	--	--	--	--	140
19...	1400	2430	--	--	--	--	--	--	140
JAN									
08...	1230	1900	760	8.2	74	7.6	1020	10.5	--
24...	1050	1680	768	8.9	83	7.6	1100	12.5	--
FEB									
06...	1420	1790	760	10.3	94	7.8	1030	11.0	--
19...	1130	1920	764	10.5	99	7.7	982	12.5	--
MAR									
11...	1240	2200	764	9.0	93	7.7	1080	17.0	--
27...	1300	2000	769	9.6	99	8.0	1050	17.0	--
APR									
08...	1300	1980	767	8.9	93	7.7	890	17.5	--
29...	1300	3430	764	9.5	96	7.5	422	16.0	--
MAY									
13...	1330	3200	766	8.6	94	7.4	389	20.0	--
28...	1100	1840	771	9.7	111	7.8	551	22.5	--
JUN									
10...	1400	2110	762	9.9	113	8.1	451	22.0	--
24...	1220	2050	762	11.2	123	8.3	410	20.0	--
JUL									
09...	1330	1330	762	11.2	133	8.5	600	24.0	--
23...	1210	1140	761	11.4	141	8.0	608	26.0	--
AUG									
06...	1400	1360	758	8.4	102	8.0	623	25.0	--
SEP									
03...	1130	1230	755	9.0	--	8.4	642	25.0	--

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	Sodium adsorp-tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alka-linity, wat flt Gran, field, mg/L as CaCO3 (29802)	Chlor-ide, water, fltrd, mg/L (00940)	Fluor-ide, water, fltrd, mg/L (00950)
OCT									
16...	--	--	--	--	--	--	--	89.7	--
NOV									
08...	--	--	--	--	--	--	115	103	--
DEC									
11...	--	--	--	--	--	--	112	129	--
17...	33.5	18.9	4.41	3	88.2	53	--	97.8	<.17
18...	26.8	14.5	5.78	2	59.2	49	--	65.5	<.17
18...	28.3	15.4	6.66	2	66.5	50	--	75.9	<.17
19...	29.9	16.3	6.64	3	73.6	52	--	83.9	<.17
19...	30.1	16.6	6.30	3	76.3	52	--	85.8	<.17
JAN									
08...	--	--	--	--	--	--	133	148	--
24...	--	--	--	--	--	--	--	--	--
FEB									
06...	--	--	--	--	--	--	127	145	--
19...	--	--	--	--	--	--	--	--	--
MAR									
11...	--	--	--	--	--	--	124	141	--
27...	--	--	--	--	--	--	--	--	--
APR									
08...	--	--	--	--	--	--	100	123	--
29...	--	--	--	--	--	--	--	--	--
MAY									
13...	--	--	--	--	--	--	56.0	45.9	--
28...	--	--	--	--	--	--	--	--	--
JUN									
10...	--	--	--	--	--	--	69.0	55.9	--
24...	--	--	--	--	--	--	--	--	--
JUL									
09...	--	--	--	--	--	--	82.0	79.9	--
23...	--	--	--	--	--	--	--	--	--
AUG									
06...	--	--	--	--	--	--	89.0	77.5	--
SEP									
03...	--	--	--	--	--	--	111	82.5	--

< Actual value is known to be less than value shown.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Partic-ulate nitro-gen, susp, water, mg/L (49570)
OCT									
16...	--	81.6	--	.50	<.04	2.06	.015	.18	.56
NOV									
08...	--	85.6	--	.67	<.04	1.83	.012	.10	.54
DEC									
11...	--	115	--	.54	<.04	2.11	.011	.14	.17
17...	14.4	96.6	444	1.2	.14	1.79	.022	.25	.61
18...	13.6	65.2	336	1.7	.15	1.42	.021	.34	.58
18...	13.9	76.8	375	1.6	.28	1.47	.025	.38	.22
19...	15.4	82.1	404	1.5	.30	1.30	.022	.36	.42
19...	14.9	84.1	404	1.4	.29	1.40	.024	.35	.44
JAN									
08...	--	149	--	.66	.06	2.02	.019	.18	.28
24...	--	--	--	.55	.07	2.44	.022	.19	--
FEB									
06...	--	150	--	.57	<.04	1.92	.013	.15	.14
19...	--	--	--	.47	e.04	2.31	.014	.13	--
MAR									
11...	--	175	--	.68	e.04	2.87	.021	.19	.36
27...	--	--	--	.67	<.04	2.17	.025	.18	--
APR									
08...	--	134	--	.46	<.04	2.13	.019	.12	.25
29...	--	--	--	.47	<.04	1.19	.020	.09	--
MAY									
13...	--	48.8	--	.46	<.04	1.11	.016	.11	.29
28...	--	--	--	.54	<.04	1.04	.015	.07	--
JUN									
10...	--	55.0	--	.57	<.04	1.03	.014	.08	.30
24...	--	--	--	e.60	<.04	e.84	e.021	e.05	--
JUL									
09...	--	80.3	--	.88	<.04	1.40	.033	.07	.48
23...	--	--	--	.75	<.04	.83	.059	<.02	--
AUG									
06...	--	80.0	--	.63	<.04	1.93	.033	.13	.26
SEP									
03...	--	76.3	--	.81	<.04	1.67	.040	e.11	.51

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phos-phorus, water, unfltrd mg/L (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inor-ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)	1,4-Naphth-oquin-one, water, fltrd, ug/L (61611)	1-Naph-thol, water, fltrd 0.7u GF ug/L (49295)
OCT									
16...	.27	3.8	<.1	3.8	3.8	--	--	<.05	<.09
NOV									
08...	.23	3.8	<.1	3.8	6.2	--	--	--	--
DEC									
11...	.22	1.2	<.1	1.2	3.9	--	--	<.05	M
17...	.51	4.2	<.1	4.2	--	25	12.0	--	<.09
18...	.73	3.3	<.1	3.2	--	52	2.8	--	<.09
18...	.65	1.7	<.1	1.7	--	50	9.5	--	<.09
19...	.58	2.7	<.1	2.7	--	47	7.1	--	<.09
19...	.56	3.0	.1	2.9	--	52	10.0	--	<.09
JAN									
08...	.29	1.6	<.1	1.5	6.1	--	--	<.05	<.09
24...	.26	--	--	--	--	--	--	<.05	<.09
FEB									
06...	.24	1.1	<.1	1.0	3.5	--	--	<.05	<.09
19...	.23	--	--	--	--	--	--	<.05	<.09
MAR									
11...	.30	2.3	<.1	2.3	4.4	--	--	<.05	<.09
27...	.28	--	--	--	--	--	--	<.05	<.09
APR									
08...	.23	1.6	<.1	1.6	3.5	--	--	<.05	<.09
29...	.186	--	--	--	--	--	--	<.05	<.09
MAY									
13...	.22	1.7	<.1	1.7	3.0	--	--	<.05	<.09
28...	.199	--	--	--	--	--	--	<.05	<.09
JUN									
10...	.199	2.3	<.1	2.3	3.7	--	--	<.05	<.09
24...	e.181	--	--	--	--	--	--	<.05	<.09
JUL									
09...	.20	3.0	<.1	2.9	3.1	--	--	<.05	<.09
23...	.23	--	--	--	--	--	--	<.05	<.09
AUG									
06...	.22	1.6	<.1	1.6	3.7	--	--	<.05	<.09
SEP									
03...	.26	3.7	<.1	3.6	8.1	--	--	<.05	<.09

< Actual value is known to be less than value shown.
M Presence of material verified, but not quantified.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	2-(4-t-Butyl-phenoxy)cyclo-hexanol wat flt ug/L (61637)	2,4-D water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,5-Di-chloro-aniline water, fltrd, ug/L (61614)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	2-[(2-Et-6-Me-Ph)--amino]propan-1-ol, ug/L (61615)	2Amino-N-iso-propyl-benz-amide, wat flt ug/L (61617)	2Chloro-2',6'-diethyl acet-anilide wat flt ug/L (61618)
OCT									
16...	<.01	--	--	--	<.03	<.006	<.1	<.005	<.005
NOV									
08...	--	<.009	.24	<.02	--	<.006	--	--	--
DEC									
11...	<.01	--	--	--	<.03	<.006	<.1	<.005	<.005
17...	--	--	--	--	--	<.006	<.1	--	<.005
18...	--	--	--	--	--	<.006	<.1	--	<.005
18...	--	--	--	--	--	<.006	<.1	--	<.005
19...	--	--	--	--	--	<.006	<.1	--	<.005
19...	--	--	--	--	--	<.006	<.1	--	<.005
JAN									
08...	<.01	--	--	--	<.03	<.006	<.1	<.005	<.005
24...	<.01	--	--	--	<.03	<.006	<.1	<.005	<.005
FEB									
06...	<.01	--	--	--	<.03	<.006	<.1	<.005	<.005
19...	<.01	--	--	--	<.03	<.006	<.1	<.005	<.005
MAR									
11...	<.01	--	--	--	<.03	<.006	<.1	<.005	<.005
27...	<.01	--	--	--	<.03	<.006	<.1	<.005	<.005
APR									
08...	<.01	--	--	--	<.03	<.006	<.1	<.005	<.005
29...	<.01	--	--	--	<.03	<.006	<.1	<.005	<.005
MAY									
13...	<.01	--	--	--	<.03	<.006	<.1	<.005	<.005
28...	<.01	--	--	--	<.03	<.006	<.1	<.005	<.005
JUN									
10...	<.01	--	--	--	<.03	<.006	<.1	<.005	<.005
24...	e.01	--	--	--	<.03	<.006	<.1	<.005	<.005
JUL									
09...	e.01	--	--	--	<.03	<.006	<.1	<.005	<.005
23...	.02	--	--	--	<.03	<.006	<.1	<.005	<.005
AUG									
06...	.01	--	--	--	<.03	<.006	<.1	<.005	<.005
SEP									
03...	e.01	--	--	--	<.03	<.006	<.1	<.005	<.005

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	2-Ethyl-6-methyl-aniline water, fltrd, ug/L (61620)	OIET, water, fltrd, ug/L (50355)	3-(Trifluoromethyl) aniline water, fltrd, ug/L (61630)	3,4-Dichloroaniline water fltrd, ug/L (61625)	3,5-Dichloroaniline water, fltrd, ug/L (61627)	3-Hydroxy carbofuran, wat flt 0.7u GF ug/L (49308)	3-Ketocarbofuran, water, fltrd, ug/L (50295)
OCT									
16...	<.006	--	<.004	--	<.01	e.002	<.005	--	--
NOV									
08...	<.006	<.04	--	<.008	--	--	--	<.006	<2
DEC									
11...	e.004	--	<.004	--	<.01	e.004	<.005	--	--
17...	<.006	--	<.004	--	--	.048	--	--	--
18...	<.006	--	<.004	--	--	.148	--	--	--
18...	<.006	--	<.004	--	--	.096	--	--	--
19...	<.006	--	<.004	--	--	.075	--	--	--
19...	<.006	--	<.004	--	--	.054	--	--	--
JAN									
08...	<.006	--	<.004	--	<.01	.013	<.005	--	--
24...	e.004	--	<.004	--	<.01	.011	<.005	--	--
FEB									
06...	<.006	--	<.004	--	<.01	.007	<.005	--	--
19...	<.006	--	<.004	--	<.01	.023	<.005	--	--
MAR									
11...	<.006	--	<.004	--	<.01	.070	<.005	--	--
27...	e.005	--	<.004	--	<.01	.028	<.005	--	--
APR									
08...	<.006	--	<.004	--	<.01	.013	<.005	--	--
29...	<.006	--	<.004	--	<.01	.014	<.005	--	--
MAY									
13...	<.006	--	<.004	--	<.01	.017	<.005	--	--
28...	<.006	--	<.004	--	<.01	.011	<.005	--	--
JUN									
10...	e.003	--	<.004	--	<.01	.009	<.005	--	--
24...	<.006	--	<.004	--	<.01	.008	<.005	--	--
JUL									
09...	<.006	--	<.004	--	<.01	.007	<.005	--	--
23...	<.006	--	<.004	--	<.01	.009	<.005	--	--
AUG									
06...	<.006	--	<.004	--	<.01	.006	<.005	--	--
SEP									
03...	e.003	--	<.004	--	<.01	<.004	<.005	--	--

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	3-Phen-oxy-benzyl alcohol water, fltrd, ug/L (61629)	4-(MeOH)-pendi-meth-alin, wat flt ug/L (61665)	4,4'-Di chloro-benzo-phen-one, wat flt ug/L (61631)	4Chloro 2methyl phenol, water, fltrd, ug/L (61633)	4Chloro phenyl-methyl sulfone water, fltrd, ug/L (61634)	Aceto-chlor ESA, water, fltrd 0.7u GF ug/L (61029)	Aceto-chlor OA, water, fltrd 0.7u GF ug/L (61030)	Aceto-chlor, water, fltrd, ug/L (49260)	Aci-fluor-fen, water, fltrd 0.7u GF ug/L (49315)
OCT									
16...	<.05	<.1	<.003	<.006	<.03	--	--	<.006	--
NOV									
08...	--	--	--	--	--	--	--	<.006	<.007
DEC									
11...	<.05	<.1	<.003	<.006	<.03	--	--	<.006	--
17...	--	--	--	<.006	--	<.05	<.05	<.006	--
18...	--	--	--	<.006	--	<.05	<.05	<.006	--
18...	--	--	--	<.006	--	<.05	<.05	<.006	--
19...	--	--	--	<.006	--	<.05	<.05	<.006	--
19...	--	--	--	<.006	--	<.05	<.05	<.006	--
JAN									
08...	<.05	<.1	<.003	<.006	<.03	--	--	<.006	--
24...	<.05	<.1	<.003	<.006	<.03	--	--	<.006	--
FEB									
06...	<.05	<.1	<.003	<.006	<.03	--	--	<.006	--
19...	<.05	<.1	<.003	<.006	<.03	--	--	<.006	--
MAR									
11...	<.05	<.1	<.003	<.006	<.03	--	--	<.006	--
27...	<.05	<.1	<.003	<.006	<.03	--	--	<.006	--
APR									
08...	--	--	<.003	<.006	<.03	--	--	<.006	--
29...	<.05	<.1	<.003	<.006	<.03	--	--	<.006	--
MAY									
13...	<.05	<.1	<.003	<.006	<.03	--	--	<.006	--
28...	<.05	<.1	<.003	<.006	<.03	--	--	<.006	--
JUN									
10...	<.05	--	<.003	<.006	<.03	--	--	<.006	--
24...	<.05	<.1	<.016	<.006	<.03	--	--	<.006	--
JUL									
09...	<.05	<.1	e.013	<.006	<.03	--	--	<.006	--
23...	--	--	e.015	<.006	<.03	--	--	<.006	--
AUG									
06...	<.05	--	e.009	<.006	<.03	--	--	<.006	--
SEP									
03...	--	--	e.003	<.006	<.03	--	--	<.006	--

< Actual value is known to be less the value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ala-chlor ESA, water, fltrd 0.7u GF ug/L (50009)	Ala-chlor OA, water, fltrd 0.7u GF ug/L (61031)	Ala-chlor, water, fltrd, ug/L (46342)	Aldi-carb sulfone water, fltrd 0.7u GF ug/L (49313)	Aldi-carb sulf-oxide, wat flt 0.7u GF ug/L (49314)	Aldi-carb, water, fltrd 0.7u GF ug/L (49312)	alpha-Endo-sulfan, water, fltrd, ug/L (34362)	alpha-HCH, water, fltrd, ug/L (34253)	Amino-methyl-phos-phonic acid, wat flt ug/L (62649)
OCT									
16...	--	--	<.004	--	--	--	<.005	<.005	.3
NOV									
08...	--	--	<.004	<.02	<.008	<.04	--	<.005	.1
DEC									
11...	--	--	<.004	--	--	--	<.005	<.005	.1
17...	<.05	<.05	<.004	--	--	--	--	--	--
18...	<.05	<.05	<.004	--	--	--	--	--	--
18...	<.05	<.05	<.004	--	--	--	--	--	--
19...	<.05	<.05	<.004	--	--	--	--	--	--
19...	.07	<.05	<.004	--	--	--	--	--	--
JAN									
08...	--	--	<.004	--	--	--	<.005	<.005	.1
24...	--	--	<.004	--	--	--	<.005	<.005	.2
FEB									
06...	--	--	<.004	--	--	--	<.005	<.005	.2
19...	--	--	<.004	--	--	--	<.005	<.005	.3
MAR									
11...	--	--	<.004	--	--	--	<.005	<.005	.4
27...	--	--	<.004	--	--	--	<.005	<.005	.2
APR									
08...	--	--	<.004	--	--	--	<.005	<.005	.2
29...	--	--	<.004	--	--	--	<.005	<.005	.1
MAY									
13...	--	--	<.004	--	--	--	<.005	<.005	.2
28...	--	--	<.004	--	--	--	<.005	<.008	.1
JUN									
10...	--	--	<.004	--	--	--	<.005	<.005	.2
24...	--	--	<.004	--	--	--	<.005	<.005	.2
JUL									
09...	--	--	<.004	--	--	--	<.005	<.005	.2
23...	--	--	<.004	--	--	--	<.005	<.005	.5
AUG									
06...	--	--	<.004	--	--	--	<.005	<.005	.6
SEP									
03...	--	--	<.004	--	--	--	<.005	<.005	.3

< Actual value is known to be less than value shown.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Atrazine, water, fltrd, ug/L (39632)	Azinphos-methyl oxon, water, fltrd, ug/L (61635)	Azinphos-methyl, water, fltrd 0.7u GF ug/L (82686)	Bendiocarb, water, fltrd, ug/L (50299)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Benomyl water, fltrd, ug/L (50300)	Bensulfuron, water, fltrd, ug/L (61693)	Bentazon, water, fltrd 0.7u GF ug/L (38711)	beta-Endosulfan, water, fltrd, ug/L (34357)
OCT									
16...	<.010	<.02	<.050	--	<.010	--	--	--	<.01
NOV									
08...	<.007	--	<.050	<.03	<.010	<.004	<.02	<.01	--
DEC									
11...	e.006	<.02	<.050	--	<.010	--	--	--	<.01
17...	<.007	<.02	<.050	--	<.010	--	--	--	--
18...	<.007	<.02	<.050	--	<.010	--	--	--	--
18...	e.005	<.02	<.050	--	<.010	--	--	--	--
19...	e.007	<.02	<.050	--	<.010	--	--	--	--
19...	e.006	<.02	<.050	--	<.010	--	--	--	--
JAN									
08...	<.007	<.02	<.050	--	<.010	--	--	--	<.01
24...	e.004	<.02	<.050	--	<.010	--	--	--	<.01
FEB									
06...	.009	<.12	<.050	--	<.010	--	--	--	<.01
19...	<.007	<.02	<.050	--	<.010	--	--	--	<.01
MAR									
11...	.009	<.02	<.050	--	<.010	--	--	--	<.01
27...	.007	<.02	<.050	--	<.010	--	--	--	<.01
APR									
08...	.007	<.02	<.050	--	<.010	--	--	--	<.01
29...	.010	<.02	<.050	--	<.010	--	--	--	<.01
MAY									
13...	e.007	<.02	<.050	--	<.010	--	--	--	<.01
28...	e.006	<.03	<.050	--	<.010	--	--	--	<.01
JUN									
10...	.009	<.02	<.050	--	<.010	--	--	--	<.01
24...	e.010	<.02	<.050	--	<.010	--	--	--	<.01
JUL									
09...	.009	<.02	<.050	--	<.010	--	--	--	<.01
23...	.008	<.03	e.021	--	<.010	--	--	--	<.01
AUG									
06...	e.005	<.02	<.050	--	<.010	--	--	--	<.01
SEP									
03...	e.007	<.02	<.050	--	<.010	--	--	--	<.01

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Bifen-thrin, water, fltrd, ug/L (61580)	Broma-cil, water, fltrd, ug/L (04029)	Brom-oxynil, water, fltrd 0.7u GF ug/L (49311)	Butyl-ate, water, fltrd, ug/L (04028)	Caf-feine, water, fltrd, ug/L (50305)	Car-baryl, water, fltrd 0.7u GF ug/L (49310)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (49309)
OCT								
16...	<.005	--	--	<.002	--	--	<.041	--
NOV								
08...	--	<.03	<.02	<.002	.051	<.03	<.041	<.006
DEC								
11...	<.005	--	--	<.002	--	--	e.004	--
17...	--	--	--	--	--	--	e.009	--
18...	--	--	--	--	--	--	e.007	--
18...	--	--	--	--	--	--	e.005	--
19...	--	--	--	--	--	--	e.005	--
19...	--	--	--	--	--	--	e.005	--
JAN								
08...	<.005	--	--	<.002	--	--	<.041	--
24...	<.005	--	--	<.002	--	--	e.043	--
FEB								
06...	<.005	--	--	<.002	--	--	<.041	--
19...	<.005	--	--	<.002	--	--	<.041	--
MAR								
11...	<.005	--	--	<.002	--	--	<.041	--
27...	<.005	--	--	<.002	--	--	<.041	--
APR								
08...	<.005	--	--	<.002	--	--	e.027	--
29...	<.005	--	--	<.002	--	--	e.010	--
MAY								
13...	<.005	--	--	<.002	--	--	e.004	--
28...	<.005	--	--	<.002	--	--	<.041	--
JUN								
10...	<.005	--	--	<.002	--	--	<.041	--
24...	<.005	--	--	<.002	--	--	<.041	--
JUL								
09...	<.005	--	--	.004	--	--	<.041	--
23...	<.005	--	--	<.002	--	--	<.041	--
AUG								
06...	<.005	--	--	<.002	--	--	<.041	--
SEP								
03...	<.005	--	--	<.002	--	--	<.041	--

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-amben methyl ester, water, fltrd, ug/L (61188)	Chlori-muron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-tri-azine, wat flt ug/L (04039)	Chloro-thalo-nil, water, fltrd 0.7u GF ug/L (49306)	Chlor-pyrifos oxon, water, fltrd, ug/L (61636)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	cis-Propi-cona-zole, water, fltrd, ug/L (79846)
OCT									
16...	<.020	--	--	--	--	<.06	e.018	<.006	.014
NOV									
08...	<.020	<.02	<.010	<.01	<.04	--	<.005	<.006	--
DEC									
11...	<.020	--	--	--	--	<.06	<.005	<.006	<.008
17...	--	--	--	--	--	<.06	e.005	<.006	--
18...	--	--	--	--	--	<.06	.005	<.006	--
18...	--	--	--	--	--	<.06	e.004	<.006	--
19...	--	--	--	--	--	<.06	.005	<.006	--
19...	--	--	--	--	--	<.06	.007	<.006	--
JAN									
08...	<.020	--	--	--	--	<.06	<.005	<.006	<.008
24...	<.020	--	--	--	--	<.06	e.005	<.006	<.008
FEB									
06...	<.020	--	--	--	--	<.06	<.005	<.006	<.008
19...	<.020	--	--	--	--	<.06	<.005	<.006	<.008
MAR									
11...	e.013	--	--	--	--	<.06	.022	<.006	<.008
27...	e.005	--	--	--	--	<.06	e.004	<.006	<.008
APR									
08...	<.020	--	--	--	--	<.06	<.005	<.006	<.008
29...	<.020	--	--	--	--	<.06	<.005	<.006	<.008
MAY									
13...	<.020	--	--	--	--	<.06	<.005	<.006	<.008
28...	<.020	--	--	--	--	<.06	.006	<.006	<.008
JUN									
10...	<.020	--	--	--	--	<.06	.009	<.006	<.008
24...	<.020	--	--	--	--	<.02	<.005	<.006	<.008
JUL									
09...	<.020	--	--	--	--	<.06	.009	<.006	<.008
23...	<.020	--	--	--	--	<.06	.013	<.006	<.008
AUG									
06...	<.020	--	--	--	--	<.06	.006	<.006	<.008
SEP									
03...	<.020	--	--	--	--	<.06	.005	<.006	<.008

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Clopyr-alid, water, fltrd 0.7u GF ug/L (49305)	Cyana-zine, water, fltrd, ug/L (04041)	Cyclo-ate, water, fltrd, ug/L (04031)	Cyflu-thrin, water, fltrd, ug/L (61585)	Cyhalo-thrin, water, fltrd, ug/L (61595)	Cyper-methrin water, fltrd, ug/L (61586)	DCPA water fitrd 0.7u GF ug/L (82682)	Dacthal mono-acid, water, fltrd 0.7u GF ug/L (49304)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)	Diazi-non, water, fltrd, ug/L (39572)
OCT										
16...	--	<.018	<.005	<.008	<.009	<.009	e.003	--	<.004	.012
NOV										
08...	<.01	<.018	<.01	--	--	--	e.003	<.01	<.004	.009
DEC										
11...	--	<.018	<.005	<.008	<.009	<.009	<.003	--	<.004	<.007
17...	--	--	--	<.008	--	<.009	e.002	--	<.004	.018
18...	--	--	--	<.008	--	<.009	e.003	--	<.004	.015
18...	--	--	--	<.008	--	<.009	e.003	--	<.004	.026
19...	--	--	--	<.008	--	<.009	e.002	--	<.004	.012
19...	--	--	--	<.008	--	<.009	e.001	--	<.004	.010
JAN										
08...	--	<.018	<.005	<.008	<.009	<.009	<.003	--	<.004	<.010
24...	--	<.018	<.005	<.008	<.009	<.009	e.002	--	<.004	.027
FEB										
06...	--	<.018	<.005	<.008	<.009	<.009	<.003	--	<.004	.007
19...	--	<.018	<.005	<.008	<.009	<.009	<.003	--	<.004	.008
MAR										
11...	--	<.018	<.005	<.008	<.009	<.009	<.003	--	<.004	e.003
27...	--	<.018	<.005	<.008	<.009	<.009	<.003	--	<.004	e.003
APR										
08...	--	<.018	<.005	<.008	<.009	<.009	<.003	--	<.004	<.005
29...	--	<.018	<.005	<.008	<.009	<.009	<.003	--	<.004	.028
MAY										
13...	--	<.018	<.005	<.008	<.009	<.009	<.003	--	<.004	.005
28...	--	<.018	<.005	<.008	<.009	<.009	e.001	--	<.004	<.005
JUN										
10...	--	<.018	<.005	<.008	<.009	<.009	<.003	--	<.004	.013
24...	--	<.018	<.005	<.016	<.009	<.016	<.003	--	<.004	<.005
JUL										
09...	--	<.018	<.005	<.008	<.009	<.009	<.003	--	<.004	.006
23...	--	<.018	<.005	<.008	<.009	<.009	<.003	--	<.004	<.005
AUG										
06...	--	<.018	<.005	<.008	<.009	<.009	<.003	--	<.004	<.006
SEP										
03...	--	<.018	<.005	<.008	<.009	<.009	<.003	--	<.004	e.004

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Dicamba water fltrd 0.7u GF ug/L (38442)	Di-chlor-prop, water, fltrd 0.7u GF ug/L (49302)	Dicro-tophos, water fltrd, ug/L (38454)	Diel-drin, water, fltrd, ug/L (39381)	Dimeth-enamid ESA, water, fltrd, ug/L (61951)	Dimeth-enamid OA, water, fltrd, ug/L (62482)	Dimeth-oate, water, fltrd 0.7u GF ug/L (82662)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphen-amid, water, fltrd, ug/L (04033)
OCT									
16...	--	--	<.08	<.005	--	--	<.006	--	--
NOV									
08...	<.01	<.01	--	<.005	--	--	--	<.01	<.03
DEC									
11...	--	--	<.08	<.005	--	--	<.006	--	--
17...	--	--	<.08	<.005	<.05	<.05	e.004	--	--
18...	--	--	<.08	<.005	<.05	<.05	<.006	--	--
18...	--	--	<.08	<.005	<.05	<.05	<.006	--	--
19...	--	--	<.08	<.005	<.05	<.05	<.006	--	--
19...	--	--	<.08	<.005	<.05	<.05	<.006	--	--
JAN									
08...	--	--	<.08	<.005	--	--	<.006	--	--
24...	--	--	<.08	<.005	--	--	<.006	--	--
FEB									
06...	--	--	<.08	<.005	--	--	<.006	--	--
19...	--	--	<.08	<.005	--	--	<.006	--	--
MAR									
11...	--	--	<.08	<.005	--	--	e.009	--	--
27...	--	--	<.08	<.005	--	--	<.006	--	--
APR									
08...	--	--	<.08	<.005	--	--	<.006	--	--
29...	--	--	<.08	<.005	--	--	<.006	--	--
MAY									
13...	--	--	<.08	<.005	--	--	<.006	--	--
28...	--	--	<.08	<.005	--	--	<.006	--	--
JUN									
10...	--	--	<.08	<.005	--	--	<.006	--	--
24...	--	--	<.08	<.005	--	--	<.006	--	--
JUL									
09...	--	--	<.08	<.005	--	--	e.012	--	--
23...	--	--	<.08	<.005	--	--	e.018	--	--
AUG									
06...	--	--	<.08	<.005	--	--	e.014	--	--
SEP									
03...	--	--	<.08	<.005	--	--	e.006	--	--

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Disulf-oton sulfone water, fltrd, ug/L (61640)	Disulf-oton sulf-oxide, water, fltrd, ug/L (61641)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	Diuron, water, fltrd 0.7u GF ug/L (49300)	e-Di-metho-morph, water, fltrd, ug/L (79844)	Endo-sulfan ether, water, fltrd, ug/L (61642)	Endo-sulfan sulfate water, fltrd, ug/L (61590)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)
OCT									
16...	<.02	<.002	<.02	--	<.02	<.004	<.006	.013	<.009
NOV									
08...	--	--	<.02	.05	--	--	--	.004	<.009
DEC									
11...	<.02	<.002	<.02	--	<.02	<.004	<.006	.002	<.009
17...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--
JAN									
08...	<.02	<.002	<.02	--	<.02	<.004	<.006	.003	<.009
24...	<.02	<.002	<.02	--	<.02	<.004	<.006	.004	<.009
FEB									
06...	<.02	<.002	<.02	--	<.02	<.004	<.006	<.002	<.009
19...	<.02	<.002	<.02	--	<.02	<.004	<.006	<.002	<.009
MAR									
11...	<.02	<.002	<.02	--	<.02	<.004	<.006	<.002	<.009
27...	<.02	<.002	<.02	--	<.02	<.004	<.006	.003	<.009
APR									
08...	<.02	<.002	<.02	--	<.02	<.004	<.006	.008	<.009
29...	<.02	<.002	<.02	--	<.02	<.004	<.006	.007	<.009
MAY									
13...	<.02	<.002	<.02	--	<.02	<.004	<.006	.009	<.009
28...	<.02	<.002	<.02	--	<.02	<.004	<.006	.046	<.009
JUN									
10...	<.02	<.002	<.02	--	<.02	<.004	<.006	.111	<.009
24...	<.02	<.002	<.02	--	<.02	<.004	<.006	e.006	<.009
JUL									
09...	<.02	<.002	<.02	--	<.02	<.004	<.006	.017	<.009
23...	<.02	<.002	<.02	--	<.02	<.004	<.006	.004	<.009
AUG									
06...	<.02	<.002	<.02	--	<.02	<.004	<.006	.012	<.009
SEP									
03...	<.02	<.002	<.02	--	<.02	<.004	<.006	.004	<.009

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ethion monoxon water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fenami-phos sulfone water, fltrd, ug/L (61645)	Fenami-phos sulf-oxide, water, fltrd, ug/L (61646)	Fenami-phos, water, fltrd, ug/L (61591)	Fen-thion sulf-oxide, water, fltrd, ug/L (61647)	Fen-thion, water, fltrd, ug/L (38801)	Fenuron water, fltrd 0.7u GF ug/L (49297)
OCT									
16...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--
NOV									
08...	--	--	<.005	--	--	--	--	--	<.03
DEC									
11...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--
17...	<.03	<.004	--	<.008	<.03	<.03	--	--	--
18...	<.03	<.004	--	<.008	<.03	<.03	--	--	--
18...	<.03	<.004	--	<.008	<.03	<.03	--	--	--
19...	<.03	<.004	--	<.008	<.03	<.03	--	--	--
19...	<.03	<.004	--	<.008	<.03	<.03	--	--	--
JAN									
08...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--
24...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--
FEB									
06...	<.03	<.004	<.005	<.008	--	<.03	<.008	<.02	--
19...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--
MAR									
11...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--
27...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--
APR									
08...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--
29...	<.03	<.004	.011	<.008	<.03	<.03	<.008	<.02	--
MAY									
13...	<.03	<.004	.040	<.008	<.03	<.03	<.008	<.02	--
28...	<.03	<.004	.014	<.031	<.03	<.03	<.008	<.02	--
JUN									
10...	<.03	<.004	.025	<.008	<.03	<.03	<.008	<.02	--
24...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--
JUL									
09...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--
23...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--
AUG									
06...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--
SEP									
03...	<.03	<.004	<.005	<.008	<.03	<.03	<.008	<.02	--

< Actual value is known to be less than value shown.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Flufenacet ESA, water, fltrd, ug/L (61952)	Flufenacet OA, water, fltrd, ug/L (62483)	Flumetralin, water, fltrd, ug/L (61592)	Flumetsulam, water, fltrd, ug/L (61694)	Fluometuron water fltrd 0.7u GF ug/L (38811)	Fonofos oxon, water, fltrd, ug/L (61649)
OCT									
16...	<.005	<.005	<.007	--	--	<.004	--	--	<.002
NOV									
08...	<.005	<.005	<.007	--	--	--	<.01	<.03	--
DEC									
11...	<.005	<.005	<.007	--	--	<.004	--	--	<.002
17...	<.005	<.005	<.007	<.05	<.05	--	--	--	<.002
18...	<.005	<.005	<.007	<.05	<.05	--	--	--	<.002
18...	<.005	<.005	<.007	<.05	<.05	--	--	--	<.002
19...	<.005	<.005	<.007	<.05	<.05	--	--	--	<.002
19...	<.005	<.005	<.007	<.05	<.05	--	--	--	<.002
JAN									
08...	<.005	<.005	<.007	--	--	<.004	--	--	<.002
24...	<.005	<.005	<.007	--	--	<.004	--	--	<.002
FEB									
06...	<.005	<.005	<.007	--	--	<.004	--	--	<.002
19...	<.005	<.005	<.007	--	--	<.004	--	--	<.002
MAR									
11...	<.005	<.005	<.007	--	--	<.004	--	--	<.002
27...	<.005	<.005	<.007	--	--	<.004	--	--	<.002
APR									
08...	<.005	<.005	<.007	--	--	<.004	--	--	<.002
29...	<.005	<.005	<.007	--	--	<.004	--	--	<.002
MAY									
13...	<.005	<.005	<.007	--	--	<.004	--	--	<.002
28...	<.005	<.005	<.007	--	--	<.004	--	--	<.002
JUN									
10...	<.005	<.005	<.007	--	--	<.004	--	--	<.002
24...	<.005	<.005	<.007	--	--	<.004	--	--	<.002
JUL									
09...	<.005	<.005	<.007	--	--	<.004	--	--	<.002
23...	<.005	<.005	<.007	--	--	<.004	--	--	<.002
AUG									
06...	<.005	<.005	<.007	--	--	<.004	--	--	<.002
SEP									
03...	<.005	<.005	<.007	--	--	<.004	--	--	<.002

< Actual value is known to be less than value shown.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fonofos water, fltrd, ug/L (04095)	Glufosinate, water, fltrd 0.7u GF ug/L (62721)	Glyphosate, water, fltrd 0.7u GF ug/L (62722)	Hexazinone, water, fltrd, ug/L (04025)	Imazaquin, water, fltrd, ug/L (50356)	Imazethapyr, water, fltrd, ug/L (50407)	Imidacloprid water, fltrd, ug/L (61695)	Iprodione, water, fltrd, ug/L (61593)	Isofenphos, water, fltrd, ug/L (61594)
OCT									
16...	<.003	<.1	<.1	<.013	--	--	--	<1	<.003
NOV									
08...	<.003	<.1	.1	--	<.02	<.02	<.007	--	--
DEC									
11...	<.003	<.1	<.1	e.010	--	--	--	<1	<.003
17...	<.003	--	--	--	--	--	--	M	<.003
18...	<.003	--	--	--	--	--	--	<1	<.003
18...	<.003	--	--	--	--	--	--	M	<.003
19...	<.003	--	--	--	--	--	--	M	<.003
19...	<.003	--	--	--	--	--	--	M	<.003
JAN									
08...	<.003	<.1	<.1	.015	--	--	--	<1	<.003
24...	<.003	<.1	<.1	.014	--	--	--	<1	<.003
FEB									
06...	<.003	<.1	<.1	.017	--	--	--	<1	<.003
19...	<.003	<.1	<.1	.014	--	--	--	M	<.003
MAR									
11...	<.003	<.1	.2	.162	--	--	--	M	<.003
27...	<.003	<.1	<.1	.029	--	--	--	<1	<.003
APR									
08...	<.003	<.1	<.1	.022	--	--	--	<1	<.003
29...	<.003	<.1	<.1	e.012	--	--	--	<1	<.003
MAY									
13...	<.003	<.1	<.1	.020	--	--	--	<1	<.003
28...	<.003	<.1	<.1	e.011	--	--	--	<1	<.003
JUN									
10...	<.003	<.1	<.1	e.010	--	--	--	<1	<.003
24...	<.003	<.1	<.1	e.006	--	--	--	<1	<.003
JUL									
09...	<.003	<.1	.2	.013	--	--	--	<1	<.003
23...	<.003	<.1	<.1	e.012	--	--	--	<1	<.003
AUG									
06...	<.003	<.1	<.1	e.012	--	--	--	<1	<.003
SEP									
03...	<.003	<.1	.2	e.011	--	--	--	<1	<.003

< Actual value is known to be less than value shown.
e Estimated.
M Presence of material verified, but not quantified.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (38478)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF ug/L (38482)	MCPB, water, fltrd 0.7u GF ug/L (38487)	Meta-laxyl, water, fltrd, ug/L (50359)	Meta-laxyl, water, fltrd, ug/L (61596)	Methi-althion water, fltrd, ug/L (61598)
OCT									
16...	<.004	--	<.035	<.027	--	--	--	<.005	<.006
NOV									
08...	<.004	<.01	<.035	e.007	<.02	<.01	<.02	--	--
DEC									
11...	<.004	--	<.035	<.027	--	--	--	<.005	<.006
17...	--	--	--	e.006	--	--	--	.007	<.006
18...	--	--	--	<.027	--	--	--	<.005	<.006
18...	--	--	--	<.027	--	--	--	<.005	<.006
19...	--	--	--	<.027	--	--	--	<.005	<.006
19...	--	--	--	<.027	--	--	--	<.005	<.006
JAN									
08...	<.004	--	<.035	<.027	--	--	--	<.005	<.006
24...	<.004	--	<.035	<.027	--	--	--	<.005	.008
FEB									
06...	<.004	--	<.035	<.027	--	--	--	<.005	<.006
19...	<.004	--	<.035	<.027	--	--	--	<.005	<.006
MAR									
11...	<.004	--	<.035	e.006	--	--	--	.007	<.006
27...	<.004	--	<.035	e.005	--	--	--	.007	<.006
APR									
08...	<.004	--	<.035	<.027	--	--	--	<.005	<.006
29...	<.004	--	<.035	e.005	--	--	--	<.005	<.006
MAY									
13...	<.004	--	<.035	<.027	--	--	--	<.005	<.006
28...	<.004	--	<.035	<.027	--	--	--	<.005	<.006
JUN									
10...	<.004	--	<.035	<.027	--	--	--	<.005	<.006
24...	<.004	--	<.035	<.027	--	--	--	<.005	<.006
JUL									
09...	<.004	--	<.035	e.005	--	--	--	<.005	<.006
23...	<.004	--	<.035	<.027	--	--	--	e.004	<.006
AUG									
06...	<.004	--	<.035	<.027	--	--	--	<.005	<.006
SEP									
03...	<.004	--	<.035	e.003	--	--	--	<.005	<.006

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Methio-carb, water, fltrd 0.7u GF ug/L (38501)	Meth-omyl, water, fltrd 0.7u GF ug/L (49296)	c-Per-methric acid methyl ester, wat flt ug/L (79842)	Methyl para-oxon, water, fltrd, ug/L (61664)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	t-Per-methric acid methyl ester, wat flt ug/L (79843)	Metola-chlor ESA, water, fltrd 0.7u GF ug/L (61043)	Metola-chlor OA, water, fltrd 0.7u GF ug/L (61044)	Metola-chlor, water, fltrd, ug/L (39415)
OCT									
16...	--	--	<.04	<.03	--	<.03	--	--	e.006
NOV									
08...	<.008	<.004	--	--	<.006	--	--	--	e.010
DEC									
11...	--	--	<.04	<.03	<.006	<.03	--	--	e.003
17...	--	--	--	<.03	<.006	--	.11	.06	.032
18...	--	--	--	<.03	<.006	--	.07	<.05	e.009
18...	--	--	--	<.03	<.006	--	.06	<.05	e.007
19...	--	--	--	<.03	<.006	--	.07	<.05	e.006
19...	--	--	--	<.03	<.006	--	.08	<.05	e.005
JAN									
08...	--	--	<.04	<.03	<.006	<.03	--	--	e.006
24...	--	--	<.04	<.03	<.006	<.03	--	--	e.004
FEB									
06...	--	--	<.04	<.03	<.020	<.03	--	--	e.009
19...	--	--	<.04	<.03	<.006	<.03	--	--	.015
MAR									
11...	--	--	<.04	<.03	<.006	<.03	--	--	.015
27...	--	--	<.04	<.03	<.006	<.03	--	--	e.013
APR									
08...	--	--	<.04	<.03	<.006	<.03	--	--	e.011
29...	--	--	<.04	<.03	<.006	<.03	--	--	.026
MAY									
13...	--	--	<.04	<.03	<.006	<.03	--	--	.020
28...	--	--	<.04	<.03	<.170	<.03	--	--	.091
JUN									
10...	--	--	<.04	<.03	<.006	<.03	--	--	.052
24...	--	--	<.04	<.03	<.006	<.03	--	--	e.060
JUL									
09...	--	--	<.04	<.03	<.006	<.03	--	--	.073
23...	--	--	<.04	<.03	<.006	<.03	--	--	.120
AUG									
06...	--	--	<.04	<.03	<.085	<.03	--	--	.065
SEP									
03...	--	--	<.04	<.03	<.006	<.03	--	--	.018

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Metri-buzin, water, fltrd, ug/L (82630)	Metsul-furon, water, fltrd, ug/L (61697)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Myclo-butanil water, fltrd, ug/L (61599)	N-(4-Chloro-phenyl) -N'-methyl-urea, ug/L (61692)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nico-sul-furon, water, fltrd, ug/L (50364)	Norflur azon, water, fltrd 0.7u GF ug/L (49293)
OCT									
16...	<.006	--	<.040	<.008	--	<.007	--	--	--
NOV									
08...	<.006	<.03	<.002	--	<.02	<.007	<.01	<.01	e.01
DEC									
11...	<.006	--	<.002	<.008	--	<.007	--	--	--
17...	.022	--	--	e.006	--	--	--	--	--
18...	.017	--	--	e.004	--	--	--	--	--
18...	<.006	--	--	.008	--	--	--	--	--
19...	<.006	--	--	e.005	--	--	--	--	--
19...	<.006	--	--	e.004	--	--	--	--	--
JAN									
08...	<.006	--	<.002	<.008	--	<.007	--	--	--
24...	<.006	--	<.002	<.008	--	<.007	--	--	--
FEB									
06...	<.006	--	<.002	<.008	--	<.007	--	--	--
19...	<.006	--	<.002	e.007	--	<.007	--	--	--
MAR									
11...	<.006	--	<.002	<.008	--	<.007	--	--	--
27...	<.006	--	<.002	<.008	--	<.007	--	--	--
APR									
08...	<.006	--	<.002	<.008	--	<.007	--	--	--
29...	<.006	--	<.002	<.008	--	<.007	--	--	--
MAY									
13...	<.006	--	<.002	<.008	--	<.007	--	--	--
28...	<.006	--	<.010	<.008	--	<.007	--	--	--
JUN									
10...	<.006	--	e.010	<.008	--	<.007	--	--	--
24...	<.006	--	<.002	<.008	--	e.007	--	--	--
JUL									
09...	<.006	--	<.002	<.008	--	<.007	--	--	--
23...	<.006	--	<.002	<.008	--	<.007	--	--	--
AUG									
06...	<.006	--	<.006	<.008	--	<.007	--	--	--
SEP									
03...	<.006	--	<.002	<.008	--	<.007	--	--	--

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	O-Et-O-Me-S-Pr -phos-phoro-thioate wat flt ug/L (61660)	Ory-zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	Oxy-fluor-fen, water, fltrd, ug/L (61600)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-oxon, water, fltrd, ug/L (61663)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)
OCT									
16...	<.008	--	--	<.007	<.003	<.008	<.010	<.025	<.022
NOV									
08...	--	<.02	<.01	--	<.003	--	<.010	<.004	<.022
DEC									
11...	<.008	--	--	<.007	<.003	<.008	<.010	<.004	e.020
17...	--	--	--	--	--	--	--	--	.041
18...	--	--	--	--	--	--	--	--	.041
18...	--	--	--	--	--	--	--	--	.028
19...	--	--	--	--	--	--	--	--	.026
19...	--	--	--	--	--	--	--	--	.023
JAN									
08...	<.008	--	--	<.007	<.003	<.008	<.010	<.004	<.022
24...	<.008	--	--	<.007	<.003	<.008	<.010	<.004	<.022
FEB									
06...	<.008	--	--	<.007	<.003	<.008	<.010	<.004	<.022
19...	<.008	--	--	.027	<.003	<.008	<.010	<.004	<.022
MAR									
11...	<.008	--	--	.007	<.003	<.008	<.010	<.004	<.022
27...	<.008	--	--	.007	<.003	<.008	<.010	<.004	<.022
APR									
08...	<.008	--	--	<.007	<.003	<.008	<.010	<.004	<.022
29...	<.008	--	--	<.007	<.003	<.008	<.010	.025	<.022
MAY									
13...	<.008	--	--	<.007	<.003	<.008	<.010	<.004	<.022
28...	<.008	--	--	e.004	<.003	<.008	<.010	<.004	<.022
JUN									
10...	<.008	--	--	<.007	<.003	<.008	<.010	<.004	<.022
24...	<.008	--	--	<.007	<.003	<.016	<.010	<.004	<.022
JUL									
09...	<.008	--	--	.023	<.003	<.008	<.010	<.004	<.022
23...	<.008	--	--	.017	<.003	<.008	<.010	<.004	<.022
AUG									
06...	<.008	--	--	.011	<.003	<.008	<.010	<.004	<.022
SEP									
03...	<.008	--	--	<.007	<.003	<.008	<.010	<.004	<.022

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phorate oxon, water, fltrd, ug/L (61666)	Phorate water fltrd 0.7u GF ug/L (82664)	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)	Phoste-bupirim water, fltrd, ug/L (61602)	Pic-loram, water, fltrd 0.7u GF ug/L (49291)	Pro-fenofos water, fltrd, ug/L (61603)	Prome-ton, water, fltrd, ug/L (04037)	Prome-tryn, water, fltrd, ug/L (04036)
OCT									
16...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.01	<.005
NOV									
08...	--	<.011	--	--	--	<.02	--	<.01	--
DEC									
11...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.01	.038
17...	<.10	<.011	<.06	<.008	--	--	--	M	.157
18...	<.10	<.011	<.04	<.008	--	--	--	M	.025
18...	<.10	<.011	<.06	<.008	--	--	--	M	.022
19...	<.10	<.011	<.06	<.008	--	--	--	M	.017
19...	<.10	<.011	<.06	<.008	--	--	--	M	.036
JAN									
08...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.01	.022
24...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.01	.014
FEB									
06...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.01	.010
19...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.01	.075
MAR									
11...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.01	.126
27...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.01	.036
APR									
08...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.01	.021
29...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.01	e.002
MAY									
13...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.01	.006
28...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.01	e.004
JUN									
10...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.01	.007
24...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.01	e.004
JUL									
09...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.01	e.005
23...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.01	e.005
AUG									
06...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.04	e.005
SEP									
03...	<.10	<.011	<.06	<.008	<.005	--	<.006	<.01	.006

< Actual value is known to be less than value shown.
M Presence of material verified, but not quantified.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Propet amphos, water, fltrd, ug/L (61604)	Propham water fltrd 0.7u GF ug/L (49236)	Propi-cona-zole, water, fltrd, ug/L (50471)	Pro-poxur, water, fltrd 0.7u GF ug/L (38538)	Siduron water, fltrd, ug/L (38548)	Sima-zine, water, fltrd, ug/L (04035)
OCT										
16...	<.020	<.010	<.011	<.02	<.004	--	--	--	--	<.010
NOV										
08...	<.004	<.010	<.011	<.02	--	<.010	<.02	<.008	<.02	.013
DEC										
11...	<.004	<.010	<.011	<.02	<.004	--	--	--	--	.012
17...	e.003	--	--	--	--	--	--	--	--	.179
18...	<.004	--	--	--	--	--	--	--	--	.087
18...	<.004	--	--	--	--	--	--	--	--	.474
19...	<.004	--	--	--	--	--	--	--	--	.842
19...	<.004	--	--	--	--	--	--	--	--	.693
JAN										
08...	<.004	<.010	<.011	<.02	<.004	--	--	--	--	.062
24...	<.004	<.010	<.011	<.02	<.004	--	--	--	--	.034
FEB										
06...	<.004	<.010	<.011	<.02	<.004	--	--	--	--	.021
19...	<.004	<.010	<.011	<.02	<.004	--	--	--	--	.086
MAR										
11...	<.004	<.010	<.011	<.02	<.004	--	--	--	--	.047
27...	<.004	<.010	<.011	<.02	<.004	--	--	--	--	.034
APR										
08...	<.004	<.010	<.011	<.02	<.004	--	--	--	--	.019
29...	<.004	<.010	<.011	<.02	<.004	--	--	--	--	.020
MAY										
13...	<.004	<.010	<.011	<.02	<.004	--	--	--	--	.010
28...	<.004	<.010	<.011	<.02	<.004	--	--	--	--	.011
JUN										
10...	<.004	<.010	<.011	<.02	<.004	--	--	--	--	.009
24...	<.004	<.010	<.011	<.02	<.004	--	--	--	--	e.007
JUL										
09...	<.004	<.010	<.011	<.02	<.004	--	--	--	--	.008
23...	<.004	<.010	<.011	e.02	<.004	--	--	--	--	.013
AUG										
06...	<.004	<.010	<.011	<.02	<.004	--	--	--	--	.014
SEP										
03...	.005	<.010	<.011	<.02	<.004	--	--	--	--	.007

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sulfo-met-ruron, water, fltrd, ug/L (50337)	Sulfo-tepp, water, fltrd, ug/L (61605)	Sulpro-fos, water, fltrd, ug/L (38716)	Tebu-pirim-phos oxon, water, fltrd, ug/L (61669)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Teflu-thrin metab-olite R119365 wat flt ug/L (61671)	Teflu-thrin metab-olite R152913 wat flt ug/L (61672)	Teflu-thrin, water, fltrd, ug/L (61606)	Teme-phos, water, fltrd, ug/L (61607)
OCT									
16...	--	<.003	<.02	<.006	--	<.02	<.01	<.008	<.3
NOV									
08...	<.009	--	--	--	<.02	--	--	--	--
DEC									
11...	--	<.003	<.02	<.006	<.02	<.02	<.01	<.008	<.3
17...	--	--	--	--	<.02	--	--	--	--
18...	--	--	--	--	<.02	--	--	--	--
18...	--	--	--	--	<.02	--	--	--	--
19...	--	--	--	--	<.02	--	--	--	--
19...	--	--	--	--	<.02	--	--	--	--
JAN									
08...	--	<.003	<.02	<.006	<.02	<.02	<.01	<.008	<.3
24...	--	<.003	<.02	<.006	<.02	<.02	<.01	<.008	<.3
FEB									
06...	--	<.003	<.02	<.006	<.02	<.02	<.01	<.008	<.3
19...	--	<.003	<.02	<.006	<.02	<.02	<.01	<.008	<.3
MAR									
11...	--	<.003	<.02	<.006	<.02	<.02	<.01	<.008	<.4
27...	--	<.003	<.02	<.006	<.02	<.02	<.01	<.008	<.3
APR									
08...	--	<.003	<.02	<.006	<.02	--	--	<.008	<.3
29...	--	<.003	<.02	<.006	<.02	--	--	<.008	<.3
MAY									
13...	--	<.003	<.02	<.006	<.02	--	--	<.008	<.3
28...	--	<.003	<.02	<.006	<.02	--	--	<.008	<.3
JUN									
10...	--	<.003	<.02	<.006	<.02	--	--	<.008	<.3
24...	--	<.003	<.02	<.006	<.02	--	--	<.008	<.3
JUL									
09...	--	<.003	<.02	<.006	<.02	--	--	<.008	--
23...	--	<.003	<.02	<.006	<.02	--	--	<.008	<.3
AUG									
06...	--	<.003	<.02	<.006	<.02	--	--	<.008	<.3
SEP									
03...	--	<.003	<.02	<.006	<.02	--	--	<.008	<.3

< Actual value is known to be less than value shown.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbacil, water, fltrd, ug/L (04032)	Terbufos oxon sulfone water, fltrd, ug/L (61674)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Terbuthylazine, water, fltrd, ug/L (04022)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	trans-Propiconazole, water, fltrd, ug/L (79847)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Tribuphos, water, fltrd, ug/L (61610)
OCT									
16...	<.034	--	<.07	<.02	<.01	<.005	e.01	<.002	<.004
NOV									
08...	<.034	<.010	--	<.02	--	<.005	--	<.002	--
DEC									
11...	<.034	--	<.07	<.02	<.01	<.005	<.01	<.002	<.004
17...	--	--	<.07	<.02	<.01	--	--	--	--
18...	--	--	<.07	<.02	<.01	--	--	--	--
18...	--	--	<.07	<.02	<.01	--	--	--	--
19...	--	--	<.07	<.02	<.01	--	--	--	--
19...	--	--	<.07	<.02	<.01	--	--	--	--
JAN									
08...	<.034	--	<.07	<.02	<.01	<.005	<.01	<.002	<.004
24...	<.034	--	<.07	<.02	<.01	<.005	<.01	<.002	<.004
FEB									
06...	<.034	--	<.07	<.02	<.01	<.005	<.01	<.002	<.004
19...	<.034	--	<.07	<.02	<.01	<.005	<.01	<.002	<.004
MAR									
11...	<.034	--	<.07	<.02	<.01	<.005	<.01	<.002	<.004
27...	<.034	--	<.07	<.02	<.01	<.005	<.01	<.002	<.004
APR									
08...	<.034	--	<.07	<.02	<.01	<.005	<.01	<.002	<.004
29...	<.034	--	<.07	<.02	<.01	<.005	<.01	<.002	<.004
MAY									
13...	<.034	--	<.07	<.02	<.01	<.005	<.01	<.002	<.004
28...	<.034	--	<.07	<.02	<.01	.005	<.01	<.002	<.004
JUN									
10...	<.034	--	<.07	<.02	<.01	e.004	<.01	<.002	<.004
24...	<.034	--	<.07	<.02	<.01	<.005	<.01	<.002	<.004
JUL									
09...	<.034	--	<.07	<.02	<.01	<.005	<.01	<.002	<.004
23...	<.034	--	<.07	<.02	<.01	<.005	<.01	<.002	<.004
AUG									
06...	<.034	--	<.07	<.02	<.01	<.005	<.01	<.002	<.004
SEP									
03...	<.034	--	<.07	<.02	<.01	<.005	<.01	<.002	<.004

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Tri-clopyr, water, fltrd 0.7u GF ug/L (49235)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)	z-Di-metho-morph, water, fltrd, ug/L (79845)	Di-chlor-vos, water fltrd, ug/L (38775)
OCT				
16...	--	<.009	<.05	<.01
NOV				
08...	<.02	e.002	--	--
DEC				
11...	--	e.001	<.05	<.01
17...	--	e.006	--	<.01
18...	--	e.006	--	<.01
18...	--	e.005	--	<.01
19...	--	e.005	--	<.01
19...	--	e.005	--	<.01
JAN				
08...	--	<.009	<.05	<.01
24...	--	<.009	<.05	<.01
FEB				
06...	--	<.009	<.05	<.01
19...	--	<.009	<.05	<.01
MAR				
11...	--	.011	<.05	<.01
27...	--	e.004	<.05	<.01
APR				
08...	--	<.009	<.05	<.01
29...	--	e.009	<.05	<.01
MAY				
13...	--	e.007	<.05	<.01
28...	--	e.009	<.05	<.01
JUN				
10...	--	.009	<.05	<.01
24...	--	e.003	<.05	<.01
JUL				
09...	--	e.004	<.05	<.01
23...	--	e.007	<.05	<.01
AUG				
06...	--	e.002	<.05	<.01
SEP				
03...	--	<.009	<.05	<.01

< Actual value is known to be less than value shown.
e Estimated.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	688	623	619	580	878	858	949	924	1190	1160	---	---
2	658	613	630	595	907	869	946	865	1200	1050	---	---
3	684	569	650	605	928	895	883	865	1090	1060	---	---
4	673	583	654	620	918	896	913	880	1100	1040	---	---
5	704	612	670	621	---	---	970	908	1110	1010	---	---
6	718	638	713	656	914	875	1000	957	1060	987	---	---
7	736	633	718	698	---	---	1080	998	1010	978	---	---
8	739	620	720	649	926	890	1110	1080	1020	972	---	---
9	708	614	662	589	916	885	1140	1110	1050	1000	---	---
10	655	569	670	585	---	---	1150	1130	1050	1000	---	---
11	645	566	641	612	---	---	1130	1080	1050	1020	---	---
12	619	566	697	638	929	---	1120	1060	1050	1020	---	---
13	631	557	749	697	939	923	1060	1010	1040	978	---	---
14	643	600	764	742	945	823	1010	910	988	960	---	---
15	667	598	774	748	943	---	958	897	1040	982	---	---
16	661	592	785	750	865	---	1030	955	1040	1000	---	---
17	711	613	803	769	853	735	1090	1030	1010	970	---	---
18	715	524	820	782	768	578	1070	1040	998	962	---	---
19	524	432	814	783	698	657	1090	1070	---	---	---	---
20	435	404	835	804	758	646	1110	1080	---	---	---	---
21	421	401	830	813	667	607	1130	1100	---	---	---	---
22	427	401	844	822	662	635	1170	1130	---	---	---	---
23	408	384	855	819	696	659	1170	1140	---	---	---	---
24	388	369	859	830	745	692	1180	1150	---	---	---	---
25	384	365	847	825	803	745	1200	1170	---	---	---	---
26	384	358	884	833	864	803	1200	1170	---	---	---	---
27	435	380	903	851	902	864	1220	1180	---	---	---	---
28	470	435	903	872	921	888	1230	1130	---	---	---	---
29	524	470	902	871	931	903	1130	1040	---	---	---	---
30	572	524	895	858	969	911	1120	1050	---	---	---	---
31	584	559	---	---	969	927	1190	1120	---	---	---	---
MONTH	739	358	903	580	---	---	1230	865	---	---	---	---

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	501	482	585	469	500	454	664	628	701	652
2	---	---	497	489	582	553	568	500	663	631	701	650
3	893	851	500	480	600	565	611	568	655	590	712	634
4	915	850	500	482	584	538	607	576	637	611	718	646
5	902	844	498	478	567	532	632	594	617	584	734	639
6	904	843	485	405	554	520	594	556	634	596	750	675
7	941	871	407	389	521	461	646	585	650	605	737	656
8	945	884	410	389	524	493	672	633	626	580	706	607
9	906	830	409	384	503	482	674	614	652	590	837	706
10	861	819	419	402	531	480	707	659	662	589	770	657
11	851	806	418	392	529	472	713	671	626	554	760	697
12	855	807	395	379	538	482	731	648	617	541	739	665
13	828	721	408	385	493	476	668	585	623	518	709	590
14	721	590	469	407	493	438	651	609	650	546	649	592
15	594	479	512	469	488	428	718	639	614	518	684	609
16	489	449	552	512	484	455	710	669	625	514	643	603
17	479	455	615	552	518	484	725	691	601	493	684	602
18	484	467	630	569	502	488	716	675	542	442	664	612
19	495	472	605	537	494	459	825	716	622	505	696	645
20	488	454	624	592	512	479	901	825	694	622	730	683
21	469	447	628	603	502	472	954	899	695	616	732	668
22	453	432	626	581	486	467	950	804	697	628	691	601
23	453	429	588	550	503	439	804	649	692	607	640	564
24	493	453	594	527	491	443	805	607	692	617	630	569
25	499	472	576	530	478	454	607	555	687	627	643	568
26	499	475	591	553	488	469	643	605	775	648	610	572
27	496	482	604	555	490	444	613	526	734	655	620	573
28	504	486	609	562	474	452	612	580	707	624	633	584
29	496	485	562	519	472	445	587	565	684	597	628	588
30	501	483	519	478	499	434	636	566	711	642	631	582
31	---	---	500	476	---	---	635	593	680	624	---	---
MONTH	---	---	630	379	600	428	954	454	775	442	837	564

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.0	17.5	14.0	12.5	12.0	10.5	10.5	10.0	14.0	12.5	14.5	13.0
2	18.5	15.5	13.5	12.0	12.5	11.0	10.5	10.0	13.0	11.5	15.0	13.0
3	18.5	15.5	14.0	12.0	12.5	11.0	11.0	10.0	12.5	11.0	14.5	13.0
4	19.5	16.5	13.5	12.0	12.5	11.0	11.5	10.5	12.5	10.5	---	---
5	20.5	17.5	14.0	12.5	12.0	11.0	12.0	10.5	11.5	10.0	---	---
6	21.5	18.5	14.0	12.5	11.5	11.0	12.0	11.0	11.0	9.5	---	---
7	22.0	19.0	14.0	13.5	12.0	11.0	11.5	11.0	11.0	9.5	---	---
8	22.5	19.5	15.5	14.0	12.0	11.0	11.0	10.5	11.0	9.5	---	---
9	22.0	19.5	16.0	15.0	11.5	11.0	11.0	10.5	11.0	9.5	---	---
10	20.5	19.0	15.5	15.0	11.5	10.5	11.5	10.5	11.5	9.5	---	---
11	20.0	17.5	16.0	14.5	11.5	10.5	12.0	11.5	11.5	10.5	---	---
12	19.5	17.5	15.5	14.5	11.5	11.0	12.5	12.0	11.5	10.5	---	---
13	19.5	17.0	16.0	14.5	11.5	11.0	13.0	12.0	13.0	11.5	---	---
14	20.0	17.5	15.5	14.5	12.5	11.5	12.5	12.0	14.0	12.5	---	---
15	19.5	17.5	15.0	14.0	12.0	12.0	13.0	12.0	14.0	13.5	---	---
16	19.0	17.0	14.5	13.5	13.0	12.0	12.5	11.5	14.5	13.5	---	---
17	19.0	16.5	14.5	13.5	12.5	12.0	12.0	11.0	14.0	13.0	---	---
18	18.0	16.5	14.5	13.0	12.0	11.0	11.5	11.0	14.0	12.0	---	---
19	18.0	16.5	14.0	12.5	11.0	9.5	11.0	10.5	13.0	12.0	---	---
20	18.0	16.5	14.0	13.0	10.0	9.5	10.5	10.5	13.0	11.0	---	---
21	18.0	16.5	14.0	13.0	10.5	9.5	10.5	10.5	13.5	11.5	---	---
22	18.0	16.5	14.5	13.0	10.0	9.5	11.5	10.5	14.0	12.0	---	---
23	17.0	16.0	14.0	13.0	9.5	9.0	12.5	11.0	14.0	12.5	---	---
24	16.0	15.0	14.0	13.5	9.0	8.5	13.0	12.5	14.0	13.0	---	---
25	16.0	15.0	14.0	13.0	8.5	8.5	13.0	12.5	14.5	13.0	---	---
26	16.0	14.5	13.5	12.0	9.0	8.5	13.0	12.5	14.5	13.0	---	---
27	16.0	15.0	13.0	11.5	10.0	9.0	13.5	12.5	15.0	13.0	---	---
28	16.0	14.5	12.5	11.0	11.0	10.0	14.0	12.5	14.5	13.0	---	---
29	16.0	14.5	12.0	11.0	11.0	10.5	13.5	12.5	---	---	---	---
30	15.5	14.5	11.5	11.0	11.0	10.0	13.0	12.5	---	---	---	---
31	15.0	13.5	---	---	10.5	10.0	13.0	12.5	---	---	---	---
MONTH	22.5	13.5	16.0	11.0	13.0	8.5	14.0	10.0	15.0	9.5	---	---

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	17.0	15.5	23.5	20.5	23.0	20.5	27.0	24.0	26.5	23.0
2	---	---	16.5	16.0	24.0	21.0	24.5	21.0	25.5	24.0	26.5	23.5
3	16.0	14.5	16.5	15.5	24.5	21.5	25.5	22.0	26.0	23.0	27.0	24.5
4	16.5	15.0	15.5	15.0	24.5	22.0	25.5	22.0	26.0	23.5	27.0	24.0
5	16.5	14.0	17.0	15.0	24.0	21.5	25.5	22.5	26.0	23.0	26.0	23.5
6	16.0	14.5	18.0	16.0	23.5	21.0	25.0	22.0	26.0	23.0	25.0	22.5
7	17.5	14.5	18.0	16.5	23.0	20.5	25.0	22.5	25.5	22.5	24.0	21.5
8	19.0	16.0	18.0	16.5	23.0	20.5	25.0	21.5	25.5	22.0	23.5	21.5
9	19.5	17.0	18.0	15.5	23.0	20.5	26.0	22.0	26.0	22.5	23.0	21.0
10	19.0	17.5	18.5	16.0	23.0	20.5	26.5	23.0	25.5	22.5	23.5	20.5
11	19.0	17.0	19.0	16.5	22.5	20.0	27.0	23.0	25.5	22.5	24.5	21.0
12	18.0	16.5	20.0	17.5	22.0	19.5	27.0	23.5	26.0	22.5	25.0	22.0
13	17.5	16.0	21.0	18.5	21.5	19.0	27.0	23.5	26.0	22.5	24.5	22.0
14	17.5	15.5	21.0	19.0	21.5	19.0	27.5	23.5	26.0	23.0	25.0	22.0
15	16.5	15.5	21.0	18.5	22.0	19.5	28.0	24.5	26.0	22.5	24.5	22.0
16	16.0	15.0	20.5	18.5	23.0	20.0	28.0	24.0	26.0	22.5	23.5	21.5
17	16.0	15.0	20.5	18.0	23.5	21.0	28.5	24.5	26.5	23.0	22.5	20.0
18	16.5	14.5	19.5	17.5	22.5	21.0	29.0	25.5	26.5	23.5	22.5	19.5
19	17.0	15.0	19.5	17.0	22.0	19.5	29.0	25.5	27.0	23.5	23.5	20.0
20	17.0	15.5	21.0	18.0	22.0	19.5	30.0	26.5	27.0	23.5	23.5	20.5
21	16.0	15.0	22.5	19.0	22.0	19.5	30.0	26.5	25.5	24.0	24.5	21.0
22	16.0	14.0	24.0	20.5	22.0	19.5	29.5	26.0	25.0	23.0	25.0	22.0
23	16.5	14.5	25.0	22.0	22.0	19.5	28.0	26.0	25.5	22.0	25.0	22.0
24	16.0	15.5	24.0	22.5	21.5	19.0	28.5	24.5	26.5	23.0	24.0	22.0
25	15.5	14.5	23.0	21.0	23.0	20.0	28.5	25.0	27.0	24.0	23.5	21.0
26	16.0	14.0	23.0	20.5	24.0	21.0	28.5	24.5	28.0	25.0	23.5	20.5
27	17.0	14.5	24.0	20.5	24.0	21.5	28.5	25.0	26.5	24.0	23.5	20.5
28	17.0	16.0	25.0	22.0	24.0	21.5	28.5	25.0	25.5	23.0	23.0	20.5
29	16.5	15.5	25.0	22.5	23.5	21.0	28.5	25.5	25.0	22.0	23.0	20.5
30	16.5	14.5	23.0	21.0	23.0	21.0	28.0	25.5	25.0	22.0	23.0	20.5
31	---	---	23.0	20.5	---	---	27.0	25.0	25.5	22.5	---	---
MONTH	---	---	25.0	15.0	24.5	19.0	30.0	20.5	28.0	22.0	27.0	19.5

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
OCT						
08...	1225	1280	21.0	79	50	173
16...SS	1020	1460	17.0	98	32	126
NOV						
06...	1230	1690	13.5	90	43	196
08...SS	1130	1850	14.5	96	47	235
DEC						
04...	1230	1440	12.0	90	30	117
11...SS	1140	1480	11.0	88	34	136
17...SS	1720	2200	12.5	93	150	891
18...SS	0700	2500	--	95	263	1780
18...SS	1600	2540	--	92	145	994
19...SS	0830	2460	--	89	168	1120
19...SS	1400	2430	--	81	172	1130
JAN						
02...	1240	2320	10.5	78	57	357
08...SS	1230	1900	10.5	94	34	174
24...SS	1050	1680	12.5	89	34	154
FEB						
05...	1215	1770	10.5	86	34	162
06...SS	1420	1790	11.0	83	27	130
19...SS	1130	1920	12.5	87	34	176
MAR						
04...	1250	2140	14.0	84	68	393
11...SS	1240	2200	17.0	93	54	321
27...SS	1300	2000	17.0	86	52	281
APR						
02...	1330	2020	16.0	82	61	333
08...SS	1300	1980	17.5	88	37	198
29...SS	1300	3430	16.0	64	38	352
MAY						
07...	1315	3220	17.5	76	77	669
13...SS	1330	3200	20.0	89	45	389
28...SS	1100	1840	22.5	81	49	243
JUN						
04...	1405	1830	24.0	81	51	252
10...SS	1400	2110	22.0	67	16	91
24...SS	1220	2050	20.0	82	32	177
JUL						
02...	1230	1770	23.0	84	53	253
09...SS	1330	1330	24.0	74	46	165
23...SS	1210	1140	26.0	89	67	206
AUG						
06...SS	1400	1360	25.0	91	39	143
07...	1230	1280	24.0	90	70	242
SEP						
03...SS	1130	1230	26.5	86	63	209
03...	1230	1240	25.5	84	54	181

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Bed sediment, dry svd sve dia percent <.25mm (80166)	Bed sediment, dry svd sve dia percent <.5 mm (80167)	Bed sediment, dry svd sve dia percent <1 mm (80168)	Bed sediment, dry svd sve dia percent <2 mm (80169)	Bed sediment, dry svd sve dia percent <4 mm (80170)	Bed sediment, dry svd sve dia percent <8 mm (80171)	Number of sampling points, count (00063)
NOV										
06...	1305	1690	13.5	2	34	84	100	--	--	1
06...	1310	1690	13.5	2	38	90	99	100	--	1
06...	1315	1690	13.5	4	50	97	100	--	--	1
06...	1320	1690	13.5	7	48	91	99	100	--	1
06...	1325	1690	13.5	2	32	83	98	100	--	1
MAR										
04...	1325	2140	14.0	2	40	90	99	100	--	1
04...	1330	2140	14.0	3	40	90	99	100	--	1
04...	1335	2140	14.0	9	61	94	98	99	100	1
04...	1340	2140	14.0	6	39	84	99	100	--	1
04...	1345	2140	14.0	4	44	95	100	--	--	1

SS Suspended-sediment data determined from a sample collected and processed according to National Water-Quality Assessment (NAWQA) protocol.

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
		OCTOBER			NOVEMBER			DECEMBER	
1	1330	39	138	1790	42	205	1460	32	124
2	1250	30	100	1720	40	184	1450	30	116
3	1250	33	113	1720	40	185	1440	26	102
4	1320	38	136	1680	41	187	1440	29	114
5	1340	41	149	1700	44	202	1440	31	121
6	1310	51	181	1700	43	198	1460	31	123
7	1310	51	182	1740	58	271	1460	32	126
8	1280	45	156	1860	112	572	1450	32	125
9	1290	50	173	2150	154	895	1470	33	131
10	1250	45	153	2060	124	690	1480	37	146
11	1250	42	141	1990	91	490	1480	41	162
12	1320	42	150	1940	95	500	1460	48	188
13	1430	47	181	1880	97	493	1480	38	152
14	1480	48	193	1830	71	352	1600	48	207
15	1440	48	186	1810	64	312	1680	73	330
16	1420	48	184	1760	60	283	1740	171	812
17	1350	44	160	1720	57	265	2090	309	1760
18	1570	55	235	1700	49	223	2500	300	2020
19	1840	69	345	1670	45	202	2470	219	1460
20	1990	80	430	1650	43	194	2690	333	2430
21	2060	91	505	1650	45	202	2940	257	2030
22	2050	86	477	1630	47	206	3010	212	1730
23	2250	80	485	1590	45	193	2880	176	1370
24	2410	72	471	1560	40	170	2740	162	1200
25	2560	72	498	1550	41	170	2610	150	1060
26	2590	71	496	1520	35	146	2460	139	921
27	2510	64	432	1490	29	115	2340	125	792
28	2330	54	340	1460	26	103	2250	73	442
29	2190	50	299	1460	33	129	2220	70	417
30	2010	52	284	1460	35	138	2220	66	396
31	1870	47	237	---	---	---	2230	66	399
TOTAL	52850	---	8210	51440	---	8475	61640	---	21506
		JANUARY			FEBRUARY			MARCH	
1	2260	59	362	1740	41	192	2020	55	300
2	2320	55	347	1750	39	182	2050	58	321
3	2280	55	338	1770	39	185	2120	62	352
4	2200	54	319	1770	36	173	2130	65	372
5	2140	61	350	1780	36	175	2050	60	331
6	2080	53	299	1800	33	162	2070	61	342
7	1990	53	283	1810	30	148	2130	71	409
8	1910	43	224	1820	29	143	2210	80	477
9	1830	37	182	1820	31	153	2240	71	430
10	1810	38	187	1820	30	146	2260	64	390
11	1840	46	227	1820	30	148	2200	71	419
12	1890	58	301	1830	29	144	2200	71	419
13	2040	74	408	1880	36	183	2280	75	461
14	2040	70	386	1870	41	209	2270	76	464
15	2020	64	350	1850	46	229	2470	77	513
16	1950	57	300	1880	43	220	2620	85	598
17	1910	45	232	1910	44	226	2540	71	485
18	1860	40	198	1900	43	223	2500	66	444
19	1810	43	211	1920	42	215	2420	64	415
20	1780	43	205	1940	44	229	2320	62	386
21	1740	39	183	1970	47	248	2230	61	368
22	1710	36	166	1960	49	262	2180	62	366
23	1690	39	177	1940	49	254	2200	58	346
24	1680	43	196	1950	53	279	2180	65	381
25	1670	48	218	2000	63	338	2100	63	357
26	1660	49	220	2030	65	357	2060	62	347
27	1660	48	216	2050	66	366	2010	62	338
28	1700	47	216	2030	58	319	1980	62	332
29	1970	55	291	---	---	---	1980	59	315
30	2020	56	305	---	---	---	1970	60	318
31	1840	48	240	---	---	---	2000	67	361
TOTAL	59300	---	8137	52610	---	6108	67990	---	12157

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
	APRIL			MAY			JUNE		
1	1950	67	351	3280	48	422	2000	49	264
2	2010	60	326	3260	56	492	1980	53	281
3	2050	55	304	3330	43	391	1920	49	255
4	2030	55	299	3490	52	490	1840	53	263
5	2080	50	280	3460	66	619	1870	57	286
6	2010	48	260	3320	67	605	1920	60	310
7	2050	49	269	3210	73	635	2070	61	340
8	1970	47	251	3240	78	687	2150	64	373
9	1920	51	264	3290	74	654	2200	63	373
10	1850	46	232	3270	71	626	2130	57	331
11	1880	48	242	3370	65	590	2080	52	294
12	1970	53	283	3360	65	588	1990	55	294
13	2260	60	364	3190	62	536	1980	54	288
14	2600	75	529	2830	62	474	2010	67	365
15	2840	87	664	2600	61	430	2150	52	303
16	3000	88	710	2430	59	387	2200	49	291
17	3090	79	655	2270	58	353	2150	45	259
18	3160	77	658	2210	54	323	2120	48	274
19	3180	78	671	2290	47	292	2030	45	247
20	3350	84	757	2160	46	270	1970	43	227
21	3470	89	839	2020	45	247	1960	41	215
22	3390	75	684	2010	46	250	2000	43	234
23	3300	75	668	1960	58	305	2020	47	256
24	3050	71	584	1940	69	360	2020	49	266
25	3070	64	526	1950	67	353	1990	54	289
26	3200	50	433	2020	66	360	1980	54	292
27	3240	48	421	1900	66	342	2040	51	279
28	3320	57	509	1810	62	304	2050	51	285
29	3420	56	518	1890	56	285	2090	51	287
30	3320	49	438	2000	59	317	2100	53	299
31	---	---	---	2020	50	274	---	---	---
TOTAL	80030	---	13989	81380	---	13261	61010	---	8620
	JULY			AUGUST			SEPTEMBER		
1	2090	53	296	1240	73	243	1330	65	234
2	1780	53	257	1270	64	220	1310	59	209
3	1500	61	248	1410	75	284	1230	58	192
4	1450	59	231	1480	72	286	1190	65	210
5	1480	64	257	1430	69	267	1180	62	198
6	1500	64	258	1350	69	252	1240	54	181
7	1530	61	252	1270	67	229	1330	66	236
8	1440	54	211	1300	55	195	1400	67	252
9	1340	61	221	1290	55	192	1310	66	232
10	1270	71	243	1330	52	187	1230	63	209
11	1210	80	262	1360	50	185	1260	60	206
12	1240	82	274	1310	49	173	1260	61	207
13	1270	72	248	1220	42	139	1280	62	213
14	1270	69	236	1190	33	108	1310	61	216
15	1180	89	283	1130	34	103	1450	62	242
16	1160	83	260	1140	31	96	1380	55	206
17	1180	82	261	1230	37	123	1250	54	183
18	1190	85	273	1310	50	178	1220	53	175
19	1250	90	304	1220	46	153	1270	49	169
20	1210	83	271	1160	42	132	1250	46	156
21	1210	73	239	1140	50	154	1330	47	167
22	1190	74	236	1210	46	149	1330	48	172
23	1130	77	234	1280	49	170	1280	46	161
24	1160	70	220	1390	44	167	1300	51	180
25	1190	69	222	1440	64	250	1290	54	190
26	1170	70	222	1340	74	269	1360	54	197
27	1290	70	245	1260	79	269	1420	62	239
28	1290	69	239	1220	76	251	1390	58	217
29	1310	71	250	1260	76	258	1450	59	232
30	1250	76	255	1240	67	224	1420	61	231
31	1210	74	244	1280	65	227	---	---	---
TOTAL	40940	---	7752	39700	---	6133	39250	---	6112
YEAR	688140		120460						

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	TIME	Depth at sample location, feet (81903)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR					
02...*	1532	4.50	933	16.7	13.0
02...*	1536	9.70	920	16.6	40.0
02...*	1538	8.20	873	16.5	67.0
02...*	1541	6.90	862	16.4	94.0
02...*	1543	5.80	873	16.4	121
02...*	1550	1.80	877	16.5	148
02...*	1552	4.10	884	16.5	175
02...*	1553	2.90	882	16.5	202
02...*	1555	2.30	879	16.5	229
02...*	1556	1.50	869	16.5	256
AUG					
20...*	1321	3.50	663	25.4	13.0
20...*	1324	9.00	666	25.4	38.0
20...*	1326	8.50	659	25.4	63.0
20...*	1328	6.50	670	25.5	88.0
20...*	1332	5.00	684	25.6	113
20...*	1339	1.50	688	25.8	138
20...*	1341	2.50	689	25.8	163
20...*	1343	1.50	693	25.9	188
20...*	1344	1.30	696	26.0	213
20...*	1345	1.50	698	26.1	238

* Instantaneous discharge at time of cross-sectional measurement: Apr. 2, 2,050 ft^3/s; Aug. 20, 1,180 ft^3/s.

11313000 DELTA–MENDOTA CANAL AT TRACY PUMPING PLANT, NEAR TRACY, CA

LOCATION.—Lat 37° 47'49", long 121° 35'03", in SW 1/4 SW 1/4 sec.31, T.1 S., R.4 E., Alameda County, Hydrologic Unit 18040003, at Tracy Pumping Plant at intake to canal, 6 mi southeast of Byron, and 10 mi northwest of Tracy.

PERIOD OF RECORD.—June 1951 to current year. Prior to October 1959, published as "near Tracy."

GAGE.—Water-stage recorder on forebay, pressure gages on pump discharge lines, and operating time of pumps. Datum of gage is NGVD of 1929 (levels by U.S. Bureau of Reclamation).

REMARKS.—Discharge computed from records of operation of pumps. Water is diverted from Sacramento–San Joaquin Delta by way of Old River and a dredged channel to the Tracy Pumping Plant where it is lifted 200 ft into canal. Water, less intermediate diversions, flows into Mendota Pool on San Joaquin River to replace water diverted at Friant Dam. The canal is a part of the Central Valley Project. See schematic diagram of Sacramento–San Joaquin Delta.

COOPERATION.—Records were provided by U.S. Bureau of Reclamation and are rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 4,940 ft^3/s, Aug. 11, 1969, Aug. 7, 1998; no flow for many days in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4330	2110	4290	4210	4310	4340	3640	854	4390	4340	4070	4200
2	4320	4370	4290	4210	4300	4290	3350	858	4390	4340	4220	4420
3	4310	4260	4280	4220	4290	4310	2910	857	4430	4330	4280	4400
4	4290	2080	4280	4200	4280	4320	2760	862	4450	4340	4300	4380
5	4310	1590	3660	4200	4280	4310	2710	858	4450	4380	4260	4380
6	4300	2370	3400	4200	4280	4300	2660	854	4510	4410	4260	4390
7	4280	4220	2900	4220	4260	4300	2740	857	4480	4400	4270	4390
8	4270	2870	2720	4250	4310	4300	2720	860	4440	4310	4270	3950
9	4430	1340	2720	4250	4280	4320	2750	855	4410	4220	4250	4060
10	4350	1060	2730	4210	4290	4280	2750	853	4410	4240	4260	4400
11	4220	3140	2720	4190	4310	4360	3210	854	4400	4280	4250	4380
12	4300	4340	2720	4250	4330	4420	3400	855	4390	4320	4240	4380
13	4250	4250	2720	4250	4340	4400	3410	732	4420	4340	4270	4380
14	4300	4270	3410	4260	3820	4340	3410	860	4360	4300	4250	4390
15	4290	4260	3710	4270	3600	4300	1610	859	4360	4350	4340	3440
16	4200	4250	3440	4260	4190	4290	858	859	4360	4340	4320	2810
17	4190	4270	3000	4270	4340	4350	859	860	4410	4350	4350	3480
18	4340	4270	3560	4270	4330	4370	860	861	4370	4400	4360	4390
19	4280	4020	3780	4280	4350	4350	858	1450	4450	4500	4340	4380
20	4250	4080	3800	4240	4290	4330	859	1690	4430	4420	4350	4390
21	4290	4450	3780	4260	4290	4330	859	1690	4420	4360	4390	4330
22	3770	4240	3800	4250	4300	4340	860	1690	4410	4380	4330	4500
23	4490	4240	3790	4250	4320	4340	857	1690	4370	4380	4370	4410
24	4290	4200	3800	4270	4340	4280	858	1690	4340	4350	4350	4400
25	4290	4230	3790	4310	4360	4440	856	1690	4400	4360	4370	4410
26	4300	4250	3790	4300	4360	4430	859	1690	4390	3780	4330	4420
27	4510	4200	2540	4300	4360	4430	853	1740	4400	3510	4380	4440
28	4220	4200	2040	4320	4340	4420	857	3100	4400	3530	4340	4490
29	2210	4250	2040	4310	---	4410	857	3620	4390	3500	4310	4500
30	2200	4280	2020	4310	---	4390	857	3890	4340	3440	4310	4490
31	2100	---	3630	4310	---	4350	---	4390	---	3450	4340	---
TOTAL	126480	109960	103150	131900	119450	134740	56897	45328	132170	129950	133330	127780
MEAN	4080	3665	3327	4255	4266	4346	1897	1462	4406	4192	4301	4259
MAX	4510	4450	4290	4320	4360	4440	3640	4390	4510	4500	4390	4500
MIN	2100	1060	2020	4190	3600	4280	853	732	4340	3440	4070	2810
AC-FT	250900	218100	204600	261600	236900	267300	112900	89910	262200	257800	264500	253500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

MEAN	2542	1979	1723	2040	2474	2678	2627	2459	2966	3734	3725	3008
MAX	4333	4239	4273	4271	4584	4563	4400	4540	4591	4740	4703	4591
(WY)	1996	1994	1996	1996	1976	1976	1976	1976	1973	1989	1989	1988
MIN	368	0.000	0.000	0.000	0.000	0.000	99.6	58.3	113	354	977	539
(WY)	1952	1973	1953	1952	1952	1952	1952	1952	1951	1977	1952	1952

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1951 - 2003	
ANNUAL TOTAL	1261731		1351135			
ANNUAL MEAN	3457		3702		2682	
HIGHEST ANNUAL MEAN					4144	1976
LOWEST ANNUAL MEAN					230	1952
HIGHEST DAILY MEAN	4510	Oct 27	4510	Oct 27	4940	Aug 11 1969
LOWEST DAILY MEAN	825	May 8	732	May 13	0.00	Jun 1 1951
ANNUAL SEVEN-DAY MINIMUM	826	May 4	838	May 7	0.00	Jun 1 1951
ANNUAL RUNOFF (AC-FT)	2503000		2680000		1943000	
10 PERCENT EXCEEDS	4360		4400		4410	
50 PERCENT EXCEEDS	4160		4280		3080	
90 PERCENT EXCEEDS	921		1530		212	

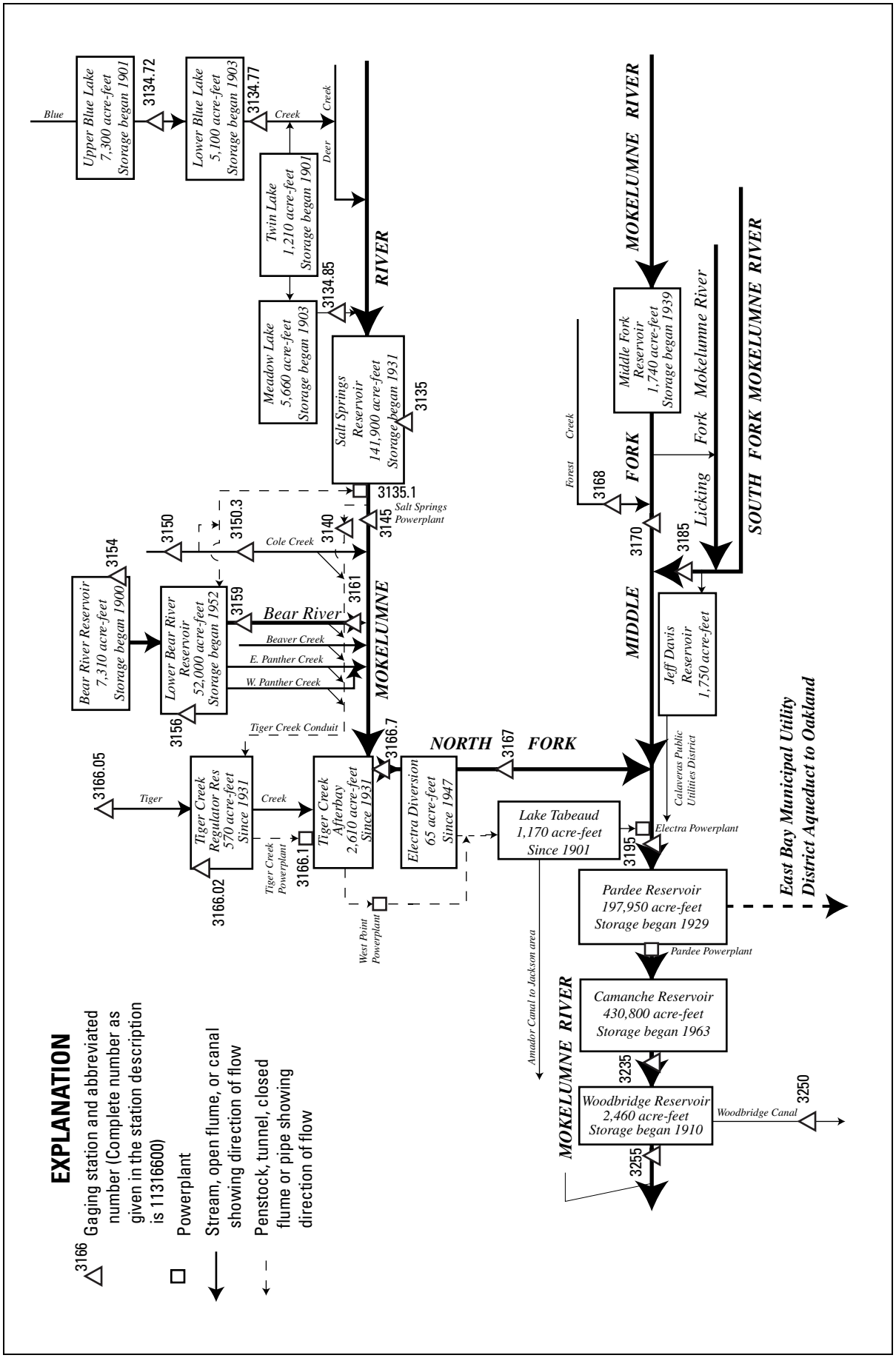


Figure 32. Diversions and storage in Mokelumne River Basin.

11313472 UPPER BLUE LAKE OUTLET NEAR MARKLEEVILLE, CA

LOCATION.—Lat 38° 37'35", long 119° 56'10", in NW 1/4 NW 1/4 sec.19, T.9 N., R.19 E., Alpine County, Hydrologic Unit 18040012, Eldorado National Forest, on left bank, 1,000 ft downstream from Upper Blue Lake Dam, and 9.8 mi southwest of Markleeville.

DRAINAGE AREA.—2.64 mi^2.

PERIOD OF RECORD.—October 1988 to current year. Unpublished records for water years 1981–88 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 8,100 ft above NGVD of 1929, from topographic map. Prior to October 1987, nonrecording gage at same site at different datum.

REMARKS.—Records not computed for winter months or above 9.9 ft^3/s. Low and medium flow regulated by Upper Blue Lake, capacity, 7,300 acre-ft, 1,000 ft upstream. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 137.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	2.6	2.7	---	---	---	---	---	---	6.0	6.5	6.3
2	2.8	2.5	2.7	---	---	---	---	---	---	5.9	6.6	6.2
3	2.8	2.5	2.7	---	---	---	---	---	---	5.7	6.5	6.2
4	2.7	2.5	2.7	---	---	---	---	---	---	5.7	6.5	5.6
5	2.7	2.9	2.7	---	---	---	---	---	---	5.6	6.4	5.5
6	2.7	2.7	2.7	---	---	---	---	---	---	5.6	6.4	5.4
7	2.6	2.7	2.7	---	---	---	---	---	---	5.6	6.4	5.4
8	2.6	3.0	2.7	---	---	---	---	---	---	5.5	6.4	5.4
9	2.6	2.9	2.7	---	---	---	---	---	---	5.4	6.4	5.4
10	2.6	2.9	2.7	---	---	---	---	---	---	5.3	6.2	5.5
11	2.6	2.9	2.7	---	---	---	---	---	---	5.3	6.0	5.6
12	2.6	2.9	---	---	---	---	---	---	---	5.3	5.8	5.7
13	2.6	2.9	---	---	---	---	---	---	---	5.3	5.7	5.7
14	2.6	2.9	---	---	---	---	---	---	---	5.7	5.5	5.7
15	2.6	2.8	---	---	---	---	---	---	---	6.2	5.4	5.7
16	2.6	2.8	---	---	---	---	---	---	---	6.2	5.4	5.7
17	2.6	2.8	---	---	---	---	---	---	5.9	6.2	5.3	5.7
18	2.6	2.8	---	---	---	---	---	---	5.9	6.1	5.2	5.7
19	2.6	2.8	---	---	---	---	---	---	5.9	6.1	5.4	5.6
20	2.6	2.8	---	---	---	---	---	6.5	5.9	6.2	5.8	5.7
21	2.6	2.8	---	---	---	---	---	6.8	5.9	6.1	5.7	5.6
22	2.6	2.9	---	---	---	---	---	7.2	5.9	6.2	5.7	5.6
23	2.6	2.9	---	---	---	---	---	7.3	5.7	6.2	5.7	5.6
24	2.6	2.8	---	---	---	---	---	7.6	5.9	6.2	5.7	5.6
25	2.6	2.8	---	---	---	---	---	7.7	6.1	6.2	6.1	5.6
26	2.6	2.8	---	---	---	---	---	7.9	6.2	6.2	6.4	5.6
27	2.6	2.8	---	---	---	---	---	8.4	6.2	6.2	6.3	5.6
28	2.9	2.8	---	---	---	---	---	---	6.3	6.4	6.3	5.6
29	3.1	2.8	---	---	---	---	---	---	6.1	6.5	6.3	5.6
30	3.3	2.7	---	---	---	---	---	---	6.0	6.4	6.3	5.6
31	2.8	---	---	---	---	---	---	---	---	6.6	6.3	---
TOTAL	83.3	83.7	---	---	---	---	---	---	---	184.1	186.6	169.7
MEAN	2.69	2.79	---	---	---	---	---	---	---	5.94	6.02	5.66
MAX	3.3	3.0	---	---	---	---	---	---	---	6.6	6.6	6.3
MIN	2.6	2.5	---	---	---	---	---	---	---	5.3	5.2	5.4
AC-FT	165	166	---	---	---	---	---	---	---	365	370	337

11313477 LOWER BLUE LAKE OUTLET NEAR MARKLEEVILLE, CA

LOCATION.—Lat 38° 36'24", long 119° 55'31", in SW 1/4 NE 1/4 sec.30, T.9 N., R.19 E., Alpine County, Hydrologic Unit 18040012, Eldorado National Forest, on left bank, 800 ft downstream from Lower Blue Lake Dam, and 10.0 mi southwest of Markleeville.

DRAINAGE AREA.—4.66 mi^2.

PERIOD OF RECORD.—October 1987 to current year. Unpublished records for water years 1981–87 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 7,870 ft above NGVD of 1929, from topographic map. Prior to October 1987, nonrecording gage at same site and datum.

REMARKS.—Records not computed for winter months or above 75 ft^3/s. Low and medium flow regulated by Lower Blue Lake (capacity, 5,100 acre-ft) 800 ft upstream. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 137.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	11	3.1	---	---	---	---	8.5	66	45	46	6.0
2	15	15	3.1	---	---	---	---	8.5	63	45	45	6.4
3	15	15	3.1	---	---	---	---	8.5	60	44	44	6.3
4	15	15	3.1	---	---	---	---	8.5	59	44	50	6.0
5	15	15	3.1	---	---	---	---	8.5	56	44	54	5.4
6	15	15	3.1	---	---	---	---	8.5	54	44	54	5.3
7	15	15	3.1	---	---	---	---	8.5	53	43	54	5.3
8	15	16	3.1	---	---	---	---	8.5	50	43	54	5.4
9	15	15	3.1	---	---	---	---	8.5	52	43	54	5.5
10	16	15	3.1	---	---	---	---	8.5	48	42	53	5.4
11	16	15	3.1	---	---	---	---	8.6	44	42	53	5.4
12	15	15	---	---	---	---	---	8.8	26	42	54	5.5
13	15	15	---	---	---	---	---	8.9	13	41	52	5.5
14	15	15	---	---	---	---	---	8.9	14	42	49	5.5
15	15	15	---	---	---	---	---	9.0	13	42	47	5.5
16	15	15	---	---	---	---	---	9.0	12	42	38	5.6
17	15	15	---	---	---	---	---	9.2	11	42	33	5.6
18	15	7.4	---	---	---	---	---	9.3	11	41	31	5.6
19	15	3.1	---	---	---	---	---	9.4	10	41	29	5.6
20	15	3.1	---	---	---	---	---	9.5	10	41	28	5.5
21	15	3.1	---	---	---	---	---	9.6	10	40	19	5.5
22	15	3.1	---	---	---	---	---	9.9	10	42	13	5.6
23	15	3.1	---	---	---	---	---	10	10	43	13	5.6
24	15	3.1	---	---	---	---	8.5	10	24	43	12	5.6
25	14	3.1	---	---	---	---	8.5	10	42	42	9.6	5.6
26	14	3.1	---	---	---	---	8.5	10	43	42	6.2	5.6
27	14	3.1	---	---	---	---	8.5	11	43	41	6.2	5.6
28	15	3.1	---	---	---	---	8.5	11	42	43	6.1	5.6
29	15	3.1	---	---	---	---	8.5	12	42	44	6.0	5.6
30	12	3.1	---	---	---	---	8.5	17	44	45	6.0	5.4
31	6.5	---	---	---	---	---	---	48	---	46	6.0	---
TOTAL	452.5	296.6	---	---	---	---	---	334.1	1035	1324	1025.1	168.0
MEAN	14.6	9.89	---	---	---	---	---	10.8	34.5	42.7	33.1	5.60
MAX	16	16	---	---	---	---	---	48	66	46	54	6.4
MIN	6.5	3.1	---	---	---	---	---	8.5	10	40	6.0	5.3
AC-FT	898	588	---	---	---	---	---	663	2050	2630	2030	333

11313485 MEADOW LAKE OUTLET NEAR MARKLEEVILLE, CA

LOCATION.—Lat 38° 35'53", long 119° 58'40", in SE 1/4 SE 1/4 sec.27, T.9 N., R.18 E., Alpine County, Hydrologic Unit 18040012, Eldorado National Forest, on right bank, 700 ft downstream from Meadow Lake Dam, and 12.5 mi southwest of Markleeville.

DRAINAGE AREA.—5.56 mi^2.

PERIOD OF RECORD.—October 1987 to current year. Unpublished records for water years 1981–87 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 7,660 ft above NGVD of 1929, from topographic map. Prior to October 1987, nonrecording gage at same site and datum.

REMARKS.—Records not computed for winter months or above 60 ft^3/s. Low and medium flow regulated by Meadow Lake, capacity, 5,660 acre-ft. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 137.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	10	12	---	---	---	---	32	40	57	51	4.8
2	19	10	11	---	---	---	---	33	---	56	50	4.7
3	18	15	11	---	---	---	---	33	---	54	50	22
4	18	15	8.8	---	---	---	---	30	---	54	49	13
5	18	15	4.3	---	---	---	---	29	---	54	48	5.7
6	18	15	4.3	---	---	---	---	28	---	53	53	3.7
7	18	15	4.3	---	---	---	---	24	---	52	56	2.9
8	18	16	4.3	---	---	---	---	16	---	51	56	2.5
9	18	15	4.3	---	---	---	---	16	---	52	56	2.2
10	18	15	4.3	---	---	---	---	16	---	51	55	3.0
11	17	14	4.3	---	---	---	---	14	---	53	55	3.8
12	17	14	---	---	---	---	---	13	---	50	54	3.5
13	17	14	---	---	---	---	---	12	---	51	54	3.9
14	17	14	---	---	---	---	---	9.8	---	49	52	4.2
15	17	14	---	---	---	---	---	9.4	---	49	52	4.0
16	17	14	---	---	---	---	---	8.9	---	54	52	2.9
17	17	14	---	---	---	---	---	8.5	---	58	51	1.8
18	16	13	---	---	---	---	---	8.3	---	56	50	1.8
19	16	13	---	---	---	---	---	8.6	---	56	52	1.7
20	16	13	---	---	---	---	---	9.9	---	55	53	1.7
21	16	13	---	---	---	---	---	11	---	56	52	1.7
22	16	13	---	---	---	---	---	13	---	56	51	1.7
23	15	13	---	---	---	---	---	15	---	56	49	1.8
24	15	13	---	---	---	---	---	17	---	54	48	1.8
25	15	13	---	---	---	---	---	16	50	53	46	1.8
26	15	12	---	---	---	---	---	15	44	52	44	1.8
27	15	12	---	---	---	---	32	14	49	52	42	1.8
28	14	12	---	---	---	---	33	17	51	51	20	1.9
29	14	12	---	---	---	---	33	25	54	50	4.8	1.9
30	13	12	---	---	---	---	32	30	56	52	4.8	2.0
31	13	---	---	---	---	---	---	36	---	51	4.7	---
TOTAL	510	403	---	---	---	---	---	568.4	---	1648	1415.3	112.0
MEAN	16.5	13.4	---	---	---	---	---	18.3	---	53.2	45.7	3.73
MAX	19	16	---	---	---	---	---	36	---	58	56	22
MIN	13	10	---	---	---	---	---	8.3	---	49	4.7	1.7
AC-FT	1010	799	---	---	---	---	---	1130	---	3270	2810	222

11313500 SALT SPRINGS RESERVOIR NEAR WEST POINT, CA

LOCATION.—Lat 38° 29'55", long 120° 12'52", in NW 1/4 SE 1/4 sec.33, T.8 N., R.16 E., Calaveras County, Hydrologic Unit 18040012, Eldorado National Forest, near center of Salt Springs Dam on North Fork Mokelumne River, 1.8 mi upstream from Cole Creek, and 18 mi northeast of West Point.

DRAINAGE AREA.—169 mi^2.

PERIOD OF RECORD.—March 1931 to current year. Prior to October 1964, records published as usable contents.

REVISED RECORDS.—WSP 1930: Drainage area, WDR CA-00-3: 1999 (month-end gage heights).

GAGE.—Water-stage recorder. Prior to Oct. 1, 1991, nonrecording gage read once daily. Datum of gage is NGVD of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.—Reservoir is formed by concrete-faced rockfill dam, completed in 1931; storage began in March 1931. Capacity, 141,857 acre-ft, between elevations 3,667.75 ft, outlet drain, and 3,958.0 ft, top of radial gates. Storage of 1,860 acre-ft available for release to river only. Water is released through Salt Springs Powerplant (station 11313510) just downstream from dam and discharged into Tiger Creek Powerplant Conduit (station 11314000). Figures given, including extremes, represent total contents. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 137. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 142,208 acre-ft, June 22, 1999, elevation, 3,958.36 ft; no contents at times in 1932–33, 1945, 1962.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 142,100 acre-ft, June 17, elevation, 3,958.28 ft; minimum, 8,490 acre-ft, Mar. 12, elevation, 3,744.90 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Based on table provided by Pacific Gas & Electric Co., dated October 1964)

3,700	1,251	3,720	3,519	3,740	7,324	3,800	28,017
3,705	1,679	3,725	4,324	3,750	9,799	3,850	54,852
3,710	2,199	3,730	5,229	3,760	12,690	3,900	90,786
3,715	2,812	3,735	6,230	3,780	19,632	3,960	143,788

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86000	67700	57400	47200	27300	13200	22900	50800	136000	141500	131600	119300
2	85000	67200	56900	46800	26600	12800	24300	51400	137800	141500	131300	118800
3	84500	66700	56300	46300	25800	12500	25200	52400	138800	141600	131000	118100
4	83900	66200	55800	45900	24900	12100	26000	53400	139300	141500	130600	117300
5	83400	65700	55200	45500	23900	11500	26900	54200	139000	141400	130300	116200
6	82700	65100	54500	45000	22900	11000	27700	54700	138700	141300	129900	115300
7	82100	64800	54000	44500	21900	10500	28200	55200	138400	141100	129600	114400
8	81500	66800	53400	44000	20900	10000	28900	55700	138100	141200	129300	113700
9	80900	67600	52900	43500	19900	9520	29700	55700	137900	140800	128900	113500
10	80300	67700	52200	43200	18900	9080	30600	55700	137500	140400	128600	113100
11	79700	67700	51600	42800	17900	8730	31700	55900	137900	139900	128300	112600
12	79200	67500	50900	42300	17200	8490	33100	56700	138700	139400	128000	112100
13	78500	67400	50500	41600	16700	8540	34500	58400	139700	138900	128000	111500
14	78000	67300	50600	40900	16400	8900	35600	60300	140600	138300	128200	110600
15	77500	67100	50600	40100	16300	9620	36500	62500	141300	138400	128100	109600
16	76600	66700	51100	39300	16400	9890	37300	64900	141700	138600	127700	108700
17	75900	66300	51000	38100	16400	9850	38000	67400	142100	138600	127200	106900
18	75300	65900	50800	37000	16300	9620	38600	69900	142000	138300	126700	106000
19	74700	65400	50600	35900	16200	9430	39200	72300	141800	137700	126200	105100
20	74100	64900	50400	34800	16000	9320	40000	75200	141800	137200	125700	104400
21	73500	64100	50100	33700	15600	9300	41100	79100	141800	136800	125200	103800
22	72900	63200	49800	32600	15300	9920	42000	84000	141700	136200	124700	103300
23	72400	62400	49500	31900	14900	10900	43000	89100	141600	135900	124200	103200
24	71900	61500	49200	31300	14800	11700	44200	94300	141500	135500	123600	103000
25	71300	60900	48900	30600	14600	12600	45500	99000	141500	135000	123100	102300
26	70800	60300	48600	30000	14300	14700	46700	103200	141600	134500	122600	101600
27	70300	59800	48400	29900	13900	16300	47800	108800	141600	134000	122100	100800
28	69800	59000	48300	29900	13500	17400	49000	115400	141600	133600	121600	100100
29	69300	58400	48200	29400	---	18400	49700	122200	141600	133100	121000	99300
30	68800	57900	48000	28600	---	19700	50300	127900	141500	132300	120500	98700
31	68200	---	47700	27800	---	21300	---	132600	---	132000	119900	---
MAX	86300	67700	57400	47200	27300	21300	50300	132600	142100	141600	131600	119300
MIN	68200	57900	47700	27800	13500	8490	22900	50800	136000	132000	119900	98700
a	3870.00	3854.80	3838.17	3799.59	3762.70	3784.25	3842.51	3948.19	3957.67	3947.55	3934.35	3909.85
b	-18100	-10300	-10200	-19900	-14300	+7800	+29000	+82300	+8900	-9500	-12100	-21200
c	10690	8950	11450	2370	6270	11240	5350	12560	13900	8260	10620	10430

CAL YR 2002 MAX 142000 MIN 5800 b +33800 c 111700
WTR YR 2003 MAX 142100 MIN 8490 b +12400 c 112100

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.
c Release, in acre-feet, through Salt Springs Powerplant (station 11313510), provided by Pacific Gas & Electric Co.

11314500 NORTH FORK MOKELUMNE RIVER BELOW SALT SPRINGS DAM, CA

LOCATION.—Lat 38° 29'37", long 120° 13'12", in NE 1/4 NW 1/4 sec.4, T.7 N., R.16 E., Calaveras County, Hydrologic Unit 18040012, Stanislaus National Forest, on left bank, 0.5 mi downstream from Salt Springs Dam, 1.3 mi upstream from Cole Creek, and 18 mi northeast of West Point.

DRAINAGE AREA.—170 mi^2.

PERIOD OF RECORD.—September 1926 to current year. Monthly discharge only for some periods, published in WSP 1315-A. Published as "above Moore Creek" 1926–30.

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 3,590 ft above NGVD of 1929, from topographic map. Prior to Sept. 12, 1928, at site 100 ft upstream and Sept. 12, 1928, to Sept. 23, 1940, at present site at datum 2.0 ft higher.

REMARKS.—Flow regulated since 1931 by Salt Springs Reservoir (station 11313500) 0.5 mi upstream. Water is imported from Bear River and Cole Creek to Salt Springs No. 2 Powerplant (station 11313510) upstream from station since December 1952. Then most of the water bypasses station through Tiger Creek Powerplant Conduit (station 11314000). See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 137.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 17,000 ft^3/s, May 16, 1996, gage height, 17.66 ft, from rating curve extended above 3,900 ft^3/s, on basis of computations of flow over dam and discharge through powerplant; minimum daily, 0.3 ft^3/s, Mar. 17, 23, 31, Apr. 1, 1931.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	23	28	43	157	42	46	356	949	135	31	23
2	24	23	28	44	176	42	45	356	1800	69	26	23
3	23	24	28	44	190	42	53	359	2290	40	25	110
4	24	24	28	44	184	63	66	364	2510	38	25	210
5	25	24	28	44	188	76	64	362	2580	36	25	247
6	24	24	28	43	180	75	64	370	2490	36	25	241
7	24	24	27	43	170	76	69	366	2380	36	25	158
8	24	24	27	43	163	76	64	429	2210	39	25	60
9	24	24	28	43	164	76	64	727	2170	36	25	35
10	24	24	28	44	152	75	64	725	1990	36	25	35
11	23	24	28	44	132	61	64	724	1300	35	25	34
12	24	24	28	43	46	44	64	725	911	35	25	34
13	24	24	28	44	47	48	65	728	666	36	25	41
14	24	28	28	44	45	44	71	735	432	35	25	217
15	23	24	27	44	44	44	82	612	641	40	25	250
16	23	24	28	88	43	44	63	560	964	39	25	251
17	23	24	27	208	42	45	62	423	753	38	25	248
18	23	24	27	240	42	45	62	434	757	36	25	245
19	23	24	27	238	42	44	62	442	786	37	25	237
20	23	24	27	244	43	44	63	460	504	37	25	147
21	23	24	28	242	43	44	64	472	440	37	24	52
22	23	24	28	231	42	44	64	605	369	37	24	33
23	23	24	27	224	42	45	64	484	293	37	24	33
24	23	24	27	205	43	45	66	500	238	36	24	33
25	23	24	28	141	44	45	70	515	177	35	23	31
26	23	24	28	135	44	46	71	524	178	35	23	23
27	23	24	29	111	42	46	69	534	174	35	23	23
28	23	24	28	97	42	48	116	544	181	35	23	23
29	24	26	27	139	---	50	326	386	176	36	23	23
30	24	28	34	201	---	48	356	573	175	35	22	24
31	24	---	44	179	---	46	---	582	---	35	23	---
TOTAL	728	728	881	3577	2592	1613	2523	15976	31484	1262	763	3144
MEAN	23.5	24.3	28.4	115	92.6	52.0	84.1	515	1049	40.7	24.6	105
MAX	25	28	44	244	190	76	356	735	2580	135	31	251
MIN	23	23	27	43	42	42	45	356	174	35	22	23
AC-FT	1440	1440	1750	7090	5140	3200	5000	31690	62450	2500	1510	6240
a	29060	27770	28790	32490	28810	24830	8430	10790	29060	26780	27390	25420

a Diversion, in acre-feet, to Tiger Creek Powerplant Conduit (station 11314000), provided by Pacific Gas & Electric Co.

11314500 NORTH FORK MOKELUMNE RIVER BELOW SALT SPRINGS DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	42.9	52.5	79.0	78.3	100	122	233	735	908	184	65.3	52.6
MAX	320	802	1390	665	710	969	1502	2473	3267	1887	406	330
(WY)	1996	1951	1951	1997	1942	1928	1938	1982	1983	1995	1983	1965
MIN	1.33	1.11	0.73	0.94	0.91	1.87	1.55	3.11	3.77	3.02	2.89	2.80
(WY)	1941	1941	1944	1944	1944	1944	1944	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1927 - 2003	
ANNUAL TOTAL	28911		65271			
ANNUAL MEAN	79.2		179		221	
HIGHEST ANNUAL MEAN					710	1983
LOWEST ANNUAL MEAN					4.27	1977
HIGHEST DAILY MEAN	1060	Jun 6	2580	Jun 5	11400	May 16 1996
LOWEST DAILY MEAN	21	Jan 1	22	Aug 30	0.30	Mar 17 1931
ANNUAL SEVEN-DAY MINIMUM	21	Jan 1	23	Aug 25	0.39	Mar 19 1931
MAXIMUM PEAK FLOW			2750	Jun 5	17000	May 16 1996
MAXIMUM PEAK STAGE			8.19	Jun 5	17.66	May 16 1996
ANNUAL RUNOFF (AC-FT)	57340		129500		160100	
ANNUAL DIVERSION (AC-FT) a	292400		299600			
10 PERCENT EXCEEDS	229		477		581	
50 PERCENT EXCEEDS	28		43		23	
90 PERCENT EXCEEDS	23		24		4.6	

a Diversion, in acre-feet, to Tiger Creek Powerplant Conduit (station 11314000), provided by Pacific Gas & Electric Co.

11315000 COLE CREEK NEAR SALT SPRINGS DAM, CA

LOCATION.—Lat 38° 31'09", long 120° 12'42", in SW 1/4 NE 1/4 sec.28, T.8 N., R.16 E., Amador County, Hydrologic Unit 18040012, Eldorado National Forest, on left bank, 200 ft downstream from bridge, 0.3 mi upstream from diversion dam, 1.4 mi north of Salt Springs Dam, 3.2 mi upstream from mouth, and 6.5 mi southwest of Mokelumne Peak.

DRAINAGE AREA.—21.0 mi^2.

PERIOD OF RECORD.—July 1927 to November 1942, October 1943 to current year. Prior to October 1958, published as "Cold Creek near Mokelumne Peak". October 1958 to September 1960, published as "near Mokelumne Peak".

REVISED RECORDS.—WSP 1515: 1928, 1930–31, 1938(M), 1944, 1947. WSP 1930: Drainage area.

GAGE.—Water-stage recorder and concrete control since Oct. 30, 1974. Elevation of gage is 5,920 ft above NGVD of 1929, from topographic map. Prior to Oct. 30, 1974, at site 0.4 mi upstream at different datum.

REMARKS.—Occasional pumping upstream from station for domestic use in summer-home tract began in September 1961. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 137.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,140 ft^3/s, Dec. 23, 1964, gage height, 10.21 ft, site and datum then in use, from rating curve extended above 900 ft^3/s, on basis of slope-area measurement at gage height 9.69 ft; no flow for many days in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.13	0.13	6.2	28	93	25	157	60	359	17	1.4	e0.08
2	0.13	0.14	5.8	28	67	25	104	69	359	14	2.8	0.08
3	0.13	0.15	5.6	34	51	25	86	89	384	12	7.5	0.18
4	0.13	0.14	5.3	33	e46	25	72	93	381	11	4.3	0.42
5	0.13	0.13	4.9	33	e45	24	70	83	335	9.0	2.8	0.22
6	0.13	0.14	4.8	37	e42	25	57	105	304	7.8	2.0	0.16
7	0.13	0.35	4.6	32	e38	29	60	101	274	6.8	1.4	0.12
8	0.13	257	e4.3	34	e36	31	107	84	273	5.9	1.0	0.09
9	0.13	156	4.1	31	e33	36	132	70	260	5.3	0.83	0.07
10	0.13	25	e4.3	29	e30	37	143	66	218	4.9	0.66	0.09
11	0.13	18	e4.3	27	29	43	160	116	186	4.4	0.49	0.09
12	0.13	34	4.3	24	27	61	164	196	158	4.0	0.42	0.08
13	0.13	51	5.9	23	48	96	107	292	147	3.8	0.37	0.08
14	0.13	42	88	e24	57	109	92	279	138	3.3	0.32	0.08
15	0.13	28	42	e23	51	127	75	303	131	3.0	0.27	e0.07
16	0.13	21	25	e25	e42	77	66	300	135	2.8	0.23	e0.07
17	0.13	17	30	33	e38	56	60	304	132	2.6	0.20	e0.07
18	0.13	14	41	46	e35	47	56	303	112	2.3	0.17	e0.07
19	0.13	13	37	44	32	46	57	313	87	2.1	0.14	e0.07
20	0.12	38	41	42	e31	52	77	356	73	1.9	0.13	e0.07
21	0.12	40	30	40	31	57	78	435	60	1.7	0.13	e0.07
22	0.12	34	26	34	34	84	59	489	52	1.5	e0.13	e0.07
23	0.13	26	25	101	35	117	62	498	46	1.3	e0.13	e0.07
24	0.13	20	25	117	37	118	87	465	38	1.1	e0.12	e0.07
25	0.13	15	24	73	32	107	73	402	35	0.92	e0.11	e0.07
26	0.13	11	22	76	29	362	65	367	33	0.78	e0.10	e0.07
27	0.14	9.0	22	73	29	203	64	512	31	0.65	e0.10	e0.07
28	0.14	7.6	38	91	28	127	65	521	29	0.53	e0.10	e0.07
29	0.12	6.9	29	68	---	110	58	533	26	0.46	e0.09	e0.07
30	0.12	6.6	24	60	---	149	53	467	21	0.41	e0.09	e0.07
31	0.13	---	24	77	---	181	---	366	---	0.51	e0.08	---
TOTAL	4.00	891.28	657.4	1440	1126	2611	2566	8637	4817	133.76	28.61	2.96
MEAN	0.13	29.7	21.2	46.5	40.2	84.2	85.5	279	161	4.31	0.92	0.099
MAX	0.14	257	88	117	93	362	164	533	384	17	7.5	0.42
MIN	0.12	0.13	4.1	23	27	24	53	60	21	0.41	0.08	0.07
AC-FT	7.9	1770	1300	2860	2230	5180	5090	17130	9550	265	57	5.9

e Estimated.

11315000 COLE CREEK NEAR SALT SPRINGS DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.96	21.7	36.8	38.5	42.2	65.6	143	252	148	21.0	1.37	0.88
MAX	88.3	368	361	292	228	212	242	509	564	263	25.2	15.6
(WY)	1983	1951	1965	1997	1982	1986	1936	1969	1983	1983	1983	1983
MIN	0.045	0.10	0.14	0.30	0.30	1.87	38.9	50.1	5.22	0.37	0.013	0.000
(WY)	1967	1960	1960	1933	1933	1933	1975	1934	1992	2001	1931	1931

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL	19724.69		22915.01			
ANNUAL MEAN	54.0		62.8		64.7	
HIGHEST ANNUAL MEAN					131	1983
LOWEST ANNUAL MEAN					16.6	1977
HIGHEST DAILY MEAN	354	Apr 14	533	May 29	3760	Dec 23 1964
LOWEST DAILY MEAN	0.12	Oct 20	0.07	Sep 9	0.00	Aug 1 1931
ANNUAL SEVEN-DAY MINIMUM	0.13	Oct 16	0.07	Sep 15	0.00	Aug 1 1931
MAXIMUM PEAK FLOW			873	May 29	6140	Dec 23 1964
MAXIMUM PEAK STAGE			3.82	May 29	10.21	Dec 23 1964
ANNUAL RUNOFF (AC-FT)	39120		45450		46840	
10 PERCENT EXCEEDS	199		162		201	
50 PERCENT EXCEEDS	21		28		15	
90 PERCENT EXCEEDS	0.13		0.12		0.15	

11315030 COLE CREEK BELOW DIVERSION DAM, NEAR SALT SPRINGS DAM, CA

LOCATION.—Lat 38° 30'54", long 120° 12'53", in NW 1/4 SE 1/4 sec.28, T.8 N., R.16 E., Amador County, Hydrologic Unit 18040012, Eldorado National Forest, on right bank, 200 ft downstream from diversion dam, 1.1 mi north of Salt Springs Dam, and 6.7 mi southwest of Mokelumne Peak.

DRAINAGE AREA.—21.8 mi^2.

PERIOD OF RECORD.—December 1987 to current year (low-flow records only). Unpublished records for water years 1981–87 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and broad-crested weir. Elevation of gage is 5,830 ft above NGVD of 1929, from topographic map. Prior to Dec. 3, 1987, nonrecording gage at same site and datum.

REMARKS.—No records computed above 3.9 ft^3/s. Flow regulated by Cole Creek Diversion Dam. Water is diverted for power since December 1952 to a tunnel from Lower Bear River Reservoir to Salt Springs Powerplant No. 2 (station 11313510) on North Fork Mokelumne River. Water diverted occasionally from Cole Creek into Lower Bear River Reservoir. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 137.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.12	0.15	2.3	3.2	3.3	3.5	---	---	---	3.9	1.2	0.42
2	e0.12	0.16	2.3	3.3	3.3	3.4	---	---	---	3.8	3.2	0.41
3	e0.12	0.16	2.3	3.3	3.4	3.5	---	---	---	3.8	3.6	0.46
4	e0.12	0.14	2.3	3.1	3.5	3.5	---	---	---	3.8	3.7	0.58
5	e0.12	0.14	2.4	3.0	3.4	3.5	---	---	---	3.8	3.5	0.44
6	e0.12	0.14	2.5	2.9	3.5	3.5	3.9	---	---	3.8	2.2	0.41
7	e0.12	1.9	2.5	2.9	3.5	3.5	---	---	---	3.8	1.4	0.41
8	e0.12	---	2.5	2.9	3.7	3.5	---	---	---	3.8	0.90	0.40
9	e0.12	---	2.5	2.9	3.5	3.5	---	---	---	3.8	0.75	0.39
10	e0.12	---	2.5	2.9	3.4	3.5	---	---	---	3.8	0.65	0.40
11	e0.12	---	2.5	2.9	3.3	3.5	---	---	---	3.7	0.57	0.33
12	e0.12	---	2.5	2.9	3.3	3.6	---	---	---	3.7	0.52	0.24
13	e0.12	---	2.6	2.9	3.6	---	---	---	---	3.7	0.49	0.25
14	e0.12	2.7	2.9	2.9	3.6	---	---	---	---	3.7	0.46	0.24
15	e0.12	2.7	2.7	3.0	3.5	---	---	---	---	3.4	0.45	0.23
16	e0.12	2.7	2.8	2.9	3.5	3.7	---	---	---	2.7	0.44	0.21
17	e0.12	2.6	3.2	2.9	3.5	3.5	---	---	---	2.3	0.43	0.21
18	e0.12	2.6	2.8	3.0	3.5	3.5	---	---	---	2.0	0.42	0.21
19	e0.12	2.6	---	3.0	3.5	3.5	---	---	---	1.7	0.41	0.21
20	e0.12	2.7	---	3.0	3.5	3.5	---	---	---	1.5	0.41	0.22
21	e0.12	2.7	---	3.0	3.5	3.5	---	---	---	1.2	0.41	0.23
22	e0.12	2.7	3.4	3.0	3.5	3.6	---	---	---	0.83	0.43	0.22
23	e0.12	2.6	3.2	3.2	3.5	3.8	---	---	---	0.61	0.47	0.20
24	e0.12	2.6	3.6	3.4	3.5	3.8	---	---	3.9	0.53	0.44	0.20
25	e0.12	2.6	3.3	3.2	3.5	3.8	---	---	3.9	0.45	0.43	0.20
26	e0.12	2.5	3.2	3.2	3.5	---	---	---	3.9	0.43	0.43	0.18
27	e0.12	2.4	3.0	---	3.4	---	---	---	3.9	0.41	0.45	0.18
28	e0.12	2.3	3.3	---	3.5	---	---	---	3.9	0.47	0.44	0.21
29	e0.12	2.3	3.7	---	---	---	---	---	3.9	0.52	0.43	0.21
30	e0.12	2.3	3.3	---	---	---	---	---	3.9	0.53	0.43	0.19
31	e0.12	---	3.3	3.2	---	---	---	---	---	0.57	0.42	---
TOTAL	3.72	---	---	---	97.2	---	---	---	---	73.05	30.48	8.69
MEAN	0.12	---	---	---	3.47	---	---	---	---	2.36	0.98	0.29
MAX	0.12	---	---	---	3.7	---	---	---	---	3.9	3.7	0.58
MIN	0.12	---	---	---	3.3	---	---	---	---	0.41	0.41	0.18
AC-FT	7.4	---	---	---	193	---	---	---	---	145	60	17

e Estimated.

11315400 UPPER BEAR RIVER RESERVOIR NEAR PARDOE CAMP, CA

LOCATION.—Lat 38° 33'30", long 120° 13'01", in NE 1/4 SW 1/4 sec.9, T.8 N., R.16 E., Amador County, Hydrologic Unit 18040012, on east side of Bear River Reservoir, between mile 8 and 9 at pack trail, 7.1 mi southeast of Plasse, 8.7 mi east of Hams Station, and 12.7 mi southwest of Kirkwood.

DRAINAGE AREA.—28.11 mi^2.

PERIOD OF RECORD.—October 2001 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 5,870 ft above NGVD of 1929, from topographic map.

REMARKS.—Reservoir is formed by rockfill dam with placed rock on both the upstream and downstream side, gunited on the upstream face, completed in 1900; record began in October 1902. Capacity, 7,310 acre-ft, at elevation 5,878 ft, top of flashboards. Water level is regulated in the spring by the addition of flashboards. Releases are made through a gate valve at the base of the dam. Valve is usually closed in the fall after the lake is drained and not used again until May. Figures given, including extremes, represent total contents. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2130.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 7,450 acre-ft, June 5, 2002, gage height, 78.82 ft; minimum, 580 acre-ft, Nov. 4–6, 2002, minimum gage height, 24.25 ft, Nov. 6.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 7,400 acre-ft, June 13–16, maximum gage height, 78.56 ft, June 13, 15; minimum, 580 acre-ft, Nov. 4–6, minimum gage height, 24.25 ft, Nov. 6.

Capacity table (gage height, in feet, and contents, in acre-feet)
(Table provided by Pacific Gas & Electric Co., dated October 1994)

0	0	30	990	50	3,106	72	6,296
10	78	40	1,929	60	4,465	82	8,000
22	448						

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	602	582	2300	1200	2410	1690	5530	6450	7140	6420	2050	850
2	600	582	2180	1180	2460	1640	5660	6460	7150	6350	1940	850
3	599	581	2060	1180	2470	1590	5710	6520	7160	6280	1820	853
4	598	580	1950	1180	2460	1540	5740	6580	7130	6240	1690	854
5	598	580	1830	1180	2430	1490	5730	6590	7130	6200	1570	855
6	597	580	1720	1190	2400	1440	5700	6650	7120	6060	1460	853
7	597	626	1610	1180	2350	1400	5710	6700	7110	5880	1340	850
8	597	2540	1500	1180	2300	1370	5840	6720	7120	5690	1230	850
9	597	2910	1400	1170	2250	1350	6040	6700	7110	5510	1120	848
10	595	3020	1310	1180	2190	1340	6280	6670	7090	5330	1010	848
11	595	3110	1200	1180	2140	1350	6620	6770	7080	5150	906	846
12	594	3260	1110	1150	2090	1420	6840	6970	7270	4960	863	845
13	592	3420	1160	1130	2150	1540	6820	7110	7400	4790	863	844
14	594	3530	1640	921	2180	1670	6820	7090	7400	4610	863	842
15	592	3600	1680	896	2200	1810	6800	7130	7400	4450	863	840
16	590	3650	1690	877	2210	1950	6770	7110	7400	4280	862	813
17	589	3680	1670	893	2180	2080	6730	7130	7390	4110	862	783
18	589	3630	1650	934	2140	2160	6690	7120	7380	3950	862	751
19	589	3520	1630	964	2100	2170	6660	7140	7370	3790	859	722
20	588	3470	1590	984	2060	2200	6680	7150	7370	3640	859	692
21	587	3420	1550	996	2020	2230	6700	7160	7360	3480	859	660
22	586	3350	1500	1010	1980	2330	6660	7180	7350	3320	859	630
23	585	3250	1450	1280	1950	2540	6640	7150	7350	3170	859	619
24	585	3150	1390	1560	1920	2730	6700	7160	7230	3020	859	618
25	585	3040	1340	1690	1880	2900	6690	7140	7070	2870	857	618
26	584	2910	1290	1800	1840	3760	6660	7150	6940	2750	857	617
27	584	2790	1260	1920	1800	4180	6620	7100	6830	2730	856	616
28	585	2660	1290	2060	1750	4350	6600	7180	6710	2590	855	616
29	583	2540	1290	2130	---	4530	6540	7180	6600	2450	852	615
30	583	2420	1270	2180	---	4850	6480	7150	6510	2310	851	614
31	583	---	1240	2290	---	5250	---	7140	---	2180	850	---
TOTAL	18322	76981	47750	40665	60310	72850	191660	215450	214670	134560	33306	22712
MEAN	591	2570	1540	1310	2150	2350	6390	6950	7160	4340	1070	757
MAX	602	3680	2300	2290	2470	5250	6840	7180	7400	6420	2050	855
MIN	583	580	1110	877	1750	1340	5530	6450	6510	2180	850	614
a	24.31	44.39	32.91	43.23	38.25	65.35	73.15	77.05	73.30	42.29	28.20	24.81
b	-19	+1837	-1180	+1050	-540	+3500	+1230	+660	-630	-4330	-1330	-236

CAL YR 2002 TOTAL 1504472 MEAN 4120 MAX 7450 MIN 580 b -4040
WTR YR 2003 TOTAL 1129236 MEAN 3090 MAX 7400 MIN 580 b +12

a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.

11315600 LOWER BEAR RIVER RESERVOIR NEAR NICHOLL, CA

LOCATION.—Lat 38° 32'20", long 120° 15'22", in SE 1/4 SW 1/4 sec.18, T.8 N., R.16 E., Amador County, Hydrologic Unit 18040012, 100 ft left of the spillway, 7.4 mi east of Hams Station and 14.6 mi southwest of Kirkwood.

DRAINAGE AREA.—37.3 mi^2.

PERIOD OF RECORD.—October 2001 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 5,820 ft above NGVD of 1929, from topographic map.

REMARKS.—Reservoir is formed by two rockfill concrete-faced dams, completed in 1952. Capacity, 52,000 acre-ft, at elevation 5,820 ft. Figures given, including extremes, represent total contents. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2130.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 52,100 acre-ft, June 6, 7, 2002, June 17, 18, 2003, maximum elevation, 5820.12 ft, June 6, 7, 2002; minimum, 3,460 acre-feet, Jan. 7, 2003, elevation, 5713.07 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 52,100 acre-ft, June 17, 18, maximum elevation, 5820.07 ft, June 18; minimum, 3,460 acre-ft, Jan. 7, elevation, 5713.07 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Table provided by Pacific Gas & Electric Co., dated October 1997)

5600	0	5660	354	5720	4,390	5780	26,140
5620	24	5680	1,007	5740	8,647	5800	38,105
5640	104	5700	2,152	5760	16,112	5824	55,036

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27700	16400	10400	3660	8890	9160	10100	18700	50500	48900	44400	34900
2	27300	16100	10100	3590	9260	8910	10400	18800	50400	48600	44300	34500
3	26900	15700	9800	3550	9560	8660	10500	19100	50500	48200	44200	34200
4	26600	15300	9490	3530	9850	8400	10500	19400	50800	47900	44000	33600
5	26200	15000	9190	3510	10100	8220	10700	19800	51200	47600	43800	33300
6	25900	14600	8850	3490	10400	8040	10800	20100	51600	47300	43500	32900
7	25500	14300	8720	3460	10600	7850	11000	20500	51700	47100	43200	32500
8	25100	14400	8350	3480	10800	7680	11500	21000	51700	47200	43000	32100
9	24800	14100	7880	3530	11000	7520	12000	21000	51700	47300	42700	31800
10	24400	13900	7600	3550	11200	7360	12600	21000	51900	47300	42400	31400
11	24000	13600	7230	3550	11400	7230	13200	21100	51900	47300	42100	31000
12	23700	13200	6930	3510	11600	7160	14000	21600	51700	47300	41800	31000
13	23300	13000	6730	3620	11900	7110	14800	22800	51500	47200	41900	31000
14	23000	12800	6740	3800	11900	7080	15400	24100	51600	46900	41800	31000
15	22600	12500	6560	3960	11800	7350	15800	25300	51800	46600	41200	30700
16	22200	12100	6400	4130	11700	7370	15800	26700	51900	46400	40800	30400
17	21900	11800	6200	4310	11600	7310	15900	27900	52100	46200	40500	30000
18	21500	11500	6040	4540	11400	7220	15900	29200	52100	46100	40100	29500
19	21200	11300	5910	4770	11200	7120	15900	30500	52000	46100	39700	29200
20	20800	11200	5750	4990	11000	7080	16100	32000	51800	46000	39400	28700
21	20500	11400	5590	5210	10900	7030	16400	33700	51600	46000	39000	28300
22	20100	11600	5410	5420	10700	7030	16700	35700	51300	45900	38600	27700
23	19700	11800	5230	5860	10500	7220	17000	37500	51100	45800	38300	27800
24	19300	12000	5040	6300	10300	7380	17400	39200	50700	45700	37900	26800
25	19000	11900	4840	6650	10100	7470	17800	40700	50500	45500	37500	26400
26	18600	11600	4640	7000	9900	8050	18100	42000	50400	45400	37200	26000
27	18200	11300	4460	7250	9660	8350	18400	42700	50100	45300	36800	25600
28	17800	11200	4320	7480	9420	8530	18700	45500	49800	45100	36400	25200
29	17500	11000	4160	7740	---	8830	18700	47100	49500	44900	36000	24900
30	17100	10700	3970	8080	---	9230	18700	49300	49300	44700	35600	24500
31	16800	---	3800	8460	---	9680	---	50200	---	44600	35200	---
MAX	28000	16400	10400	8460	11900	9680	18700	50200	52100	48900	44400	34900
MIN	16800	10700	3800	3460	8890	7030	10100	18700	49300	44600	35200	24500
a	5761.50	5746.55	5715.70	5739.34	5742.60	5743.41	5765.69	5817.58	5816.26	5809.69	5795.52	5777.16
b	-11200	-6100	-6900	+4660	+960	+260	+9020	+31500	-900	-4700	-9400	-10700

CAL YR 2002 MAX 52100 MIN 3800 b -3500
WTR YR 2003 MAX 52100 MIN 3460 b -3500

a Elevation, in feet, at end of month.
b Change in contents, in acre-feet.

11315900 BEAR RIVER BELOW LOWER BEAR RIVER DAM, CA

LOCATION.—Lat 38° 32'11", long 120° 15'24", in NW 1/4 NW 1/4 sec.19, T.8 N., R.16 E., Amador County, Hydrologic Unit 18040012, Eldorado National Forest, on left bank, 250 ft downstream from outlet valve on Lower Bear River Reservoir, 0.2 mi below Lower Bear River Reservoir Dam, 1.4 mi upstream from Rattlesnake Creek, and 3.5 mi northwest of Salt Springs Dam.

DRAINAGE AREA.—37.4 mi^2.

PERIOD OF RECORD.—December 1987 to current year (low-flow records only). Unpublished records for water years 1981–87 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 5,500 ft above NGVD of 1929, from topographic map. Prior to Dec. 3, 1987, nonrecording gage at same site and datum.

REMARKS.—No records computed above 9.3 ft^3/s. Flow regulated since 1900 by Bear River Reservoir, capacity, 6,760 acre-ft, and since December 1952 by Lower Bear River Reservoir 0.2 mi upstream, capacity, 49,100 acre-ft. Water diverted for power since December 1952 from Lower Bear River Reservoir through tunnel to Salt Springs Powerplant No. 2 (station 11313510) on North Fork Mokelumne River. Water diverted occasionally from Cole Creek into Lower Bear River Reservoir. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 137.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	4.7	4.5	4.4	6.3	6.5	5.4	7.2	---	8.7	6.8	5.5
2	4.9	4.7	4.5	4.5	6.0	6.6	5.5	7.4	---	7.9	7.0	5.4
3	5.0	4.7	4.5	4.5	6.4	6.6	5.5	8.8	---	7.7	6.7	5.3
4	5.1	4.6	4.5	4.5	6.7	6.7	5.4	9.0	---	7.7	6.7	5.3
5	5.1	4.6	4.4	4.6	6.5	6.7	5.3	7.5	---	7.6	6.6	5.3
6	5.1	4.5	4.3	4.5	6.5	6.7	5.3	7.2	---	7.6	6.6	5.2
7	5.1	4.8	4.3	4.5	6.5	6.7	5.4	7.2	---	7.6	6.5	5.4
8	5.1	8.2	4.3	4.5	6.5	6.7	5.7	7.2	---	7.5	6.4	5.6
9	5.0	5.4	4.4	4.6	6.5	6.7	5.7	7.1	---	7.5	6.2	5.6
10	5.0	5.7	4.5	4.9	6.5	6.7	5.7	7.5	---	7.5	6.2	5.5
11	5.0	5.4	4.5	4.8	6.5	6.7	5.7	7.5	---	7.4	6.2	5.5
12	5.0	5.3	4.5	4.7	6.6	6.7	6.1	7.3	---	7.3	6.1	5.4
13	5.0	5.2	5.0	4.7	7.3	6.7	6.5	7.1	---	7.3	6.1	5.3
14	5.0	4.9	5.0	4.6	7.1	6.9	6.3	7.1	---	7.2	6.1	5.2
15	5.0	4.9	4.8	4.5	6.9	7.9	6.3	7.1	---	7.2	6.1	5.2
16	5.0	4.8	4.8	4.5	7.1	7.0	6.4	7.1	---	7.2	6.0	5.3
17	5.0	4.7	4.7	4.6	6.8	7.1	6.6	7.2	---	7.3	6.0	5.3
18	5.0	4.7	4.7	4.7	6.8	6.9	6.7	7.3	---	7.3	6.1	5.3
19	4.9	4.7	4.6	4.7	6.7	5.9	6.8	7.3	---	7.3	6.0	5.3
20	4.9	4.7	4.6	4.7	6.7	4.9	6.8	7.4	---	7.3	6.0	5.3
21	4.9	4.7	4.5	4.8	6.8	4.7	7.0	7.4	---	7.4	6.0	5.2
22	4.9	4.7	4.5	5.1	6.7	4.7	6.7	7.6	---	7.3	5.9	5.2
23	4.8	4.6	4.5	5.8	6.6	5.4	6.8	7.7	---	7.4	5.9	5.2
24	4.8	4.6	4.5	5.8	6.6	5.6	7.4	7.8	---	7.3	5.8	5.2
25	4.8	4.5	4.4	5.8	6.7	5.4	7.2	7.9	---	7.2	5.7	5.3
26	4.8	4.5	4.4	5.8	6.6	6.6	7.1	8.1	---	7.3	5.8	5.2
27	4.8	4.5	4.7	5.9	6.5	5.7	7.3	---	---	7.2	5.7	5.2
28	4.8	4.4	4.8	6.1	6.5	5.3	7.4	7.6	---	7.2	5.8	5.2
29	4.8	4.5	4.6	5.9	---	5.3	7.2	6.4	---	7.0	5.7	5.2
30	4.7	4.5	4.5	5.9	---	5.3	7.1	---	---	6.8	5.7	5.2
31	4.7	---	4.5	6.1	---	5.3	---	---	---	6.8	5.7	---
TOTAL	152.8	146.7	141.3	155.0	185.9	192.6	190.3	---	---	229.0	190.1	159.3
MEAN	4.93	4.89	4.56	5.00	6.64	6.21	6.34	---	---	7.39	6.13	5.31
MAX	5.1	8.2	5.0	6.1	7.3	7.9	7.4	---	---	8.7	7.0	5.6
MIN	4.7	4.4	4.3	4.4	6.0	4.7	5.3	---	---	6.8	5.7	5.2
AC-FT	303	291	280	307	369	382	377	---	---	454	377	316

11316100 BEAR RIVER BELOW BEAR RIVER DIVERSION DAM, CA

LOCATION.—Lat 38° 29'33", long 120° 17'21", in NE 1/4 NW 1/4 sec.2, T.7 N., R.15 E., Amador County, Hydrologic Unit 18040012, Eldorado National Forest, on right bank, 200 ft downstream from diversion dam on Bear River and highway bridge, 1.4 mi upstream from mouth, and 3.5 mi northwest of Salt Springs Dam.

DRAINAGE AREA.—47.8 mi^2.

PERIOD OF RECORD.—December 1987 to current year (low-flow records only). Unpublished records for water years 1983–87 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and sharp-crested weir. Elevation of gage is 3,710 ft above NGVD of 1929, from topographic map. Prior to Dec. 8, 1987, nonrecording gage at same site and datum.

REMARKS.—No records computed above 5.5 ft^3/s. Flow regulated since 1900 by Bear River Reservoir, capacity, 6,760 acre-ft, and since December 1952 by Lower Bear River Reservoir 4 mi upstream, capacity, 49,100 acre-ft. Water diverted for power since December 1952 from Lower Bear River Reservoir through tunnel to Salt Springs Powerplant No. 2 (station 11313510) on North Fork Mokelumne River. Water diverted at diversion dam 200 ft upstream to Tiger Creek Powerplant Conduit for use at Tiger Creek Powerplant (station 11316610). Spill at the diversion bypasses this site. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 137.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5.2	e4.9	---	---	---	---	---	---	---	---	---	---
2	e5.1	e4.9	---	---	---	---	---	---	---	---	---	---
3	e5.4	e4.9	---	---	---	---	---	---	---	---	---	---
4	e5.4	e4.8	---	---	---	---	---	---	---	---	---	---
5	e5.4	e4.8	---	---	---	---	---	---	---	---	---	---
6	---	e4.7	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	e5.3	---	---	---	---	---	---	---	---	---	---	---
9	e5.3	---	---	---	---	---	---	---	---	---	---	---
10	e5.4	---	---	---	---	---	---	---	---	---	---	---
11	e5.4	---	---	---	---	---	---	---	---	---	---	---
12	e5.3	---	---	---	---	---	---	---	---	---	---	---
13	e5.3	---	5.5	---	---	---	---	---	---	---	---	---
14	e5.3	---	---	---	---	---	---	---	---	---	---	---
15	e5.3	---	---	---	---	---	---	---	---	---	---	---
16	e5.3	---	---	---	---	---	---	---	---	---	---	---
17	e5.3	---	---	---	---	---	---	---	---	---	---	---
18	e5.3	---	---	---	---	---	---	---	---	---	---	---
19	e5.3	---	---	---	---	---	---	---	---	---	---	---
20	e5.3	---	---	---	---	---	---	---	---	---	---	---
21	e5.3	---	---	---	---	---	---	---	---	---	---	---
22	e5.3	---	---	---	---	---	---	---	---	---	---	---
23	e5.3	---	---	---	---	---	---	---	---	---	---	---
24	e5.3	---	---	---	---	---	---	---	---	---	---	---
25	e5.3	---	---	---	---	---	---	---	---	---	---	---
26	e5.3	---	---	---	---	---	---	---	---	---	---	---
27	e5.3	---	---	---	---	---	---	---	---	---	---	---
28	e5.1	---	---	---	---	---	---	---	---	---	---	---
29	e4.9	---	---	---	---	---	---	---	---	---	---	---
30	e4.9	---	---	---	---	---	---	---	---	---	---	---
31	e4.9	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

e Estimated.

11316602 TIGER CREEK REGULATOR RESERVOIR NEAR PIONEER, CA

LOCATION.—Lat 38° 28'38", long 120° 27'06", in SW 1/4 NE 1/4 sec.8, T.7 N., R.14 E., Amador County, Hydrologic Unit 18040012, 7.2 mi northeast of Pioneer, and 12.9 mi west of Salt Springs Reservoir.

DRAINAGE AREA.—7.33 mi^2.

PERIOD OF RECORD.—October 2002 to September 2003.

GAGE.—Water-stage recorder. Elevation of gage is 3,592 ft above NGVD of 1929, from topographic map.

REMARKS.—Reservoir is formed by concrete arch dam, established in 1931. Capacity, 570 acre-ft, at elevation 24.0 ft. Figures given, including extremes, represent total contents. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 137.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 510 acre-ft, Sept. 23, 2003, gage height, 19.54 ft; minimum, 384 acre-feet, Sept. 3, 2003, gage height, 8.45 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)
(Table provided by Pacific Gas & Electric Co., dated October 1997)

0	300	12	422	18	491	24	570
6	359						

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	433	431	427	440	463	444	453	443	475	407	409	408
2	427	415	437	427	470	444	457	463	475	405	409	452
3	424	413	444	458	470	454	425	490	476	397	419	384
4	419	427	434	447	465	442	455	410	479	404	406	457
5	416	419	451	446	452	446	454	438	495	399	405	448
6	418	422	445	449	452	440	463	457	417	407	417	447
7	421	488	446	456	446	437	446	470	462	406	414	422
8	424	486	453	450	454	433	434	414	416	413	405	429
9	425	471	445	444	447	431	470	425	417	423	406	410
10	425	480	445	454	424	434	445	433	432	421	403	419
11	427	471	444	454	420	421	466	399	437	425	407	406
12	432	422	454	460	435	412	467	402	440	414	424	411
13	430	407	466	469	451	419	433	400	447	421	500	418
14	427	445	420	475	452	421	402	416	469	404	493	431
15	425	417	403	468	479	433	405	412	483	479	476	434
16	429	415	412	471	490	427	442	415	413	477	413	446
17	443	417	402	462	490	425	460	437	409	494	413	445
18	409	432	415	458	490	433	477	443	413	419	414	421
19	442	436	455	459	490	409	489	454	418	414	412	425
20	415	409	440	471	471	439	461	494	429	406	429	422
21	414	506	436	469	455	403	411	486	452	415	415	424
22	411	487	434	475	453	414	430	469	442	439	413	410
23	397	425	432	470	457	443	446	487	429	447	412	510
24	392	430	426	473	427	418	469	487	419	462	421	491
25	441	429	426	465	419	443	468	480	409	444	427	468
26	436	421	427	471	437	451	486	480	404	445	412	473
27	428	419	428	440	452	437	413	479	404	443	419	472
28	421	428	429	478	448	439	434	480	407	439	411	476
29	427	425	414	443	---	445	415	480	410	420	416	467
30	420	435	416	469	---	447	417	479	402	417	438	421
31	439	---	442	479	---	448	---	476	---	412	410	---
MAX	443	506	466	479	490	454	489	494	495	494	500	510
MIN	392	407	402	427	419	403	402	399	402	397	403	384
a	13.52	13.12	13.80	16.95	14.36	14.32	11.48	16.74	10.21	11.05	10.89	13.27
b		-4	+7	+37	-31	0	-31	+59	-74	+10	-2	+11

WTR YR 2003 MAX 510 MIN 384

a Gage height, in feet, at end of month.
b Change in contents, in acre-feet.

11316605 TIGER CREEK BELOW REGULATOR RESERVOIR, NEAR PIONEER, CA

LOCATION.—Lat 38° 28'37", long 120° 27'11", in SW 1/4 NE 1/4 sec.8, T.7 N., R.14 E., Amador County, Hydrologic Unit 18040012, Eldorado National Forest, on right bank, 200 ft downstream from outlet valve on Regulator Dam, 7.2 mi northeast of Pioneer, and 12.9 mi west of Salt Springs Reservoir.

DRAINAGE AREA.—7.35 mi^2.

PERIOD OF RECORD.—October 2001 to current year (low flow records only).

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 3,510 ft above NGVD of 1929, from topographic map.

REMARKS.—No records computed above 40 ft^3/s. Flow regulated since 1931 by Salt Springs Reservoir (station 11313500) 18.3 mi upstream. Some water is diverted through Tiger Creek Powerplant Conduit (station 11314000). Additional water is diverted out of Bear River and several smaller tributaries into Tiger Creek Powerplant Conduit. All the water enters the North Fork Mokelumne River at Tiger Creek Powerplant (station 11316610) 0.4 mi downstream. Water is occasionally diverted at the weir for cooling at Tiger Creek Powerplant. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 137.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	5.5	5.5	7.3	7.2	8.5	11	21	7.4	6.8	8.2	4.1
2	3.4	5.5	5.5	7.2	7.3	8.5	11	22	7.4	6.8	8.2	4.1
3	3.3	5.4	5.5	7.3	7.3	8.5	11	22	6.1	6.7	6.0	4.1
4	3.3	5.5	5.5	7.3	7.3	8.8	11	22	5.3	6.6	4.1	4.1
5	3.4	5.4	5.4	7.3	7.4	9.9	11	22	5.3	6.7	4.1	4.1
6	3.4	5.4	5.5	7.3	7.4	11	11	22	5.4	6.6	4.1	4.1
7	3.4	5.5	5.4	7.3	7.4	11	11	22	5.5	6.6	4.1	4.1
8	3.4	5.4	5.5	7.3	7.4	11	11	22	5.4	6.8	4.1	4.1
9	3.4	5.4	5.5	7.2	7.4	11	11	22	5.4	6.6	4.1	4.1
10	3.4	5.5	5.5	7.3	7.5	11	11	22	e5.4	6.7	4.1	4.1
11	3.4	5.5	5.5	7.3	7.4	17	11	22	e5.4	6.7	4.1	4.1
12	3.4	5.5	5.5	7.3	7.4	22	11	21	e5.5	6.7	4.1	4.1
13	3.3	5.4	5.5	7.3	7.5	17	11	21	e5.7	6.7	4.1	4.1
14	3.4	5.5	5.5	7.4	7.5	11	11	13	e5.9	6.7	4.2	4.0
15	3.4	5.4	5.4	7.3	7.6	11	11	7.5	e6.0	6.8	4.1	4.0
16	3.4	5.4	5.4	7.4	7.5	11	11	7.5	e6.5	6.8	4.1	4.0
17	3.4	5.4	5.5	7.2	7.6	11	11	7.4	6.7	6.7	4.0	4.1
18	3.4	5.4	5.5	7.3	7.6	11	11	7.4	6.7	6.8	4.0	4.0
19	3.3	5.4	5.4	7.3	7.6	11	11	7.5	6.7	6.7	4.0	4.0
20	3.4	5.4	5.4	7.3	7.6	11	11	7.4	6.7	6.7	4.1	4.0
21	3.3	5.5	5.5	7.2	7.6	11	11	7.5	6.9	6.6	4.2	4.0
22	3.4	5.5	5.5	7.2	7.6	11	11	7.4	6.9	6.7	4.2	4.1
23	3.3	5.4	5.5	7.3	7.6	11	11	7.5	6.9	6.8	4.2	4.1
24	3.3	5.4	5.5	7.2	15	11	11	7.5	6.9	6.8	4.2	4.4
25	3.4	5.4	5.5	7.3	21	11	11	7.4	6.8	6.8	4.2	4.1
26	3.4	5.4	5.5	7.3	16	11	11	7.4	6.8	6.7	4.2	4.1
27	3.4	5.4	5.5	7.3	8.6	11	11	7.4	6.8	6.6	4.1	4.1
28	3.4	5.4	5.5	7.2	8.6	11	18	7.4	6.8	6.4	4.2	4.1
29	3.4	5.4	5.4	7.2	---	11	21	7.4	6.9	6.3	4.2	4.1
30	3.4	5.5	5.4	7.2	---	11	21	7.4	6.8	6.3	4.2	4.1
31	4.6	---	6.7	7.3	---	11	---	7.4	---	7.4	4.2	---
TOTAL	105.9	163.1	170.9	225.6	240.9	353.2	357	422.4	188.9	207.6	138.0	122.6
MEAN	3.42	5.44	5.51	7.28	8.60	11.4	11.9	13.6	6.30	6.70	4.45	4.09
MAX	4.6	5.5	6.7	7.4	21	22	21	22	7.4	7.4	8.2	4.4
MIN	3.3	5.4	5.4	7.2	7.2	8.5	11	7.4	5.3	6.3	4.0	4.0
AC-FT	210	324	339	447	478	701	708	838	375	412	274	243

e Estimated.

11316670 NORTH FORK MOKELUMNE RIVER BELOW TIGER CREEK RESERVOIR, NEAR WEST POINT, CA

LOCATION.—Lat 38° 26'25", long 120° 30'14", in SE 1/4 SE 1/4 sec.23, T.7 N., R.13 E., Amador County, Hydrologic Unit 18040012, on right bank, 500 ft downstream from Tiger Creek Reservoir Dam, and 3.1 mi northeast of West Point.

DRAINAGE AREA.—357 mi^2.

PERIOD OF RECORD.—October 1985 to current year (low-flow records only). Unpublished records for water years 1982–85 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 2,220 ft above NGVD of 1929, from topographic map.

REMARKS.—No records computed above 50 ft^3/s. Flow regulated since 1931 by Salt Springs Reservoir (station 11313500) 20 mi upstream. Water is diverted through Tiger Creek Powerplant Conduit (station 11314000). Additional water is diverted out of the Bear River and several smaller tributaries into Tiger Creek Powerplant Conduit. All the water enters the North Fork Mokelumne River at Tiger Creek Powerplant (station 11316610) 0.4 mi downstream. Most of the water is diverted at Tiger Creek Reservoir to West Point Powerplant. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 137.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	44	46	46	---	46	---	---	---	---	e44	44
2	44	44	46	46	---	44	---	---	---	---	e44	44
3	44	44	46	47	---	44	---	---	---	---	e44	44
4	44	44	45	47	---	---	---	---	---	43	e44	43
5	44	45	44	47	---	---	---	---	---	42	e44	44
6	44	46	44	47	---	---	---	---	---	42	e44	44
7	44	---	44	47	---	---	---	---	---	42	e44	44
8	44	---	44	47	---	---	---	---	---	42	e44	44
9	44	---	44	47	---	---	---	---	---	42	e44	44
10	44	42	44	47	---	---	---	---	---	42	e44	43
11	44	42	44	47	---	---	---	---	---	42	e44	44
12	44	42	44	---	---	---	---	---	---	44	e44	44
13	44	42	45	---	---	---	---	---	---	46	44	44
14	44	42	---	44	---	---	---	---	---	e46	44	44
15	44	42	---	44	---	---	---	---	---	e46	44	44
16	44	43	---	---	49	---	---	---	---	e46	44	44
17	44	45	---	---	44	---	---	---	---	e46	44	44
18	44	46	46	---	44	---	---	---	---	e46	44	44
19	44	46	45	---	44	---	---	---	---	e46	44	44
20	44	---	44	---	44	---	---	---	---	e46	44	44
21	44	---	44	---	44	---	---	---	---	e45	44	44
22	44	---	44	---	44	---	---	---	---	e45	44	44
23	44	---	44	---	44	---	---	---	---	e45	44	43
24	44	46	44	---	44	---	---	---	---	e45	44	43
25	44	45	44	---	44	---	---	---	---	e45	44	43
26	44	44	44	---	44	---	---	---	---	e45	44	43
27	44	46	45	---	---	---	---	---	---	e45	44	43
28	44	46	46	44	---	---	---	---	---	e45	44	43
29	44	46	46	---	---	---	---	---	---	e45	44	43
30	44	46	46	---	---	---	---	---	---	e45	44	43
31	44	---	47	---	---	---	---	---	---	e45	44	---
TOTAL	1364	---	---	---	---	---	---	---	---	---	1364	1310
MEAN	44.0	---	---	---	---	---	---	---	---	---	44.0	43.7
MAX	44	---	---	---	---	---	---	---	---	---	44	44
MIN	44	---	---	---	---	---	---	---	---	---	44	43
AC-FT	2710	---	---	---	---	---	---	---	---	---	2710	2600
a	28630	27520	28340	31450	27530	25190	12050	11590	28400	26380	27230	25330

CAL YR 2002 a 309700
WTR YR 2003 a 299600

e Estimated.
a Diversion, in acre-feet, to Tiger Creek Powerplant (station 11316610), provided by Pacific Gas & Electric Co.

11316700 NORTH FORK MOKELUMNE RIVER BELOW ELECTRA DIVERSION DAM, NEAR WEST POINT, CA

LOCATION.—Lat 38° 25'15", long 120° 32'56", in SW 1/4 NE 1/4 sec.33, T.7 N., R.13 E., Amador County, Hydrologic Unit 18040012, on right bank, 300 ft downstream from Electra Diversion Dam, and 2.0 mi northwest of West Point.

DRAINAGE AREA.—365 mi^2.

PERIOD OF RECORD.—October 1985 to current year (low-flow records only). Unpublished records for water years 1982–84 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder and sharp-crested weir since March 1987. Elevation of gage is 1,980 ft above NGVD of 1929, from topographic map.

REMARKS.—No records computed above 33 ft^3/s. Flow regulated since 1931 by numerous reservoirs and diversions upstream. Most of the water is diverted at Electra Diversion Dam to Electra Powerplant. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by Pacific Gas & Electric Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 137.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	29	---	---	---	---	---	---	---	---	33	e31
2	22	29	---	---	---	---	---	---	---	---	22	e31
3	22	29	---	---	---	---	---	---	---	---	22	e31
4	22	30	---	---	---	---	---	---	---	---	22	e31
5	22	30	---	---	---	---	---	---	---	---	22	e31
6	22	30	---	---	---	---	---	---	---	---	22	e31
7	22	30	---	---	---	---	---	---	---	---	24	e31
8	22	31	---	---	---	---	---	---	---	---	23	e31
9	22	---	---	---	---	---	---	---	---	---	23	e31
10	22	28	---	---	---	---	---	---	---	---	23	e31
11	22	29	---	---	---	---	---	---	---	---	23	e31
12	22	29	32	---	---	---	---	---	---	---	23	e31
13	22	29	33	---	---	---	---	---	---	---	26	e31
14	22	29	---	---	---	---	---	---	---	---	30	e31
15	22	29	---	---	---	---	---	---	---	---	30	e31
16	22	29	---	---	---	---	---	---	---	---	30	e31
17	22	29	---	---	---	---	---	---	---	---	30	e31
18	22	29	---	---	---	---	---	---	---	---	30	e31
19	22	29	---	---	---	---	---	---	---	---	31	e31
20	22	---	---	---	---	---	---	---	---	---	31	e31
21	22	---	---	---	---	---	---	---	---	---	e31	e31
22	22	---	---	---	---	---	---	---	---	---	e31	e31
23	22	---	---	---	---	---	---	---	---	---	e31	e31
24	22	---	33	---	---	---	---	---	---	---	e31	e31
25	22	29	33	---	---	---	---	---	---	---	e31	e31
26	22	29	33	---	---	---	---	---	---	---	e31	e31
27	22	29	33	---	---	---	---	---	---	---	e31	e31
28	22	29	33	---	---	---	---	---	---	---	e31	e31
29	22	29	---	---	---	---	---	---	---	---	e31	e31
30	23	---	---	---	---	---	---	---	---	---	e31	e31
31	26	---	---	---	---	---	---	---	---	---	e31	---
TOTAL	687	---	---	---	---	---	---	---	---	---	861	930
MEAN	22.2	---	---	---	---	---	---	---	---	---	27.8	31.0
MAX	26	---	---	---	---	---	---	---	---	---	33	31
MIN	22	---	---	---	---	---	---	---	---	---	22	31
AC-FT	1360	---	---	---	---	---	---	---	---	---	1710	1840

e Estimated.

11316800 FOREST CREEK NEAR WILSEYVILLE, CA

LOCATION.—Lat 38° 24'12", long 120° 26'45", in SW 1/4 NW 1/4 sec.4, T.6 N., R.14 E., Calaveras County, Hydrologic Unit 18040012, on left bank, 1.0 mi downstream from Lion Creek, 1.8 mi upstream from mouth, and 4 mi northeast of Wilseyville.

DRAINAGE AREA.—20.8 mi^2.

PERIOD OF RECORD.—July 1960 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 2,950 ft above NGVD of 1929, from topographic map.

REMARKS.—No regulation. Minor diversions upstream from station for irrigation and domestic use. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by East Bay Municipal Utility District, under general supervision of the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,020 ft^3/s, Feb. 19, 1986, gage height, 8.12 ft, from rating curve extended above 500 ft^3/s, on basis of slope-area measurement at gage height 7.41 ft; minimum daily, 0.11 ft^3/s, Aug. 14, 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 120 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 13	1155	152	4.45	May 4	0520	138	4.39
Apr. 25	2315	154	4.46				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	2.1	3.2	18	20	17	25	67	22	7.8	6.1	2.4
2	1.5	2.2	3.3	15	20	16	27	64	20	7.0	8.3	2.3
3	1.8	2.1	3.2	16	18	15	28	76	19	7.4	6.9	2.2
4	1.8	2.1	3.3	15	17	15	30	118	18	6.5	5.4	2.4
5	2.2	2.1	3.2	14	16	14	29	93	18	5.8	5.0	2.3
6	2.1	2.1	3.1	13	15	13	28	84	17	5.8	4.4	1.6
7	2.1	2.7	3.2	12	14	13	28	77	16	6.0	4.0	1.8
8	1.2	21	3.1	11	13	12	28	83	15	5.3	3.7	2.8
9	0.91	16	3.0	11	12	12	29	79	16	4.8	2.7	2.8
10	1.0	9.2	3.4	16	12	12	29	74	15	5.5	2.1	2.9
11	1.6	6.7	3.6	17	12	11	31	70	14	5.5	3.2	2.9
12	2.4	5.0	3.5	15	11	12	46	66	13	5.5	3.0	2.6
13	2.1	4.3	5.3	14	18	13	137	64	12	5.1	2.4	2.1
14	2.0	3.9	14	13	18	14	96	63	11	5.0	2.7	1.7
15	1.9	3.7	16	13	16	36	73	62	10	4.5	2.5	2.0
16	1.8	3.6	52	12	25	28	63	59	10	4.0	1.7	1.9
17	1.9	3.5	35	12	22	25	61	55	10	4.2	2.5	1.9
18	1.9	3.2	18	12	20	22	61	52	9.4	4.5	2.9	2.4
19	1.9	3.3	12	13	20	21	57	49	9.5	3.9	2.7	2.5
20	2.0	3.3	12	12	19	21	53	46	9.5	3.7	2.4	2.3
21	1.9	3.2	14	13	18	20	57	42	9.6	4.1	2.2	2.2
22	1.9	3.3	12	14	18	20	55	40	10	3.6	2.1	2.6
23	1.9	3.3	10	17	17	26	53	38	9.3	4.0	2.6	2.6
24	2.0	3.4	10	19	17	28	67	35	8.4	4.0	2.2	1.5
25	2.1	3.5	9.3	19	19	26	94	32	9.2	3.4	2.7	1.8
26	2.1	3.5	9.5	18	18	33	110	31	8.7	3.1	2.8	2.3
27	2.2	3.7	12	19	18	33	84	29	8.0	3.5	2.7	2.3
28	2.1	3.7	14	21	17	29	93	27	7.7	3.4	2.6	1.9
29	2.1	3.2	19	20	---	27	86	26	7.6	3.2	2.5	1.7
30	2.1	3.3	16	18	---	25	74	25	7.7	3.6	1.9	1.8
31	2.1	---	24	19	---	25	---	24	---	4.3	1.5	---
TOTAL	58.51	136.2	353.2	471	480	634	1732	1750	370.6	148.0	100.4	66.5
MEAN	1.89	4.54	11.4	15.2	17.1	20.5	57.7	56.5	12.4	4.77	3.24	2.22
MAX	2.4	21	52	21	25	36	137	118	22	7.8	8.3	2.9
MIN	0.91	2.1	3.0	11	11	11	25	24	7.6	3.1	1.5	1.5
AC-FT	116	270	701	934	952	1260	3440	3470	735	294	199	132

11316800 FOREST CREEK NEAR WILSEYVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.00	8.86	19.4	38.8	45.8	51.8	49.6	35.2	13.8	6.22	3.75	3.18
MAX	11.9	59.5	138	244	243	209	174	129	54.8	18.5	10.5	8.36
(WY)	1983	1984	1965	1997	1986	1983	1982	1995	1998	1998	1983	1983
MIN	0.63	1.80	2.17	2.40	2.35	4.58	2.96	3.92	1.59	0.46	0.33	0.50
(WY)	1978	1993	1977	1991	1991	1977	1977	1977	1977	1977	1977	1992

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1961 - 2003	
ANNUAL TOTAL	4770.01		6300.41			
ANNUAL MEAN	13.1		17.3		23.3	
HIGHEST ANNUAL MEAN					67.9	1983
LOWEST ANNUAL MEAN					2.39	1977
HIGHEST DAILY MEAN	80	Mar 7	137	Apr 13	1550	Jan 2 1997
LOWEST DAILY MEAN	0.83	Sep 3	0.91	Oct 9	0.11	Aug 14 1977
ANNUAL SEVEN-DAY MINIMUM	1.1	Sep 21	1.6	Oct 5	0.15	Aug 11 1977
MAXIMUM PEAK FLOW			154	Apr 25	2020	Feb 19 1986
MAXIMUM PEAK STAGE			4.46	Apr 25	8.12	Feb 19 1986
ANNUAL RUNOFF (AC-FT)	9460		12500		16850	
10 PERCENT EXCEEDS	34		52		60	
50 PERCENT EXCEEDS	7.6		10		8.0	
90 PERCENT EXCEEDS	1.6		2.1		2.1	

11317000 MIDDLE FORK MOKELUMNE RIVER AT WEST POINT, CA

LOCATION.—Lat 38° 23'23", long 120° 31'32", in SE 1/4 NE 1/4 sec.10, T.6 N., R.13 E., Calaveras County, Hydrologic Unit 18040012, on right bank, 200 ft downstream from highway bridge, 4.5 mi upstream from South Fork Mokelumne River, and 0.6 mi south of West Point.

DRAINAGE AREA.—68.4 mi^2.

PERIOD OF RECORD.—October 1911 to current year. Monthly discharge only for October 1911, published in WSP 1315-A.

REVISED RECORDS.—WSP 1515: 1919–20, 1927–28(M), 1936(M). WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 2,450 ft above NGVD of 1929, from topographic map. Prior to Oct. 6, 1926, nonrecording gage at site 1,200 ft upstream at different datum. Oct. 6, 1926, to Aug. 18, 1928, nonrecording gage at present site and datum.

REMARKS.—Flow slightly regulated by Schaads Reservoir, capacity, 1,740 acre-ft, 6 mi upstream from station, since January 1940. Maximum output of Schaads Powerplant is 35 ft^3/s and is operational only when reservoir level is within 4 ft of spill gates. Several small diversions upstream from station. At times water is diverted 4 mi upstream from station to Licking Fork Mokelumne River via Middle Fork Ditch, capacity, 10 ft^3/s; because of leakage, only 5 ft^3/s may reach Licking Fork Mokelumne River. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by East Bay Municipal Utility District, under general supervision of the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,040 ft^3/s, Jan. 2, 1997, gage height, 9.28 ft, from rating curve extended above 4,010 ft^3/s; no flow for many days in 1931 and Sept. 9, 1934.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 400 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 13	1615	535	3.86

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	7.6	10	e29	59	28	73	182	77	55	22	4.7
2	5.1	7.7	9.8	e25	59	26	85	171	72	e13	24	6.5
3	5.2	8.1	9.6	e26	56	26	87	201	68	e13	26	6.1
4	4.8	8.1	9.3	e25	54	25	91	323	64	e13	18	9.1
5	4.5	8.0	e9.1	e24	54	24	96	260	61	e13	14	9.2
6	5.0	7.8	8.8	e36	45	23	87	222	58	e13	12	7.3
7	4.8	13	8.7	e50	24	36	82	203	56	e13	12	4.9
8	4.4	34	8.7	54	24	52	83	221	54	e13	11	6.1
9	4.0	36	8.9	54	24	52	85	216	55	e13	9.6	6.8
10	4.1	20	9.1	51	33	51	88	197	54	e13	5.2	6.4
11	4.4	17	9.1	35	50	50	91	184	54	e13	7.4	6.2
12	5.5	13	8.7	31	50	49	110	177	56	e13	6.4	6.2
13	5.6	11	12	36	62	50	447	174	39	e13	4.2	6.4
14	5.4	11	24	57	63	47	317	175	10	e13	4.8	4.5
15	5.3	10	32	56	59	57	218	177	22	e13	5.0	5.3
16	5.5	10	143	55	56	46	176	171	47	e13	3.0	5.4
17	5.6	10	e64	53	43	62	161	161	47	e13	5.2	4.9
18	5.6	10	e60	52	49	63	160	153	46	e13	6.4	5.3
19	5.7	9.9	e50	54	64	60	143	143	44	e13	6.7	5.8
20	5.9	9.8	e50	56	62	61	131	137	43	e13	6.6	6.2
21	6.0	9.7	e54	46	60	60	137	134	42	e13	6.7	6.1
22	6.3	9.6	e50	27	58	59	136	134	42	e13	6.6	7.3
23	6.5	9.6	e48	29	58	69	125	131	42	e13	7.5	7.6
24	6.9	9.4	e48	32	58	73	156	127	39	13	7.7	6.5
25	7.1	9.9	e48	31	57	70	244	120	39	8.8	6.8	6.5
26	9.4	10	e48	30	58	83	330	110	38	6.3	9.7	7.2
27	9.3	10	e33	49	59	94	239	102	39	7.0	8.4	7.0
28	9.1	10	e24	62	57	83	257	99	40	5.9	6.9	6.7
29	7.6	10	e30	60	---	75	246	96	40	5.3	6.7	5.9
30	7.6	10	e26	57	---	71	205	90	48	5.1	6.4	5.6
31	7.2	---	e35	58	---	70	---	82	---	9.1	2.2	---
TOTAL	185.0	360.2	988.8	1340	1455	1695	4886	5073	1436	401.5	285.1	189.7
MEAN	5.97	12.0	31.9	43.2	52.0	54.7	163	164	47.9	13.0	9.20	6.32
MAX	9.4	36	143	62	64	94	447	323	77	55	26	9.2
MIN	4.0	7.6	8.7	24	24	23	73	82	10	5.1	2.2	4.5
AC-FT	367	714	1960	2660	2890	3360	9690	10060	2850	796	565	376

e Estimated.

11317000 MIDDLE FORK MOKELUMNE RIVER AT WEST POINT, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.3	22.2	49.3	92.0	125	139	148	108	43.7	16.6	9.35	7.76
MAX	37.5	223	389	680	768	653	561	372	181	71.8	40.8	31.1
(WY)	1983	1951	1956	1997	1986	1983	1982	1983	1983	1998	1969	1969
MIN	0.86	2.64	3.33	4.75	5.70	9.06	6.47	4.17	0.95	0.22	0.071	0.15
(WY)	1932	1930	1977	1977	1991	1977	1977	1931	1924	1924	1931	1931

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1912 - 2003	
ANNUAL TOTAL	14443.0		18295.3			
ANNUAL MEAN	39.6		50.1		64.0	
HIGHEST ANNUAL MEAN					218	1983
LOWEST ANNUAL MEAN					5.25	1977
HIGHEST DAILY MEAN	283	Mar 7	447	Apr 13	3740	Jan 2 1997
LOWEST DAILY MEAN	3.0	Aug 15	2.2	Aug 31	0.00	Aug 23 1931
ANNUAL SEVEN-DAY MINIMUM	3.5	Aug 15	4.5	Oct 5	0.00	Aug 23 1931
MAXIMUM PEAK FLOW			535	Apr 13	5040	Jan 2 1997
MAXIMUM PEAK STAGE			3.86	Apr 13	9.28	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	28650		36290		46390	
10 PERCENT EXCEEDS	101		136		166	
50 PERCENT EXCEEDS	20		29		21	
90 PERCENT EXCEEDS	4.8		5.8		4.0	

11318500 SOUTH FORK MOKELUMNE RIVER NEAR WEST POINT, CA

LOCATION.—Lat 38° 22'06", long 120° 32'40", in SE 1/4 SE 1/4 sec.16, T.6 N., R.13 E., Calaveras County, Hydrologic Unit 18040012, on right bank, 500 ft upstream from highway bridge, 2.5 mi upstream from mouth, and 2.4 mi southwest of West Point.

DRAINAGE AREA.—75.1 mi^2.

PERIOD OF RECORD.—October 1933 to current year.

REVISED RECORDS.—WSP 1315-A: 1934(M). WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 1,950 ft above NGVD of 1929, from topographic map. October 1933 to Sept. 19, 1957, at site 1,100 ft downstream at different datum.

REMARKS.—The Middle Fork Ditch can divert 10 ft^3/s from the Middle Fork Mokelumne River which, due to leakage, delivers about 5 ft^3/s to Licking Fork Mokelumne River. There are two pumps with a combined capacity of 8.9 ft^3/s that can pump water to Jeff Davis Reservoir upstream from the station. There are other small diversions upstream from the station for irrigation and domestic use. See schematic diagram of Mokelumne River Basin.

COOPERATION.— Records were collected by East Bay Municipal Utility District, under general supervision of the U.S Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,610 ft^3/s, Jan. 2, 1997, gage height, 12.72 ft, from rating curve extended above 2,700 ft^3/s, on basis of slope-area measurement of peak flow; no flow many days during August and September 1934.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 500 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 13	1055	566	5.01

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	5.9	4.7	66	52	48	72	223	59	22	13	2.2
2	4.8	5.6	5.0	51	55	46	89	210	57	19	15	2.4
3	4.5	5.8	4.7	47	49	44	90	248	54	18	17	1.9
4	4.8	6.8	4.8	45	46	42	100	364	51	16	12	1.8
5	4.7	6.8	5.1	43	43	40	98	308	49	18	9.7	2.1
6	4.1	6.7	5.0	42	36	39	85	271	47	20	8.9	1.6
7	4.4	9.1	4.6	39	30	37	78	245	46	18	8.9	1.5
8	4.3	54	4.6	38	28	36	77	251	44	16	8.5	2.1
9	4.1	59	5.1	39	26	35	82	238	43	15	7.2	1.9
10	4.0	29	5.6	63	25	34	87	218	40	15	7.0	2.4
11	4.6	25	5.8	72	25	33	89	209	39	15	7.0	2.4
12	4.5	15	4.9	59	25	34	114	201	38	14	5.4	2.5
13	4.6	8.3	14	52	49	38	487	195	37	14	3.8	1.9
14	4.2	4.7	47	49	63	44	384	197	35	13	3.1	1.6
15	3.9	4.3	66	45	48	133	265	213	35	12	3.8	1.6
16	3.0	3.4	225	42	101	109	213	187	34	12	3.8	0.86
17	3.0	9.1	184	40	80	85	196	171	32	13	3.8	0.84
18	3.7	10	75	41	63	76	189	159	32	12	3.7	1.6
19	4.2	6.3	50	41	55	69	171	144	31	9.5	3.6	1.2
20	4.5	6.0	60	41	52	69	160	131	30	10	3.8	0.99
21	5.1	6.0	70	40	48	67	167	122	30	10	3.4	1.0
22	5.4	6.1	51	42	45	65	160	115	30	9.0	4.5	1.5
23	5.0	5.7	37	45	44	82	148	107	29	8.8	5.1	3.2
24	5.2	5.0	31	51	44	100	193	99	27	8.8	4.5	4.4
25	5.8	5.2	28	50	52	88	278	92	26	8.4	3.9	3.8
26	5.8	4.8	26	51	50	91	367	86	25	7.8	3.6	3.4
27	5.8	4.8	28	52	50	93	284	79	24	7.5	4.2	3.9
28	6.1	4.4	39	55	49	81	314	72	23	7.6	3.3	4.4
29	5.9	4.4	93	51	---	74	288	68	21	6.5	3.3	5.0
30	5.3	4.6	62	48	---	71	247	65	22	6.5	3.0	4.1
31	5.1	---	78	49	---	69	---	61	---	8.6	2.5	---
TOTAL	145.7	331.8	1323.9	1489	1333	1972	5572	5349	1090	391.0	190.3	70.09
MEAN	4.70	11.1	42.7	48.0	47.6	63.6	186	173	36.3	12.6	6.14	2.34
MAX	6.1	59	225	72	101	133	487	364	59	22	17	5.0
MIN	3.0	3.4	4.6	38	25	33	72	61	21	6.5	2.5	0.84
AC-FT	289	658	2630	2950	2640	3910	11050	10610	2160	776	377	139

11318500 SOUTH FORK MOKELUMNE RIVER NEAR WEST POINT, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.4	30.1	72.1	133	176	187	182	121	46.5	21.4	12.2	9.95
MAX	41.6	270	465	907	959	825	704	461	163	62.9	36.1	31.6
(WY)	1983	1951	1956	1997	1986	1983	1982	1995	1983	1983	1952	1983
MIN	1.65	3.21	2.83	1.85	2.53	11.3	7.48	10.9	4.49	1.00	0.039	0.13
(WY)	1989	1991	1991	1991	1991	1977	1977	1977	1992	1934	1934	1934

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1934 - 2003	
ANNUAL TOTAL	15899.9		19257.79			
ANNUAL MEAN	43.6		52.8		83.3	
HIGHEST ANNUAL MEAN					264	1983
LOWEST ANNUAL MEAN					6.14	1977
HIGHEST DAILY MEAN	321	Mar 7	487	Apr 13	5780	Feb 17 1986
LOWEST DAILY MEAN	2.2	Aug 7	0.84	Sep 17	0.00	Aug 6 1934
ANNUAL SEVEN-DAY MINIMUM	2.5	Aug 3	1.1	Sep 16	0.00	Aug 12 1934
MAXIMUM PEAK FLOW			566	Apr 13	7610	Jan 2 1997
MAXIMUM PEAK STAGE			5.01	Apr 13	12.72	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	31540		38200		60330	
10 PERCENT EXCEEDS	119		159		214	
50 PERCENT EXCEEDS	21		30		27	
90 PERCENT EXCEEDS	3.9		3.7		5.7	

11319500 MOKELUMNE RIVER NEAR MOKELUMNE HILL, CA

LOCATION.—Lat 38° 18'46", long 120° 43'09", in SW 1/4 SW 1/4 sec.1, T.5 N., R.11 E., Calaveras County, Hydrologic Unit 18040012, on downstream side of bridge, 1.2 mi northwest of Mokelumne Hill, and 8 mi downstream from confluence of north and south Forks of Mokelumne River.

DRAINAGE AREA.—544 mi^2.

PERIOD OF RECORD.—January to June 1901, May 1903 to December 1904, October 1927 to current year. Yearly estimate only for water year 1928 (incomplete), published in WSP 1315-A. Published as "at Electra" 1901, 1903–04.
CHEMICAL DATA: Water year 1980. Water years 1971–79 in files of California Department of Water Resources.
WATER TEMPERATURE: Water years 1961–79 (daily record).

REVISED RECORDS.—WSP 1445: 1903–04, 1928(M), 1936(M), 1938(M), 1940(M), 1943(M), 1945(M). WSP 1930: Drainage area.
WDR CA-00-3: 1996 (maximum gage height).

GAGE.—Water-stage recorder. Datum of gage is 584.88 ft above NGVD of 1929 (levels by California Division of Highways). Jan. 1, to June 30, 1901, and May 11, 1903, to Dec. 31, 1904, nonrecording gage at site 3 mi upstream at different datum. Nov. 10, 1927, to Aug. 26, 1952, water-stage recorder at site 40 ft upstream at datum 5.00 ft higher. Aug. 27, 1952, to Oct. 14, 1977, at present site at datum 5.00 ft higher.

REMARKS.—Flow regulated by Salt Springs Reservoir (station 11313500) beginning in 1931, several smaller reservoirs, and four powerplants. Diversion upstream from station for irrigation and domestic use. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by East Bay Municipal Utility District, under general supervision of the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 41,300 ft^3/s, Jan. 2, 1997, gage height, 25.60 ft, present datum; minimum observed, 5 ft^3/s, Aug. 13–15, 17, 18, 1904.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	511	411	589	886	1070	885	430	1330	2190	724	690	524
2	491	481	586	718	1010	815	587	1250	3360	727	605	525
3	536	501	547	771	1050	745	776	1340	3960	620	647	522
4	492	480	543	815	1070	759	724	1890	4320	647	571	516
5	561	509	257	840	1040	799	649	1580	4080	600	597	682
6	543	598	231	766	962	798	546	1500	3840	503	587	714
7	493	449	240	773	959	815	596	1430	3920	577	567	701
8	508	602	596	812	933	807	628	1510	3720	290	516	697
9	525	1280	505	876	966	843	661	1750	3600	607	510	531
10	483	743	605	944	864	775	725	1760	3310	554	507	525
11	512	532	648	792	896	832	785	1740	2590	541	495	548
12	523	523	625	824	822	771	846	1710	1940	555	458	566
13	535	542	592	897	812	754	2070	1650	1770	579	153	486
14	492	362	706	815	856	857	1910	1750	1290	565	91	494
15	456	526	927	865	854	934	1430	1770	1180	346	165	677
16	491	555	1060	845	945	939	1170	1750	1640	190	603	687
17	448	589	1300	956	845	832	1170	1690	1480	122	589	677
18	479	536	917	1120	756	852	1130	1700	1420	496	576	688
19	509	591	652	938	647	882	1180	1630	1480	523	552	711
20	490	388	712	1040	728	907	985	1590	1380	558	535	701
21	492	340	749	1130	830	799	683	1810	1150	559	541	647
22	558	574	670	1050	893	666	834	1770	1130	619	554	391
23	545	617	708	982	842	586	723	1890	1070	653	569	148
24	491	645	584	1070	792	682	731	1940	982	660	567	96
25	464	585	533	1130	617	687	1100	1880	930	651	563	496
26	554	612	605	1080	870	684	1470	1810	833	650	559	668
27	469	576	619	924	775	946	1130	1810	809	646	553	663
28	461	544	667	854	930	760	1300	1910	802	653	532	573
29	513	549	909	862	---	596	1450	1850	812	654	488	532
30	525	540	563	1020	---	461	1370	1940	737	642	481	554
31	479	---	778	1090	---	416	---	1940	---	658	501	---
TOTAL	15629	16780	20223	28485	24634	23884	29789	52870	61725	17369	15922	16940
MEAN	504	559	652	919	880	770	993	1705	2058	560	514	565
MAX	561	1280	1300	1130	1070	946	2070	1940	4320	727	690	714
MIN	448	340	231	718	617	416	430	1250	737	122	91	96
AC-FT	31000	33280	40110	56500	48860	47370	59090	104900	122400	34450	31580	33600

11319500 MOKELUMNE RIVER NEAR MOKELUMNE HILL, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	513	582	762	924	1046	1171	1365	1889	1799	741	555	527
MAX	898	3275	4375	5659	4788	3950	4114	5092	6243	3384	1117	949
(WY)	1984	1951	1951	1997	1986	1983	1982	1952	1983	1983	1983	1983
MIN	8.97	25.3	70.1	65.5	100	115	221	273	262	106	77.5	67.7
(WY)	1978	1930	1931	1991	1977	1977	1977	1987	1977	1928	1930	1930

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL	266926		324250			
ANNUAL MEAN	731		888		988	
HIGHEST ANNUAL MEAN					2511	1983
LOWEST ANNUAL MEAN					208	1977
HIGHEST DAILY MEAN	1890	Jun 7	4320	Jun 4	31300	Jan 2 1997
LOWEST DAILY MEAN	26	Aug 14	91	Aug 14	6.6	Oct 2 1977
ANNUAL SEVEN-DAY MINIMUM	226	Sep 1	340	Aug 9	7.0	Sep 28 1977
MAXIMUM PEAK FLOW			5160	Jun 7	41300	Jan 2 1997
MAXIMUM PEAK STAGE			12.55	Jun 7	25.60	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	529400		643100		715900	
10 PERCENT EXCEEDS	1180		1670		2150	
50 PERCENT EXCEEDS	619		690		623	
90 PERCENT EXCEEDS	454		491		246	

11323500 MOKELUMNE RIVER BELOW CAMANCHE DAM, CA

LOCATION.—Lat 38° 13'34", long 121° 02'24", in NE 1/4 SE 1/4 sec.6, T.4 N., R.9 E., San Joaquin County, Hydrologic Unit 18040005, at Camanche Dam, and 4.2 mi northeast of Clements.

DRAINAGE AREA.—621 mi^2.

PERIOD OF RECORD.—October 1904 to current year. Monthly discharge only for some periods, published in WSP 1315-A and 1735. Prior to October 1961, published as "near Clements."
CHEMICAL DATA: Water years 1906–07, 1965–66. Published as "at Clements" in 1906–07.
WATER TEMPERATURE: Water years 1962–68, 1970–76.
SEDIMENT DATA: Water years 1956–70. Prior to 1962 water year, published as "near Clements".

REVISED RECORDS.—WSP 751: Drainage area. WSP 881: 1905–09 (yearly summaries only). WSP 1445: 1911, 1917(M), 1925(M). WDR CA-94-3: 1993(M).

GAGE.—Ultrasonic flowmeters on outlet pipes at dam and water-stage recorder on spillway. Elevation of ultrasonic flowmeters is 140 ft above NGVD of 1929, from topographic map. Datum of spillway gage is 235.50 ft above NGVD of 1929. Oct. 1, 1961, to September 1999, Oct. 1, 2001, to September 2002, published data from water-stage recorder on left bank 1 mi downstream (present auxiliary gage). Datum of auxiliary gage is 82.71 ft above NGVD of 1929. See WSP 1930 for history of changes prior to Oct. 1, 1961.

REMARKS.—Flow regulated by Camanche Reservoir (station 11322300) beginning December 1963, Salt Springs Reservoir (station 11313500) beginning March 1931, Pardee Reservoir (station 11320000) beginning March 1929, and several small reservoirs. East Bay Municipal Utility District aqueducts, maximum capacity, 511 ft^3/s with Pardee Reservoir full, are the largest of several diversions upstream from the station. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by East Bay Municipal Utility District, under general supervision of the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 28,800 ft^3/s, Nov. 21, 1950, gage height, 24.40 ft, site and datum then in use; no flow on several days in 1924. Maximum discharge since construction of Camanche Dam in 1963, 6,060 ft^3/s, Feb. 19, 1986, gage height, 11.21 ft; minimum daily, 23 ft^3/s, Oct. 6, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	360	257	255	256	251	256	299	301	1650	1320	800	401
2	349	257	256	256	251	255	299	301	1450	1320	800	401
3	335	256	256	256	251	255	300	300	1250	1320	801	401
4	324	257	256	256	253	254	300	302	1050	1320	805	401
5	313	254	254	256	251	255	296	302	848	1320	803	401
6	313	256	257	257	253	255	300	301	648	1310	800	402
7	313	257	257	256	251	255	301	302	599	1320	798	400
8	298	256	257	256	252	256	301	300	600	1230	800	400
9	280	255	257	258	252	257	299	303	554	1130	803	400
10	280	256	257	257	253	256	300	301	502	1020	802	400
11	282	256	260	256	253	255	300	302	502	930	800	400
12	285	255	256	256	252	255	299	302	506	822	798	400
13	285	255	256	256	252	255	300	301	633	800	798	402
14	284	257	258	257	252	256	299	317	1310	801	797	401
15	281	257	257	256	252	255	301	347	1310	802	798	352
16	276	256	256	256	251	288	300	363	1310	800	800	353
17	271	256	256	255	254	359	298	369	1310	800	799	351
18	265	256	257	253	252	356	300	368	1310	800	716	349
19	260	257	256	252	255	355	299	389	1310	775	629	330
20	262	256	257	253	253	356	300	402	1300	674	524	329
21	261	258	257	254	253	356	299	427	1300	574	428	328
22	258	257	257	252	253	317	301	441	1310	473	402	329
23	256	257	257	254	252	316	300	441	1310	450	403	331
24	257	257	256	254	252	315	301	442	1310	452	404	330
25	256	255	257	254	252	267	304	442	1300	456	401	333
26	255	256	256	254	253	266	304	441	1300	607	401	330
27	256	255	256	251	255	265	299	620	1300	775	400	331
28	256	256	257	251	257	269	299	1020	1300	799	403	330
29	259	256	258	251	---	265	300	1420	1300	800	400	332
30	256	255	258	251	---	277	300	2000	1300	800	400	340
31	261	---	257	251	---	299	---	1850	---	800	401	---
TOTAL	8747	7684	7957	7891	7071	8756	8998	16017	32982	27600	19914	10988
MEAN	282	256	257	255	253	282	300	517	1099	890	642	366
MAX	360	258	260	258	257	359	304	2000	1650	1320	805	402
MIN	255	254	254	251	251	254	296	300	502	450	400	328
AC-FT	17350	15240	15780	15650	14030	17370	17850	31770	65420	54740	39500	21790

11323500 MOKELUMNE RIVER BELOW CAMANCHE DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1963, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	450	543	710	745	883	913	1193	1608	1458	557	478	467
MAX	670	3188	4568	3529	2473	3155	3451	4217	3164	1194	691	678
(WY)	1939	1951	1951	1956	1938	1938	1938	1952	1952	1952	1962	1958
MIN	58.0	63.1	95.6	112	77.6	132	136	179	241	296	267	108
(WY)	1932	1932	1960	1962	1948	1931	1961	1961	1931	1961	1961	1931

SUMMARY STATISTICS	WATER YEARS 1931 - 1963	
ANNUAL MEAN	832	
HIGHEST ANNUAL MEAN	1669	1938
LOWEST ANNUAL MEAN	221	1961
HIGHEST DAILY MEAN	26900	Nov 21 1950
LOWEST DAILY MEAN	35	Apr 24 1955
ANNUAL SEVEN-DAY MINIMUM	49	Feb 12 1948
MAXIMUM PEAK FLOW	28800	Nov 21 1950
MAXIMUM PEAK STAGE	24.40	Nov 21 1950
ANNUAL RUNOFF (AC-FT)	603000	
10 PERCENT EXCEEDS	1890	
50 PERCENT EXCEEDS	551	
90 PERCENT EXCEEDS	213	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	537	465	497	801	999	1034	924	1020	1008	811	643	526
MAX	2061	2157	2938	4978	4315	5117	3726	3889	3847	2932	1770	1447
(WY)	1966	1984	1984	1997	1997	1986	1983	1982	1995	1998	1998	1995
MIN	33.3	83.6	78.7	83.6	60.8	77.9	125	170	254	249	235	123
(WY)	1978	1989	1967	1967	1967	1989	1991	1988	1977	1991	1991	1992

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1965 - 2003	
ANNUAL TOTAL	116926		164605			
ANNUAL MEAN	320		451		771	
HIGHEST ANNUAL MEAN					2400	1983
LOWEST ANNUAL MEAN					172	1988
HIGHEST DAILY MEAN	560	Jun 21	2000	May 30	5750	Feb 18 1986
LOWEST DAILY MEAN	232	Feb 19	251	Jan 27	23	Oct 6 1977
ANNUAL SEVEN-DAY MINIMUM	235	Feb 14	251	Jan 27	28	Oct 14 1977
MAXIMUM PEAK FLOW			2070	May 30	6060	Feb 19 1986
MAXIMUM PEAK STAGE			a 6.72	May 30	11.21	Feb 19 1986
ANNUAL RUNOFF (AC-FT)	231900		326500		558400	
10 PERCENT EXCEEDS	496		881		1920	
50 PERCENT EXCEEDS	277		300		435	
90 PERCENT EXCEEDS	241		254		116	

a Auxiliary gage.

11325000 WOODBRIDGE CANAL AT WOODBRIDGE, CA

LOCATION.—Lat 38° 09'07", long 121° 18'00", in NE 1/4 SE 1/4 sec.34, T.4 N., R.6 E., San Joaquin County, Hydrologic Unit 18040005, on right bank at Woodbridge, at point of diversion from Woodbridge Reservoir.

PERIOD OF RECORD.—April 1926 to current year.

GAGE.—Water-stage recorder. Datum of gage is 32.18 ft above NGVD of 1929 (levels by East Bay Municipal Utility District). Prior to Mar. 15, 1931, water-stage recorder at site 0.2 mi downstream at different datum.

REMARKS.—Discharge computed from records of gate openings and effective head as shown by differential recorder. Canal diverts from Woodbridge Reservoir on Mokelumne River for irrigation south and west of Woodbridge. See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by Woodbridge Irrigation District, under general supervision of the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 482 ft^3/s, July 8, 1953; no flow at times in each year. Lowest daily mean, ~~-64~~ ft^3/s, May 4, 1938 (the water level in Woodbridge Reservoir was drawn down and water from the canal drained back into the reservoir. In order that the figures may represent the net diverted flow, the reverse flow was indicated by negative figures).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	50	0.00	0.00	0.00	0.00	70	77	153	150	178	152
2	109	50	0.00	0.00	0.00	0.00	76	75	144	151	176	160
3	97	49	0.00	0.00	0.00	0.00	80	75	141	152	171	166
4	94	16	0.00	0.00	0.00	0.00	73	78	140	149	169	170
5	91	0.00	0.00	0.00	0.00	0.00	73	79	142	148	170	166
6	84	0.00	0.00	0.00	0.00	0.00	71	79	149	150	169	168
7	79	0.00	0.00	0.00	0.00	0.00	69	73	145	158	170	171
8	74	0.00	0.00	0.00	0.00	0.00	71	67	134	168	174	173
9	68	0.00	0.00	0.00	0.00	0.00	67	60	126	190	175	173
10	69	0.00	0.00	0.00	0.00	0.00	69	47	119	187	174	173
11	71	0.00	0.00	0.00	0.00	0.00	72	44	124	187	177	174
12	71	0.00	0.00	0.00	0.00	0.00	70	47	135	186	176	175
13	70	0.00	0.00	0.00	0.00	0.00	74	70	135	181	176	175
14	68	0.00	0.00	0.00	0.00	0.00	77	78	139	179	178	173
15	70	0.00	0.00	0.00	0.00	0.00	78	82	140	179	182	172
16	71	0.00	0.00	0.00	0.00	0.00	79	93	148	177	178	171
17	74	0.00	0.00	0.00	0.00	0.00	76	98	157	180	174	170
18	71	0.00	0.00	0.00	0.00	0.00	75	93	162	181	174	169
19	68	0.00	0.00	0.00	0.00	0.00	77	100	166	182	175	170
20	63	0.00	0.00	0.00	0.00	0.00	71	108	166	179	175	169
21	62	0.00	0.00	0.00	0.00	14	73	115	168	180	167	166
22	60	0.00	0.00	0.00	0.00	38	77	124	164	184	151	168
23	63	0.00	0.00	0.00	0.00	36	78	124	164	190	136	169
24	57	0.00	0.00	0.00	0.00	44	78	124	164	196	132	171
25	60	0.00	0.00	0.00	0.00	50	76	121	164	192	129	169
26	62	0.00	0.00	0.00	0.00	58	76	121	164	187	133	168
27	60	0.00	0.00	0.00	0.00	65	79	123	163	185	140	167
28	59	0.00	0.00	0.00	0.00	70	77	132	164	182	148	168
29	61	0.00	0.00	0.00	---	66	77	148	155	179	145	168
30	61	0.00	0.00	0.00	---	67	78	161	150	180	149	163
31	57	---	0.00	0.00	---	67	---	163	---	181	146	---
TOTAL	2239	165.00	0.00	0.00	0.00	575.00	2237	2979	4485	5450	5067	5067
MEAN	72.2	5.50	0.000	0.000	0.000	18.5	74.6	96.1	150	176	163	169
MAX	115	50	0.00	0.00	0.00	70	80	163	168	196	182	175
MIN	57	0.00	0.00	0.00	0.00	0.00	67	44	119	148	129	152
AC-FT	4440	327	0.00	0.00	0.00	1140	4440	5910	8900	10810	10050	10050

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 2003, BY WATER YEAR (WY)

MEAN	105	23.3	4.35	0.22	0.18	21.5	110	203	255	268	249	177
MAX	218	137	83.5	5.95	5.55	158	295	376	401	412	378	294
(WY)	1955	1959	1959	1931	1931	1953	1953	1950	1950	1953	1953	1948
MIN	0.000	-0.14	0.000	0.000	0.000	0.000	0.000	64.6	95.9	63.0	66.8	5.37
(WY)	1978	1939	1927	1927	1927	1927	1927	1998	1926	1926	1926	1992

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1926 - 2003	
ANNUAL TOTAL	29058.00		28264.00			
ANNUAL MEAN	79.6		77.4		120	
HIGHEST ANNUAL MEAN					206	1953
LOWEST ANNUAL MEAN					49.2	1928
HIGHEST DAILY MEAN	208	Jun 25	196	Jul 24	482	Jul 8 1953
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Nov 5	-64	May 4 1938
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Nov 5	-6.3	Oct 31 1938
ANNUAL RUNOFF (AC-FT)	57640		56060		86620	
10 PERCENT EXCEEDS	183		174		307	
50 PERCENT EXCEEDS	74		71		97	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA

LOCATION.—Lat 38° 09'31", long 121° 18'09", in NW 1/4 NE 1/4 sec.34, T.4 N., R.6 E., San Joaquin County, Hydrologic Unit 18040005, on right bank at Woodbridge, 0.4 mi downstream from County Highway Bridge, and 0.5 mi downstream from dam and canal intake of Woodbridge Irrigation District.

DRAINAGE AREA.—661 mi^2.

PERIOD OF RECORD.—Water years 1924–94 (low-flow records only 1924–25), October 1996 to current year.
CHEMICAL DATA: Water years 1951–94.
SPECIFIC CONDUCTANCE: Water years 1952–58, 1975–77.
WATER TEMPERATURE: Water years 1951–58, 1961–86.
SEDIMENT: Water years 1975–94.

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 14.9 ft above NGVD of 1929 (levels by East Bay Municipal Utility District). See WSP 2130 for history of changes prior to July 26, 1968.

REMARKS.—Concerning regulation and diversions see REMARKS for Mokelumne River below Camanche Dam (station 11323500). Between Woodbridge and Camanche Dam there are many additional diversions for irrigation, including Woodbridge Canal (station 11325000). See schematic diagram of Mokelumne River Basin.

COOPERATION.—Records were collected by East Bay Municipal Utility District, under general supervision of the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 27,000 ft^3/s, Nov. 22, 1950, gage height, 29.58 ft, from rating curve extended above 6,200 ft^3/s, on basis of contracted-opening measurement of peak flow; minimum daily, 0.23 ft^3/s, Nov. 15, 1977. Maximum discharge since construction of Camanche Dam in 1963, 5,340 ft^3/s, Mar. 8, 1986, gage height, 23.19 ft; maximum gage height, 23.31 ft, Jan. 9, 1997.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146	132	211	224	210	212	174	173	1480	1040	496	133
2	160	126	211	214	211	211	177	176	1320	1060	495	149
3	156	121	209	211	211	208	173	185	1130	1060	509	123
4	151	535	210	209	211	211	185	181	960	1050	507	128
5	143	389	209	207	214	211	176	177	731	1050	507	130
6	137	237	209	207	213	207	165	172	547	1050	500	125
7	149	231	209	205	214	208	165	166	407	1050	485	128
8	149	288	209	205	213	204	160	168	405	992	484	136
9	123	237	209	207	214	206	163	178	405	878	479	128
10	113	219	210	220	214	207	169	188	319	789	474	115
11	115	214	209	210	214	207	167	187	282	673	479	125
12	114	210	209	206	217	206	195	181	253	597	486	108
13	117	202	237	208	232	188	231	165	286	522	481	115
14	122	205	260	208	215	185	176	156	700	521	471	119
15	126	207	243	208	212	256	164	164	998	517	477	119
16	127	208	320	208	235	218	166	179	1010	521	492	102
17	125	208	260	210	215	187	166	188	1010	514	490	91
18	123	211	224	211	213	189	165	190	1020	513	467	86
19	117	211	232	211	218	185	165	180	1010	504	376	83
20	113	212	265	211	215	221	166	200	1010	458	290	76
21	115	211	241	210	213	218	170	207	1000	346	243	70
22	115	214	219	211	213	206	172	203	1020	286	213	69
23	114	213	215	210	214	221	163	217	1030	166	203	73
24	117	214	213	210	214	178	173	220	1030	166	202	77
25	120	214	212	209	214	160	175	222	1010	168	192	74
26	118	209	211	210	215	135	174	227	1020	203	169	97
27	107	212	210	211	212	133	170	287	1020	371	141	81
28	109	212	220	209	213	134	193	529	1010	475	169	76
29	110	213	228	210	---	133	176	861	1040	476	152	81
30	110	212	218	210	---	136	173	1300	1050	489	152	98
31	127	---	239	211	---	151	---	1570	---	485	163	---
TOTAL	3888	6727	6981	6511	6019	5932	5207	9397	25513	18990	11444	3115
MEAN	125	224	225	210	215	191	174	303	850	613	369	104
MAX	160	535	320	224	235	256	231	1570	1480	1060	509	149
MIN	107	121	209	205	210	133	160	156	253	166	141	69
AC-FT	7710	13340	13850	12910	11940	11770	10330	18640	50610	37670	22700	6180

11325500 MOKELUMNE RIVER AT WOODBRIDGE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1963, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	277	469	655	713	870	848	989	1282	1121	200	133	198
MAX	571	2529	4283	3435	2341	3032	3278	3990	2958	728	309	400
(WY)	1939	1951	1951	1956	1938	1938	1938	1952	1952	1952	1931	1958
MIN	3.76	13.6	29.4	56.6	45.0	34.5	7.02	11.3	11.3	17.1	17.2	10.0
(WY)	1932	1932	1960	1962	1948	1961	1931	1931	1931	1955	1955	1931

SUMMARY STATISTICS	WATER YEARS 1931 - 1963		
ANNUAL MEAN	644		
HIGHEST ANNUAL MEAN	1507		1938
LOWEST ANNUAL MEAN	62.2		1960
HIGHEST DAILY MEAN	19600	Dec 9	1950
LOWEST DAILY MEAN	2.4	Oct 2	1931
ANNUAL SEVEN-DAY MINIMUM	2.4	Oct 2	1931
MAXIMUM PEAK FLOW	27000	Nov 22	1950
MAXIMUM PEAK STAGE	29.58	Nov 22	1950
ANNUAL RUNOFF (AC-FT)	466700		
10 PERCENT EXCEEDS	1680		
50 PERCENT EXCEEDS	346		
90 PERCENT EXCEEDS	28		

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

MEAN	393	430	447	757	894	842	669	651	554	374	264	257
MAX	1716	1979	2825	4746	4285	4711	3641	3522	2736	2561	1462	1067
(WY)	1966	1984	1984	1997	1997	1986	1983	1982	1983	1998	1998	1983
MIN	2.12	23.3	38.5	33.1	20.2	9.34	9.02	8.66	8.34	9.24	6.58	5.13
(WY)	1978	1978	1990	1977	1977	1989	1977	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1965 - 2003	
ANNUAL TOTAL	56981		109724			
ANNUAL MEAN	156		301		542	
HIGHEST ANNUAL MEAN					2170	1983
LOWEST ANNUAL MEAN					21.8	1977
HIGHEST DAILY MEAN	535	Nov 4	1570	May 31	5240	Mar 8 1986
LOWEST DAILY MEAN	29	Aug 14	69	Sep 22	0.23	Nov 15 1977
ANNUAL SEVEN-DAY MINIMUM	34	Jul 14	75	Sep 19	0.24	Nov 12 1977
MAXIMUM PEAK FLOW			1610	May 31	5340	Mar 8 1986
MAXIMUM PEAK STAGE			12.34	May 31	23.31	Jan 9 1997
ANNUAL RUNOFF (AC-FT)	113000		217600		392900	
10 PERCENT EXCEEDS	220		627		1560	
50 PERCENT EXCEEDS	182		210		209	
90 PERCENT EXCEEDS	38		121		27	

11333000 CAMP CREEK NEAR SOMERSET, CA

LOCATION.—Lat 38° 39'26", long 120° 39'46", in SW 1/4 SW 1/4 sec.4, T.9 N., R.12 E., El Dorado County, Hydrologic Unit 18040013, on right bank, 0.2 mi upstream from mouth, 1.3 mi northeast of Somerset, and 5.6 mi south of Camino.

DRAINAGE AREA.—62.6 mi^2.

PERIOD OF RECORD.—February to May 1924 (published as "near Pleasant Valley"), October 1954 to current year.

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 1,820 ft above NGVD of 1929, from topographic map. Feb. 1 to May 31, 1924, nonrecording gage at site 0.2 mi upstream at different datum.

REMARKS.—Records good. Flow partly regulated since January 1955 by Jenkinson Lake, usable capacity, 40,570 acre-ft. Water is released from Jenkinson Lake through Camino Conduit for irrigation and domestic supply in North Fork Cosumnes and South Fork American River Basins. Seepage from North Fork Extension Ditch siphon could constitute a major part or all the flow at low stages. Some water is released from Jenkinson Lake for irrigation downstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 22,400 ft^3/s, Jan. 2, 1997, gage height, 20.30 ft, from rating curve extended above 5,000 ft^3/s; no flow Aug. 7–18, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	4.0	5.7	23	7.0	8.4	12	312	65	6.7	5.7	5.0
2	4.2	4.0	5.7	16	8.0	8.0	17	293	46	6.6	7.5	5.1
3	4.2	4.0	5.7	14	6.9	7.8	16	370	31	6.6	7.4	5.1
4	4.2	3.8	5.7	13	6.7	7.5	19	481	26	6.6	6.0	5.0
5	4.1	3.8	5.7	12	6.6	7.2	22	415	21	6.4	6.0	4.9
6	4.0	3.8	5.7	10	6.4	7.0	20	361	17	6.3	6.0	4.9
7	4.0	4.5	5.7	9.4	6.3	6.9	19	331	14	6.2	6.0	4.8
8	4.0	21	5.7	8.7	6.3	6.6	16	353	11	6.2	5.8	4.9
9	4.0	19	5.7	8.4	6.3	6.6	15	345	10	6.2	5.5	5.0
10	3.9	13	6.0	9.7	6.2	6.4	13	297	9.4	6.2	5.5	5.1
11	3.8	10	6.0	11	6.2	6.4	12	276	9.3	6.0	5.5	5.0
12	3.8	6.0	5.7	8.8	6.2	6.2	18	273	9.1	6.0	5.5	4.9
13	3.8	5.7	8.9	8.2	9.5	6.0	115	273	9.0	6.0	5.5	4.8
14	3.8	5.6	21	7.7	12	6.1	69	277	8.8	6.0	5.5	4.8
15	3.7	5.5	30	7.4	8.3	18	44	274	8.6	5.8	5.3	4.7
16	3.7	5.3	42	7.0	24	11	35	268	8.4	5.7	5.2	4.8
17	3.7	5.0	51	6.9	18	8.6	31	244	8.3	5.7	4.9	4.8
18	3.7	4.9	25	6.9	13	8.5	29	222	8.1	5.7	4.9	4.8
19	3.8	5.1	16	6.7	12	7.2	24	199	8.0	5.7	5.0	4.8
20	3.8	5.5	16	6.6	12	11	20	176	7.9	5.7	5.1	4.8
21	3.8	5.5	18	7.1	11	8.8	26	163	7.8	5.5	5.3	4.8
22	3.8	5.6	16	7.5	9.8	8.0	26	162	7.8	5.5	5.8	4.8
23	3.8	5.6	11	8.9	9.2	18	22	166	7.6	5.6	5.8	4.8
24	3.9	5.5	9.3	8.7	8.8	19	32	162	7.5	5.7	5.5	4.7
25	3.8	5.6	8.1	7.9	9.1	14	50	151	7.3	5.5	5.4	4.7
26	3.8	5.5	7.6	7.5	8.4	18	118	140	7.2	5.3	5.5	4.8
27	3.8	5.5	10	7.3	11	16	276	113	7.1	5.3	5.5	4.7
28	3.8	5.7	12	7.3	9.1	14	388	88	6.9	5.3	5.3	4.8
29	3.8	5.7	29	7.1	---	13	379	81	6.8	5.2	5.1	4.8
30	3.8	5.7	22	6.9	---	11	351	87	6.7	5.2	5.1	4.8
31	3.8	---	28	6.8	---	10	---	79	---	5.4	5.0	---
TOTAL	120.3	195.4	449.9	284.4	264.3	311.2	2234	7432	408.6	181.8	173.1	145.7
MEAN	3.88	6.51	14.5	9.17	9.44	10.0	74.5	240	13.6	5.86	5.58	4.86
MAX	4.2	21	51	23	24	19	388	481	65	6.7	7.5	5.1
MIN	3.7	3.8	5.7	6.6	6.2	6.0	12	79	6.7	5.2	4.9	4.7
AC-FT	239	388	892	564	524	617	4430	14740	810	361	343	289
a	-2235	-660	+980	+2245	+1838	+2984	+6566	-110	-1874	-3495	-2115	-2046
b	2602	1386	1174	1039	924	1079	1073	1906	3947	4657	2527	2299
c	121	50	4	20	18	52	38	163	232	276	190	192

a Change in contents, in acre-feet, in Jenkinson Lake.
b Diversion, in acre-feet, from Jenkinson Lake provided by U.S. Bureau of Reclamation.
c Total evaporation, in acre-feet, from Jenkinson Lake provided by U.S. Bureau of Reclamation; not reviewed by U.S. Geological Survey.

11333000 CAMP CREEK NEAR SOMERSET, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.00	8.65	41.9	89.7	115	136	147	111	27.5	11.2	6.98	5.31
MAX	32.9	71.3	469	1095	820	745	621	452	220	37.2	23.7	17.2
(WY)	1983	1984	1984	1997	1986	1983	1982	1967	1998	1995	1972	1982
MIN	0.71	1.62	2.01	2.82	2.43	2.84	1.59	2.42	0.57	0.51	0.12	0.67
(WY)	1978	1978	1977	1977	1977	1977	1977	1977	1977	1977	1977	1988

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1955 - 2003	
ANNUAL TOTAL	6120.3		12200.7			
ANNUAL MEAN	16.8		33.4		58.7	
ANNUAL MEAN a	53.5		72.2		86.9	
HIGHEST ANNUAL MEAN					215	1983
LOWEST ANNUAL MEAN					1.89	1977
HIGHEST DAILY MEAN	113	Apr 17	481	May 4	10700	Jan 2 1997
LOWEST DAILY MEAN	3.7	Sep 25	3.7	Oct 15	0.00	Aug 7 1977
ANNUAL SEVEN-DAY MINIMUM	3.7	Oct 12	3.7	Oct 12	0.00	Aug 7 1977
MAXIMUM PEAK FLOW			552	May 4	22400	Jan 2 1997
MAXIMUM PEAK STAGE			4.90	May 4	20.30	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	12140		24200		42510	
ANNUAL RUNOFF (AC-FT) a	38700		52240		62990	
10 PERCENT EXCEEDS	42		80		172	
50 PERCENT EXCEEDS	8.2		6.9		8.2	
90 PERCENT EXCEEDS	3.9		4.2		3.0	

a Adjusted for change in contents, evaporation, and diversion from Jenkinson Lake.

11335000 COSUMNES RIVER AT MICHIGAN BAR, CA

LOCATION.—Lat 38° 30'01", long 121° 02'39", in NW 1/4 SE 1/4 sec.36, T.8 N., R.8 E., Sacramento County, Hydrologic Unit 18040013, on downstream side of midstream pier of county bridge at Michigan Bar, 5.5 mi southwest of Latrobe, and 16.3 river mi downstream from confluence of north and middle Forks of Cosumnes River.

DRAINAGE AREA.—536 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1907 to current year. Monthly discharge only for some periods, published in WSP 1315-A.

REVISED RECORDS.—WSP 331: 1911–12. WSP 1315-A: 1908–9, 1911(M). WSP 1930: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 168.09 ft above NGVD of 1929. Prior to July 10, 1930, nonrecording gage at same site and datum.

REMARKS.—Records good. Flow partly regulated since January 1955 by Jenkinson Lake, usable capacity, 40,570 acre-ft. See REMARKS for Camp Creek near Somerset (station 11333000) for diversion out of basin. Numerous small diversions upstream from station for irrigation and domestic use. See schematic diagram of Sacramento–San Joaquin Delta.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 93,000 ft^3/s, Jan. 2, 1997, gage height, 18.54 ft, from rating curve extended above 34,000 ft^3/s on basis of slope-area determination of peak flow; no flow at times in many years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood in March 1907 reached a stage of 16.3 ft, estimated discharge, 71,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 4,000 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 13	2000	3,800	7.21

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	12	36	469	300	221	411	1420	510	67	19	11
2	7.0	12	36	320	314	208	478	1290	462	63	20	11
3	6.9	12	36	261	294	198	488	1370	427	60	36	9.9
4	8.2	12	36	234	265	195	484	1840	394	59	58	10
5	7.9	13	37	217	243	191	708	1770	369	57	40	9.4
6	8.3	13	36	206	223	181	553	1560	340	54	32	e9.6
7	8.6	16	36	198	209	174	468	1380	314	53	27	e10
8	7.7	28	35	191	197	170	429	1350	291	51	26	e11
9	7.1	293	35	189	187	164	430	1510	272	48	25	11
10	6.7	234	36	218	178	159	454	1280	250	46	23	9.7
11	7.5	147	37	302	170	154	488	1160	229	45	21	9.0
12	6.7	120	39	313	166	151	609	1130	212	43	20	9.4
13	6.3	82	48	274	179	154	2920	1140	199	41	19	9.1
14	7.4	68	95	253	281	164	2370	1180	185	38	17	9.4
15	7.5	62	366	242	277	398	1480	1170	174	38	17	9.6
16	7.6	57	692	227	352	693	1130	1150	164	36	16	9.1
17	7.4	51	958	213	424	459	957	1080	151	34	15	8.2
18	8.0	46	506	212	332	392	915	1000	141	33	15	7.8
19	7.7	43	333	222	297	346	809	941	130	31	14	7.7
20	8.8	42	392	225	305	355	730	874	125	30	14	7.5
21	9.3	40	466	225	278	364	724	838	118	28	13	7.2
22	9.9	40	344	234	261	324	838	832	113	27	14	7.7
23	9.9	40	230	259	249	421	713	836	108	25	14	7.9
24	11	40	175	359	241	665	755	819	102	24	18	7.6
25	11	39	149	382	243	556	1360	784	99	24	16	7.2
26	11	38	131	353	237	497	1790	728	92	24	16	7.4
27	11	38	121	347	239	664	1490	673	86	23	14	6.8
28	12	37	156	350	236	564	2130	644	80	21	13	7.2
29	12	36	870	351	---	493	1920	617	74	20	13	7.8
30	12	36	603	320	---	445	1630	604	71	20	13	7.9
31	12	---	489	299	---	417	---	559	---	18	13	---
TOTAL	270.9	1747	7559	8465	7177	10537	30661	33529	6282	1181	631	264.1
MEAN	8.74	58.2	244	273	256	340	1022	1082	209	38.1	20.4	8.80
MAX	12	293	958	469	424	693	2920	1840	510	67	58	11
MIN	6.3	12	35	189	166	151	411	559	71	18	13	6.8
AC-FT	537	3470	14990	16790	14240	20900	60820	66500	12460	2340	1250	524

e Estimated.

11335000 COSUMNES RIVER AT MICHIGAN BAR, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	31.1	137	428	937	1188	1186	1053	688	252	60.2	20.5	14.7
MAX	335	2493	3380	7129	6610	5255	3992	2362	1111	346	114	82.0
(WY)	1963	1951	1965	1997	1986	1983	1982	1995	1998	1983	1983	1983
MIN	0.000	7.90	18.3	21.4	35.9	43.5	33.7	48.5	4.42	0.096	0.000	0.000
(WY)	1978	1930	1977	1991	1991	1977	1977	1977	1924	1977	1908	1924

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1908 - 2003	
ANNUAL TOTAL	99459.5		108304.0			
ANNUAL MEAN	272		297		496	
HIGHEST ANNUAL MEAN					1687	1983
LOWEST ANNUAL MEAN					21.8	1977
HIGHEST DAILY MEAN	2550	Mar 7	2920	Apr 13	61600	Jan 2 1997
LOWEST DAILY MEAN	4.0	Sep 5	6.3	Oct 13	0.00	Jul 25 1908
ANNUAL SEVEN-DAY MINIMUM	4.9	Sep 4	7.0	Oct 9	0.00	Jul 25 1908
MAXIMUM PEAK FLOW			3800	Apr 13	93000	Jan 2 1997
MAXIMUM PEAK STAGE			7.21	Apr 13	18.54	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	197300		214800		359400	
10 PERCENT EXCEEDS	703		837		1280	
50 PERCENT EXCEEDS	112		151		102	
90 PERCENT EXCEEDS	6.6		9.1		7.0	

11335000 COSUMNES RIVER AT MICHIGAN BAR, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1953–80, October 2001 to current year.
CHEMICAL DATA: Water years 1953–80, October 2001 to current year.
pH: December 2001 to November 2002 (discontinued).
SPECIFIC CONDUCTANCE: October 2001 to current year.
WATER TEMPERATURE: Water years 1963–79, December 2001 to current year.
SEDIMENT DATA: Water years 1958–74, December 2001 to current year.

PERIOD OF DAILY RECORD.—
pH: December 2001 to November 2002 (discontinued).
SPECIFIC CONDUCTANCE: December 2001 to current year.
WATER TEMPERATURE: December 2001 to current year.

INSTRUMENTATION.—Water-quality monitor since October 2001.

REMARKS.—pH records are rated excellent. Specific conductance and water temperature records are rated excellent, except January 16 to June 27, which are rated good. Interruptions in record were due to instrument failure.

EXTREMES FOR PERIOD OF DAILY RECORD.—
pH: Maximum recorded, 9.4 standard units, June 26, 2002; minimum recorded, 6.2 standard units, May 31, 2002.
SPECIFIC CONDUCTANCE: Maximum recorded, 130 microsiemens, Feb. 8, 2002; minimum recorded, 44 microsiemens, May 30, 31, 2003.
WATER TEMPERATURE: Maximum recorded, 31.0° C, July 20–22, 2003; minimum recorded, 3.0° C, Jan. 18, 20, 24, 30, 31, 2002.

EXTREME FOR CURRENT YEAR.—
pH: Maximum recorded, 8.8 standard units, Oct. 1; minimum recorded, 7.2 standard units, Nov. 10–14.
SPECIFIC CONDUCTANCE: Maximum recorded, 127 microsiemens, Dec. 22; minimum recorded, 44 microsiemens, May 30, 31.
WATER TEMPERATURE: Maximum recorded, 31.0° C, July 20–22; minimum recorded, 5.0° C, Dec. 25.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Alkalinity, wat flt Gran, field, mg/L as CaCO3 (29802)
OCT									
22...	1020	9.7	757	7.7	79	7.6	101	16.0	50.0
NOV									
14...	0850	68	765	10.8	101	7.4	68	12.5	22.0
DEC									
13...	1040	46	758	10.6	92	7.3	72	9.0	24.0
JAN									
13...	1100	274	760	11.9	103	7.8	81	9.0	25.0
FEB									
14...	1150	300	758	11.6	101	7.6	74	9.0	27.0
MAR									
13...	1140	154	761	11.0	106	7.4	80	13.5	33.0
APR									
10...	1130	436	760	9.6	92	7.4	78	13.5	31.0
MAY									
16...	1140	1200	765	10.8	103	7.2	49	13.5	14.0
JUN									
13...	1150	201	760	9.6	108	7.8	57	21.0	19.0
JUL									
25...	1020	24	757	10.4	133	8.0	74	27.5	19.0
AUG									
08...	1230	27	753	8.0	100	7.6	71	26.0	33.0
SEP									
10...	1220	10	760	8.5	103	8.1	74	25.0	34.0

11335000 COSUMNES RIVER AT MICHIGAN BAR, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Particulate nitrogen, susp, water, mg/L (49570)	Phosphorus, water, unfltrd mg/L (00665)
OCT									
22...	2.37	3.7	.13	<.04	<.06	<.008	<.02	.04	.008
NOV									
14...	2.15	3.5	.21	<.04	<.06	<.008	<.02	.03	.014
DEC									
13...	2.16	3.5	e.10	<.04	<.06	<.008	<.02	<.02	.006
JAN									
13...	1.93	3.7	e.07	<.04	<.06	<.008	<.02	<.02	.004
FEB									
14...	1.51	3.1	e.06	<.04	<.06	<.008	<.02	<.02	.006
MAR									
13...	1.77	3.2	e.09	<.04	<.06	<.008	<.02	<.02	.007
APR									
10...	1.36	2.9	e.09	<.04	<.06	<.008	<.02	<.02	.007
MAY									
16...	1.00	1.2	e.07	<.04	<.06	<.008	<.02	<.02	.008
JUN									
13...	1.00	1.2	.10	<.04	<.06	<.008	<.02	.04	.010
JUL									
25...	1.24	1.3	.15	<.04	<.06	<.008	<.02	<.02	.011
AUG									
08...	1.19	1.5	.15	<.04	<.06	<.008	<.02	<.02	.010
SEP									
10...	1.62	1.7	.21	<.04	<.06	<.008	<.02	.12	.011

Date	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)
OCT				
22...	.2	<.1	.2	3.1
NOV				
14...	.2	<.1	.2	7.2
DEC				
13...	<.1	<.1	<.1	1.4
JAN				
13...	<.1	<.1	<.1	3.5
FEB				
14...	<.1	<.1	<.1	1.3
MAR				
13...	<.1	.2	<.1	1.5
APR				
10...	<.1	<.1	<.1	1.8
MAY				
16...	<.1	<.1	<.1	1.5
JUN				
13...	.1	<.1	<.1	1.8
JUL				
25...	.2	<.1	.2	2.2
AUG				
08...	.2	<.1	.2	4.2
SEP				
10...	.7	<.1	.7	1.9

< Actual value is known to be less than value shown.
e Estimated.

11335000 COSUMNES RIVER AT MICHIGAN BAR, CA—Continued

PH, WATER WHOLE, FILED, STANDARD UNITS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.8	7.7	7.9	7.6	---	---	---	---	---	---	---	---
2	8.7	7.8	7.9	7.6	---	---	---	---	---	---	---	---
3	8.6	7.8	7.9	7.6	---	---	---	---	---	---	---	---
4	8.6	7.8	7.9	7.6	---	---	---	---	---	---	---	---
5	8.6	7.8	7.9	7.6	---	---	---	---	---	---	---	---
6	8.5	7.8	7.9	7.6	---	---	---	---	---	---	---	---
7	---	---	7.8	7.6	---	---	---	---	---	---	---	---
8	---	---	7.6	7.5	---	---	---	---	---	---	---	---
9	---	---	7.5	7.4	---	---	---	---	---	---	---	---
10	---	---	7.4	7.2	---	---	---	---	---	---	---	---
11	---	---	7.3	7.2	---	---	---	---	---	---	---	---
12	8.1	7.4	7.3	7.2	---	---	---	---	---	---	---	---
13	8.1	7.4	7.3	7.2	---	---	---	---	---	---	---	---
14	8.2	7.4	7.3	7.2	---	---	---	---	---	---	---	---
15	8.1	7.4	7.3	7.3	---	---	---	---	---	---	---	---
16	8.1	7.4	7.3	7.3	---	---	---	---	---	---	---	---
17	8.1	7.4	7.4	7.3	---	---	---	---	---	---	---	---
18	8.1	7.4	7.4	7.3	---	---	---	---	---	---	---	---
19	8.1	7.4	7.5	7.4	---	---	---	---	---	---	---	---
20	8.0	7.4	7.5	7.4	---	---	---	---	---	---	---	---
21	8.0	7.4	7.5	7.4	---	---	---	---	---	---	---	---
22	8.0	7.4	7.5	7.4	---	---	---	---	---	---	---	---
23	7.9	7.4	7.5	7.4	---	---	---	---	---	---	---	---
24	7.9	7.4	7.5	7.4	---	---	---	---	---	---	---	---
25	7.9	7.5	7.6	7.4	---	---	---	---	---	---	---	---
26	8.0	7.5	---	---	---	---	---	---	---	---	---	---
27	8.0	7.5	---	---	---	---	---	---	---	---	---	---
28	8.0	7.5	---	---	---	---	---	---	---	---	---	---
29	7.9	7.5	---	---	---	---	---	---	---	---	---	---
30	7.9	7.5	---	---	---	---	---	---	---	---	---	---
31	7.9	7.5	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

11335000 COSUMNES RIVER AT MICHIGAN BAR, CA—Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	102	100	94	93	81	78	117	109	69	61	87	78
2	102	100	94	92	81	78	110	109	68	62	91	83
3	103	101	93	92	81	79	111	110	67	58	90	79
4	103	102	93	91	81	79	112	110	70	60	80	79
5	104	102	92	91	81	78	112	106	72	62	81	78
6	104	102	92	91	81	78	108	104	75	65	79	77
7	---	---	92	89	81	79	104	101	73	65	80	77
8	---	---	90	88	81	79	101	99	75	64	80	78
9	---	---	92	74	81	80	99	96	75	69	80	78
10	---	---	74	64	81	79	101	95	77	69	81	78
11	---	---	65	64	81	79	101	88	79	71	81	78
12	103	101	65	64	81	79	89	81	81	72	81	78
13	103	101	65	64	81	78	81	80	82	74	81	78
14	102	100	66	65	81	79	81	80	84	74	80	77
15	102	100	67	66	86	74	82	79	80	67	107	77
16	102	100	69	67	93	71	85	80	92	67	95	78
17	101	99	70	69	92	78	84	80	96	82	79	76
18	101	99	70	70	84	78	84	81	92	84	76	74
19	101	99	71	70	88	83	84	78	90	84	74	72
20	101	99	72	71	119	78	84	78	88	79	77	72
21	100	99	73	72	124	108	80	75	80	79	80	76
22	100	99	74	73	127	121	81	75	79	78	80	78
23	100	98	74	73	121	117	79	74	79	77	95	77
24	100	98	74	74	117	115	77	69	77	77	94	88
25	99	98	75	74	116	114	69	60	77	76	88	79
26	99	97	---	---	115	112	63	59	77	76	79	76
27	98	96	80	77	113	111	63	60	78	76	76	65
28	97	95	80	78	112	105	65	60	80	77	66	63
29	96	95	81	78	121	97	66	60	---	---	67	64
30	96	94	81	78	118	115	66	58	---	---	65	64
31	95	93	---	---	120	112	68	61	---	---	65	64
MONTH	---	---	---	---	127	71	117	58	96	58	107	63

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	65	63	72	69	49	45	66	65	74	74	79	76
2	69	65	69	67	52	46	67	65	75	74	80	77
3	76	69	70	67	57	47	67	65	75	74	80	77
4	83	75	67	55	50	46	67	65	80	73	83	78
5	107	83	56	53	51	46	67	65	80	70	82	78
6	105	98	56	54	51	47	67	65	70	68	81	78
7	98	92	56	54	52	48	68	65	70	68	81	78
8	92	88	55	54	53	49	80	66	71	68	81	79
9	88	82	64	54	56	51	68	66	69	68	81	79
10	85	75	62	59	57	51	68	66	69	68	81	79
11	75	67	60	58	57	52	68	67	69	68	82	79
12	70	61	---	---	58	53	68	67	69	68	83	80
13	96	70	---	---	63	54	68	67	70	69	83	80
14	78	75	---	---	60	55	70	67	71	69	83	80
15	75	72	---	---	63	56	69	68	72	70	85	80
16	73	71	---	---	62	56	69	68	73	71	83	80
17	72	71	---	---	65	57	70	68	74	73	83	80
18	72	70	---	---	63	56	70	69	75	73	83	80
19	72	70	---	---	62	57	71	69	76	73	84	81
20	71	69	---	---	63	57	71	69	76	73	84	81
21	69	68	---	---	64	60	79	71	76	74	85	81
22	77	68	---	---	64	60	77	72	76	74	86	82
23	76	73	---	---	65	61	78	71	76	74	86	82
24	82	72	---	---	67	62	72	71	76	75	86	82
25	84	78	---	---	67	62	73	72	77	76	87	82
26	85	80	---	---	67	62	73	72	78	76	85	82
27	80	70	---	---	69	64	73	72	78	76	85	82
28	86	69	---	---	65	64	74	73	78	76	86	83
29	86	75	48	45	66	65	74	73	78	75	86	83
30	77	72	48	44	66	65	74	73	78	76	86	83
31	---	---	48	44	---	---	74	73	78	76	---	---
MONTH	107	61	---	---	69	45	80	65	80	68	87	76

11335000 COSUMNES RIVER AT MICHIGAN BAR, CA—Continued

TEMPERATURE, WATER, DEGREE C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.5	18.0	14.0	11.5	10.5	8.0	8.0	7.0	10.5	9.5	11.0	9.0
2	20.5	17.0	13.0	10.5	10.5	8.0	7.5	7.0	9.5	8.0	11.0	9.0
3	20.0	16.0	12.5	10.5	10.0	8.0	7.5	6.5	8.5	7.0	10.0	9.0
4	20.5	17.0	12.0	10.0	10.0	8.0	8.0	7.0	7.5	6.5	10.0	8.0
5	21.0	17.5	12.0	10.0	9.5	8.0	8.0	7.5	7.0	5.5	10.5	8.0
6	21.0	17.5	12.0	10.0	9.5	8.0	8.5	7.0	6.5	5.0	11.0	8.5
7	---	---	12.0	10.5	10.0	7.5	7.5	6.5	6.5	5.0	11.5	8.5
8	---	---	13.5	12.0	9.0	7.5	7.0	6.5	6.5	5.0	12.0	9.0
9	---	---	13.5	13.0	8.5	7.5	7.0	6.5	6.0	5.0	12.0	9.5
10	---	---	13.0	12.0	9.0	8.0	8.0	6.5	6.5	5.0	12.5	10.0
11	---	---	12.5	11.5	9.5	7.5	8.5	8.0	7.0	5.5	13.0	11.0
12	20.5	17.0	13.0	11.5	9.5	8.0	9.0	8.5	7.0	6.0	14.5	12.0
13	20.5	17.0	13.0	12.5	9.5	8.5	10.0	9.0	8.5	7.0	14.5	13.0
14	20.0	17.0	13.0	12.0	10.5	9.0	9.0	8.5	10.0	8.5	15.5	13.0
15	19.5	16.0	12.5	11.5	10.0	9.5	9.0	8.5	10.5	9.5	15.5	14.0
16	19.5	16.0	12.5	11.0	10.5	9.5	8.5	7.0	11.5	10.0	14.0	11.0
17	19.0	15.5	12.0	11.0	9.5	8.5	7.0	6.5	11.0	9.5	12.0	10.0
18	18.5	15.5	12.0	10.5	8.5	7.5	7.0	7.0	10.0	8.0	12.0	9.5
19	18.5	15.0	11.5	10.0	7.5	6.5	7.0	7.0	9.0	8.0	12.0	9.5
20	18.0	15.0	11.5	10.0	7.5	6.5	7.0	6.5	9.0	7.0	13.0	10.5
21	18.0	15.0	11.5	10.0	8.5	7.5	7.5	6.5	9.0	7.0	14.0	11.0
22	18.0	15.0	12.0	10.5	8.0	6.5	8.5	7.0	9.5	7.5	14.0	11.5
23	17.5	15.0	12.0	11.0	6.5	5.5	9.5	8.5	9.5	8.0	14.0	12.5
24	17.0	15.0	11.5	11.0	6.5	5.5	10.0	9.5	9.5	9.0	14.0	11.5
25	17.0	14.5	12.0	11.0	6.0	5.0	10.5	9.5	10.5	9.0	13.5	12.0
26	16.5	14.0	---	---	6.5	5.5	10.5	10.0	10.0	8.5	14.5	12.5
27	16.5	13.5	11.5	9.0	8.0	6.5	11.0	10.0	10.5	9.5	13.5	11.5
28	16.0	13.5	11.0	9.0	9.0	8.0	10.5	9.5	10.0	8.5	13.5	11.5
29	15.5	13.0	10.5	8.0	9.0	8.5	9.5	8.5	---	---	14.0	11.5
30	15.0	13.0	9.0	8.0	8.5	8.0	9.5	9.0	---	---	14.5	12.0
31	14.5	12.0	---	---	8.5	7.5	10.0	9.0	---	---	15.5	13.0
MONTH	---	---	---	8.0	10.5	5.0	11.0	6.5	11.5	5.0	15.5	8.0

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.5	12.5	12.5	11.0	22.0	19.0	26.0	25.0	29.0	27.0	28.0	24.0
2	12.5	11.5	12.5	11.5	23.0	20.0	25.5	24.5	27.5	26.0	28.5	24.5
3	12.0	10.5	13.5	11.5	24.0	20.5	25.5	24.5	28.0	25.5	28.0	25.0
4	11.5	10.5	13.0	11.5	24.0	21.5	25.5	24.5	27.0	26.0	28.5	25.0
5	10.5	8.5	12.5	10.0	24.0	21.5	26.0	25.0	27.5	25.5	28.5	24.5
6	11.5	9.5	13.0	10.5	24.0	21.5	26.5	25.5	27.5	25.0	27.5	23.5
7	13.0	10.0	13.0	11.0	24.0	21.5	26.5	25.0	27.0	24.5	26.0	23.0
8	14.5	11.0	12.5	11.5	24.5	21.0	26.5	24.5	27.0	24.0	26.0	23.0
9	15.0	12.5	11.5	9.0	24.5	21.5	26.5	25.0	27.5	24.0	24.0	22.5
10	15.0	13.0	12.0	8.5	24.0	21.5	27.5	25.5	27.5	24.0	25.5	21.5
11	15.0	13.5	13.5	10.5	23.5	21.0	28.0	25.5	27.0	24.0	26.5	22.0
12	14.0	11.5	---	---	23.0	21.0	28.0	26.0	27.5	24.0	26.5	22.5
13	11.5	11.0	---	---	23.5	19.5	28.5	26.0	27.0	23.5	26.5	22.5
14	11.5	9.5	---	---	24.0	20.5	28.5	25.5	27.0	24.0	26.5	22.5
15	11.0	9.0	---	---	25.0	20.5	28.5	26.0	27.0	23.5	25.5	22.5
16	11.0	9.5	---	---	26.0	22.0	29.0	25.5	27.5	24.0	25.0	21.5
17	11.5	10.0	---	---	26.5	23.0	29.5	26.0	27.5	24.0	24.5	21.0
18	12.5	10.0	---	---	26.0	23.5	30.0	26.5	28.0	24.5	24.5	20.0
19	12.5	10.5	---	---	25.5	22.5	30.0	27.0	28.0	24.5	24.5	20.5
20	12.5	11.5	---	---	25.5	22.5	31.0	27.5	28.0	24.5	24.5	20.0
21	12.0	11.5	---	---	25.0	22.0	31.0	28.0	27.5	25.5	25.0	21.0
22	12.0	10.0	---	---	25.5	22.0	31.0	28.0	26.5	24.5	25.0	21.0
23	12.0	10.0	---	---	25.0	22.0	30.0	28.0	27.5	23.5	25.5	21.0
24	12.0	11.0	---	---	25.0	21.5	29.5	27.5	27.5	24.5	25.0	21.0
25	11.0	10.0	---	---	25.5	22.5	30.0	27.0	28.0	24.5	24.5	20.5
26	12.0	9.5	---	---	26.5	23.0	30.0	27.0	28.5	25.5	24.5	20.5
27	12.5	10.5	---	---	27.0	24.0	30.0	27.0	28.0	25.0	24.5	20.5
28	12.5	11.5	---	---	27.0	25.0	30.5	27.0	27.5	24.0	24.5	20.5
29	12.0	10.5	21.5	20.0	27.0	25.0	30.5	27.5	27.0	23.0	24.0	20.5
30	12.5	10.0	20.5	18.5	26.5	25.0	30.0	28.0	27.0	23.5	24.0	20.0
31	---	---	21.0	18.5	---	---	29.5	27.5	27.5	24.0	---	---
MONTH	15.0	8.5	---	---	27.0	19.0	31.0	24.5	29.0	23.0	28.5	20.0

11335000 COSUMNES RIVER AT MICHIGAN BAR, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)	Suspnd. sediment, sieve diametr percent <.063mm (70331)
OCT						
22...SS	1020	9.7	16.0	1	.03	86
NOV						
14...SS	0850	68	12.5	3	.55	97
DEC						
13...SS	1040	46	9.0	2	.25	94
JAN						
13...SS	1100	274	9.0	1	.74	33
FEB						
14...SS	1150	300	9.0	2	1.6	75
MAR						
13...SS	1140	154	13.5	1	.42	83
APR						
10...SS	1130	436	13.5	3	3.5	77
MAY						
16...SS	1140	1200	13.5	5	16	70
JUN						
13...SS	1150	201	21.0	<.5	<.27	50
JUL						
25...SS	1020	24	27.5	<.5	<.03	67
AUG						
08...SS	1230	27	26.0	1	.07	80

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Depth at sample location, feet (81903)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Location in X-sect. looking dwnstrm ft from l bank (00009)
JUL							
25...*	1030	3.00	10.0	8.0	70	27.5	24.0
25...*	1040	3.00	10.3	7.7	70	27.5	40.0
25...*	1045	3.00	10.3	7.7	70	28.0	56.0
25...*	1047	3.00	10.3	7.8	69	28.0	72.0
25...*	1050	3.00	9.9	7.7	70	27.5	88.0

SS Suspended-sediment data determined from a sample collected and processed according to National Water Quality Assessment (NAWQA) protocol.

< Actual value is known to be less than value shown.

* Instantaneous discharge at time of cross-sectional measurement: 24 ft^3/s.

11336580 MORRISON CREEK NEAR SACRAMENTO, CA

LOCATION.—Lat 38° 29'55", long 121° 27'06", in SW 1/4 SE 1/4 sec.32, T.8 N., R.5 E., Sacramento County, Hydrologic Unit 18020109, on right bank, 750 ft upstream from Florin Road, 1.6 mi upstream from Elder Creek, and 3.8 mi south of State Capitol Building in Sacramento.

DRAINAGE AREA.—53.4 mi^2.

PERIOD OF RECORD.—August 1959 to September 1987, October 1997 to current year.

REVISED RECORDS.— WDR CA-72-2: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 7.60 ft above NGVD of 1929. Prior to June 29, 1960, at site 650 ft downstream at datum 1.55 ft higher. June 29, 1960, to Sept. 12, 1965, at site 475 ft upstream at datum 2.71 ft higher.

REMARKS.— Records fair except for estimated daily discharges, which are poor. No regulation or diversion above station. Summer flow is sustained by wastewater from domestic and industrial use. During major storm events record can be affected by backwater from Beach Lake located 5.7 mi downstream from gage. Flow is diverted by pumps into the Sacramento River.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,730 ft^3/s, Feb. 17, 1986, gage height, 10.40 ft; no flow at times in 1960, 1962, 1965.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than a base discharge of 400 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 7	2345	732	5.09	Dec. 19	1800	457	4.10
Dec. 16	0545	1,110	6.26	Apr. 13	0930	508	4.31

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	4.5	4.4	20	6.9	5.8	6.2	7.9	9.5	6.8	6.5	5.0
2	4.6	5.0	5.1	12	6.4	5.6	4.5	25	9.4	6.9	11	5.0
3	4.9	5.0	4.7	9.8	5.8	5.7	4.3	86	9.7	6.4	6.6	4.9
4	4.8	5.1	4.6	8.2	5.4	6.3	21	17	8.9	7.1	6.0	4.3
5	5.2	4.8	4.6	7.2	4.4	5.9	4.0	9.7	8.7	7.2	6.1	4.8
6	4.8	4.8	4.4	7.1	e1.5	4.8	4.7	7.6	8.8	7.2	6.0	3.9
7	5.5	106	4.6	6.6	e4.5	5.0	5.3	5.9	8.5	6.9	5.9	2.4
8	5.4	183	4.5	6.4	4.5	4.7	5.4	5.8	8.1	7.3	6.9	2.1
9	4.9	24	12	26	4.2	4.7	5.1	7.5	7.4	6.5	6.2	1.7
10	4.8	19	10	19	4.6	5.0	5.1	5.0	7.1	5.3	6.3	2.2
11	4.4	6.7	5.0	15	4.5	5.1	5.3	5.6	7.7	4.9	6.1	2.1
12	4.8	5.2	5.2	12	11	4.8	101	5.7	6.7	5.1	6.7	2.2
13	4.6	4.7	120	10	26	4.7	165	6.5	5.2	5.4	6.7	1.9
14	4.6	5.4	214	7.4	12	21	29	7.5	5.0	5.7	6.8	2.1
15	4.7	4.7	66	8.4	7.3	117	11	7.7	4.7	5.5	5.5	2.5
16	4.4	4.7	400	6.6	102	23	8.1	8.3	5.0	5.0	6.7	2.6
17	4.4	4.3	44	6.5	15	17	14	8.2	7.1	5.4	7.1	2.7
18	4.4	4.3	13	6.2	11	7.4	6.4	8.3	4.6	6.1	5.7	4.3
19	4.7	4.6	98	5.5	15	6.6	6.2	9.1	4.4	5.7	2.9	4.9
20	4.5	5.2	154	5.4	9.0	8.4	5.3	10	4.5	5.8	3.0	4.9
21	4.5	4.8	97	15	7.9	5.8	7.2	8.7	4.6	6.2	17	4.9
22	4.5	4.2	21	13	8.6	5.6	6.6	8.0	5.1	6.3	35	5.1
23	4.8	4.4	12	36	7.0	18	6.1	8.9	5.9	6.7	31	5.4
24	4.3	4.6	9.0	15	5.8	5.8	27	8.1	6.7	6.1	25	5.0
25	4.2	5.3	7.4	11	5.5	5.6	10	8.0	7.5	5.9	17	4.6
26	4.4	5.3	7.5	8.9	5.6	5.0	9.2	8.0	7.7	6.2	12	4.4
27	4.1	5.1	7.3	8.1	5.6	4.8	8.4	8.9	7.4	6.3	9.0	4.7
28	4.3	4.4	50	7.9	5.7	5.2	99	10	7.2	5.9	6.6	4.7
29	4.5	4.3	59	7.1	---	4.4	19	11	7.1	5.9	5.7	4.5
30	4.7	4.4	18	8.2	---	4.5	10	8.9	7.0	5.4	5.4	4.5
31	4.8	---	85	8.5	---	4.6	---	9.2	---	5.9	5.1	---
TOTAL	144.3	457.8	1551.3	344.0	312.7	337.8	619.4	352.0	207.2	189.0	293.5	114.3
MEAN	4.65	15.3	50.0	11.1	11.2	10.9	20.6	11.4	6.91	6.10	9.47	3.81
MAX	5.5	183	400	36	102	117	165	86	9.7	7.3	35	5.4
MIN	4.1	4.2	4.4	5.4	1.5	4.4	4.0	5.0	4.4	4.9	2.9	1.7
AC-FT	286	908	3080	682	620	670	1230	698	411	375	582	227

e Estimated.

11336580 MORRISON CREEK NEAR SACRAMENTO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.95	20.1	27.3	56.5	68.2	30.7	14.8	6.65	5.71	6.12	5.90	6.15
MAX	77.8	67.5	106	212	415	213	91.4	17.6	8.71	17.6	12.4	21.9
(WY)	1963	1982	1984	1969	1986	1983	1982	1998	1970	1974	1959	1981
MIN	2.59	3.16	3.06	4.24	6.26	6.72	2.45	3.68	2.62	2.09	2.37	3.00
(WY)	1978	1960	2000	1976	1964	1960	1977	1979	1977	1977	1977	2000

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1959 - 2003	
ANNUAL TOTAL	5647.8		4923.3			
ANNUAL MEAN	15.5		13.5		21.2	
HIGHEST ANNUAL MEAN					59.6	1983
LOWEST ANNUAL MEAN					4.76	1977
HIGHEST DAILY MEAN	400	Dec 16	400	Dec 16	1940	Jan 5 1982
LOWEST DAILY MEAN	1.2	Sep 15	1.5	Feb 6	0.00	Jul 12 1960
ANNUAL SEVEN-DAY MINIMUM	1.3	Sep 13	2.0	Sep 8	0.07	Jul 11 1960
MAXIMUM PEAK FLOW			1110	Dec 16	2730	Feb 17 1986
MAXIMUM PEAK STAGE			6.26	Dec 16	10.40	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	11200		9770		15380	
10 PERCENT EXCEEDS	21		19		31	
50 PERCENT EXCEEDS	5.8		6.0		5.9	
90 PERCENT EXCEEDS	3.9		4.4		3.0	

11336585 LAGUNA CREEK NEAR ELK GROVE, CA

LOCATION.—Lat 38° 25'24", long 121° 21'08", in NE 1/4 NE 1/4 sec.31, T.7 N., R.6 E., Sacramento County, Hydrologic Unit 18020109, on left bank, 50 ft downstream from bridge on Waterman Road, at intersection with Bond Road, and 1 mi northeast of Elk Grove.

DRAINAGE AREA.—31.9 mi^2.

PERIOD OF RECORD.—October 1995 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 40 ft above NGVD of 1929, from topographic map.

REMARKS.—Records poor due to beaver activity at station. Station is located 7.8 mi upstream of Morrison Creek. Low flow sustained by residential and agricultural wastewater.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,020 ft^3/s, Jan. 23, 1997, gage height, 7.54 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than a base discharge of 500 ft^3/s, or maximum:

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 16	0830	407	5.05

DICHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.66	0.31	0.00	52	1.1	0.72	0.00	1.6	0.89	1.4	2.0	0.73
2	0.20	0.26	0.00	18	0.90	0.97	0.09	0.33	1.0	1.5	2.5	0.96
3	0.12	0.67	0.00	10	0.67	0.82	0.23	18	1.1	1.6	2.4	1.1
4	0.12	0.68	0.00	9.1	0.41	0.51	4.8	15	1.0	1.6	1.9	1.1
5	0.09	0.58	0.00	7.7	0.27	0.31	7.6	7.0	0.99	1.5	1.8	1.4
6	0.08	0.53	0.00	5.3	0.44	0.17	3.0	4.2	1.2	1.7	1.4	1.6
7	0.43	7.5	0.00	3.4	0.48	0.11	0.73	1.5	1.3	1.6	1.9	1.6
8	0.69	51	0.00	2.7	0.26	0.04	0.04	0.33	1.1	1.4	1.9	1.3
9	0.96	27	0.00	1.3	0.10	0.06	0.00	0.03	0.85	1.2	1.3	e1.6
10	1.1	14	0.00	2.1	0.05	0.21	0.00	0.00	0.87	1.2	1.2	e2.1
11	0.89	13	0.00	2.4	5.2	0.31	0.00	0.00	0.95	0.97	1.0	e2.3
12	0.29	15	0.00	2.3	0.06	0.20	12	0.00	1.1	1.2	0.70	2.8
13	0.51	1.3	4.9	2.9	1.9	0.03	63	0.00	0.89	1.5	0.83	2.9
14	0.23	0.02	45	3.0	2.6	0.00	39	0.00	0.84	1.5	0.81	1.8
15	0.08	0.00	36	2.8	2.3	51	12	0.03	1.1	1.2	0.79	1.8
16	0.08	0.34	135	2.4	30	26	7.4	0.08	0.92	1.3	0.97	2.4
17	0.38	0.33	43	2.1	20	7.8	5.2	0.01	0.50	1.3	1.3	1.5
18	0.41	0.32	20	1.6	9.8	7.4	2.3	0.00	0.44	1.5	1.2	0.49
19	0.29	0.13	19	1.3	5.4	1.9	0.81	0.00	1.0	1.5	1.3	0.46
20	0.75	0.07	49	1.0	e3.6	1.1	0.28	0.02	1.0	1.7	1.4	1.3
21	0.83	0.05	93	1.7	e2.6	1.2	0.23	0.18	1.0	1.8	1.4	2.9
22	0.94	0.05	42	2.7	2.1	1.4	1.1	0.22	1.3	1.6	2.3	2.1
23	0.86	0.09	17	4.6	1.7	3.4	1.2	0.49	1.3	1.8	1.4	1.9
24	0.71	0.14	11	4.8	1.6	6.1	1.4	1.0	1.2	2.0	0.68	1.9
25	0.38	0.14	7.0	3.7	1.6	5.7	2.7	1.2	1.1	2.0	0.25	1.2
26	0.14	0.18	9.8	2.9	1.3	4.6	3.2	1.2	1.4	1.8	0.32	1.9
27	0.34	0.10	12	2.4	0.83	2.2	3.0	0.79	1.2	1.9	0.21	0.76
28	0.09	0.01	20	2.2	0.37	0.35	20	0.51	0.57	1.9	0.37	0.92
29	0.09	0.00	45	2.0	---	0.02	7.5	0.45	0.94	1.9	0.65	1.8
30	0.38	0.00	52	1.8	---	0.00	2.7	0.64	1.2	1.4	0.73	1.4
31	0.57	---	59	1.4	---	0.00	---	0.92	---	1.4	0.80	---
TOTAL	13.69	133.80	719.70	163.6	97.64	124.63	201.51	55.73	30.25	47.87	37.71	48.02
MEAN	0.44	4.46	23.2	5.28	3.49	4.02	6.72	1.80	1.01	1.54	1.22	1.60
MAX	1.1	51	135	52	30	51	63	18	1.4	2.0	2.5	2.9
MIN	0.08	0.00	0.00	1.0	0.05	0.00	0.00	0.00	0.44	0.97	0.21	0.46
AC-FT	27	265	1430	325	194	247	400	111	60	95	75	95

e Estimated.

11336585 LAGUNA CREEK NEAR ELK GROVE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.45	1.40	19.7	50.6	80.4	9.58	3.03	0.87	0.71	0.88	1.00	0.77
MAX	0.79	4.46	92.1	206	263	21.9	8.91	2.24	3.08	2.08	1.88	1.60
(WY)	2000	2003	1997	1997	1998	1996	1998	1998	2002	2001	2001	2003
MIN	0.000	0.000	0.008	3.76	1.94	0.000	0.29	0.13	0.000	0.000	0.048	0.26
(WY)	1996	1996	2001	2001	2002	1997	2002	1999	1996	1996	1996	1997

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1996 - 2003	
ANNUAL TOTAL	2313.37		1674.15			
ANNUAL MEAN	6.34		4.59		13.7	
HIGHEST ANNUAL MEAN					29.6	1998
LOWEST ANNUAL MEAN					4.31	2001
HIGHEST DAILY MEAN	470	Jan 3	135	Dec 16	1530	Feb 3 1998
LOWEST DAILY MEAN	0.00	May 12	0.00	Nov 15	0.00	Oct 1 1995
ANNUAL SEVEN-DAY MINIMUM	0.00	May 12	0.00	Nov 29	0.00	Oct 1 1995
MAXIMUM PEAK FLOW			407	Dec 16	2020	Jan 23 1997
MAXIMUM PEAK STAGE			5.05	Dec 16	7.54	Jan 23 1997
ANNUAL RUNOFF (AC-FT)	4590		3320		9960	
10 PERCENT EXCEEDS	9.7		9.8		11	
50 PERCENT EXCEEDS	0.85		1.2		0.51	
90 PERCENT EXCEEDS	0.06		0.03		0.00	

11337600 MARSH CREEK AT BRENTWOOD, CA

LOCATION.—Lat 37° 57'46", long 121° 41'11", in SE 1/4 NW 1/4 sec.6, T.1 N., R.2 E., Contra Costa County, Hydrologic Unit 18040003, on right bank, 25 ft upstream of County Flood Control drop structure, and 0.2 mi north of sewage disposal plant in the City of Brentwood.

DRAINAGE AREA.—38.3 mi^2.

PERIOD OF RECORD.—August 2000 to current year.

REVISED RECORDS.—WDR CA-02-3: 2001.

GAGE.—Water-stage recorder. Datum of gage is 34.21 ft above NGVD of 1929.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Flow is affected by numerous agricultural and municipal storm diversions upstream from station. Low flow is sustained by urban and agricultural run-off. Marsh Creek Reservoir is located upstream, but acts primarily as a detention basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,110 ft^3/s, Dec. 16, 2002, gage height, 7.89 ft; minimum daily, 0.39 ft^3/s, Nov. 26, 27, 2002.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 400 ft^3/s, or maximum:

Date	Time	Discharge (ft3/s)	Gage height (ft)	Date	Time	Discharge (ft3/s)	Gage-height (ft)
Nov. 8	0915	445	6.76	Dec. 19	1700	503	6.90
Dec. 16	0600	1,110	7.89				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	0.85	0.44	73	4.0	2.2	1.1	6.7	3.3	1.8	4.7	7.3
2	2.1	0.89	0.43	43	3.6	1.8	2.4	10	2.8	1.2	2.5	6.3
3	1.5	0.67	0.43	30	3.3	1.8	1.1	35	0.98	1.2	3.4	5.9
4	0.80	0.73	0.43	25	3.0	1.8	10	22	0.97	2.4	4.0	5.8
5	0.73	0.79	0.52	20	3.1	1.8	2.0	13	1.8	2.3	4.5	4.9
6	1.3	0.63	0.63	18	2.7	1.4	2.3	10	2.1	1.7	4.6	4.9
7	1.6	45	0.47	15	2.7	1.3	1.9	9.7	2.1	1.9	5.3	5.6
8	1.8	115	0.42	13	2.5	1.4	1.1	6.9	2.0	1.7	6.6	5.4
9	1.8	7.1	0.92	16	2.3	1.3	1.5	5.7	3.4	3.3	6.5	5.7
10	1.8	3.5	2.6	22	2.3	1.4	1.3	5.2	1.7	4.4	5.1	6.0
11	1.9	1.5	0.92	13	2.3	1.5	1.5	4.8	3.4	3.2	3.0	6.3
12	0.81	1.6	0.46	11	31	1.6	19	4.9	2.4	2.4	2.3	4.6
13	0.74	1.0	38	9.7	11	1.9	36	4.5	2.4	4.3	3.3	4.2
14	0.75	0.72	80	7.3	3.8	1.8	22	5.9	3.1	2.9	6.2	3.7
15	1.1	0.50	30	6.7	2.8	41	11	5.3	2.3	1.9	4.2	4.0
16	1.1	0.51	590	6.4	24	47	7.7	5.1	3.8	1.9	5.7	3.3
17	1.4	0.60	216	6.1	12	15	6.0	4.3	2.2	1.7	7.1	2.9
18	1.6	0.50	64	5.7	5.6	4.5	5.0	4.8	1.5	2.1	6.7	2.7
19	1.3	0.50	175	5.5	3.5	2.9	4.2	5.5	0.74	4.5	5.4	5.3
20	0.78	0.84	311	5.3	3.0	2.6	4.0	2.9	3.1	4.7	4.4	4.9
21	0.91	0.52	189	11	2.7	2.4	5.5	1.9	6.2	5.6	12	6.4
22	1.4	0.49	75	6.5	2.4	2.2	3.0	0.87	6.7	4.8	13	6.3
23	1.4	0.47	38	5.8	2.3	14	3.7	1.6	7.3	2.5	6.5	4.5
24	1.5	0.45	27	5.5	2.4	2.8	6.5	0.70	6.3	4.4	5.2	4.4
25	1.4	0.42	20	4.8	2.7	2.2	7.9	1.1	6.9	4.6	e3.9	5.6
26	1.2	0.39	16	4.6	4.0	1.9	7.7	1.7	7.4	7.6	e4.8	6.1
27	0.68	0.39	15	4.5	9.2	1.6	5.9	1.2	4.7	4.1	e4.8	7.0
28	0.65	0.41	20	4.4	2.4	1.3	9.7	1.7	3.1	4.3	e4.5	6.2
29	1.9	0.46	79	4.1	---	1.1	8.7	1.7	4.6	2.7	5.6	5.9
30	1.5	0.46	50	3.9	---	1.2	7.4	0.55	3.4	3.0	7.6	4.6
31	1.4	---	132	3.8	---	1.3	---	1.6	---	2.9	7.6	---
TOTAL	40.75	187.89	2173.67	410.6	156.6	168.0	207.1	186.82	102.69	98.0	171.0	156.7
MEAN	1.31	6.26	70.1	13.2	5.59	5.42	6.90	6.03	3.42	3.16	5.52	5.22
MAX	2.1	115	590	73	31	47	36	35	7.4	7.6	13	7.3
MIN	0.65	0.39	0.42	3.8	2.3	1.1	1.1	0.55	0.74	1.2	2.3	2.7
AC-FT	81	373	4310	814	311	333	411	371	204	194	339	311

e Estimated.

11337600 MARSH CREEK AT BRENTWOOD, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.60	4.37	33.1	11.7	7.71	9.11	5.25	5.13	4.31	4.40	4.87	4.09
MAX	3.82	6.26	70.1	15.6	12.6	12.1	6.90	6.03	5.23	5.35	5.58	5.22
(WY)	2001	2003	2003	2002	2001	2001	2003	2003	2001	2002	2001	2003
MIN	1.31	2.21	2.02	6.33	4.94	5.42	3.87	4.19	3.42	3.16	3.50	2.63
(WY)	2003	2001	2001	2001	2002	2003	2001	2002	2003	2003	2002	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL TOTAL	4090.07		4059.82			
ANNUAL MEAN	11.2		11.1		8.08	
HIGHEST ANNUAL MEAN					11.1	2003
LOWEST ANNUAL MEAN					5.57	2001
HIGHEST DAILY MEAN	590	Dec 16	590	Dec 16	590	Dec 16 2002
LOWEST DAILY MEAN	0.39	Nov 26	0.39	Nov 26	0.39	Nov 26 2002
ANNUAL SEVEN-DAY MINIMUM	0.42	Nov 25	0.42	Nov 25	0.42	Nov 25 2002
MAXIMUM PEAK FLOW			1110	Dec 16	1110	Dec 16 2002
MAXIMUM PEAK STAGE			7.89	Dec 16	7.89	Dec 16 2002
ANNUAL RUNOFF (AC-FT)	8110		8050		5850	
10 PERCENT EXCEEDS	15		16		11	
50 PERCENT EXCEEDS	4.2		3.4		3.9	
90 PERCENT EXCEEDS	0.81		0.77		1.3	

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the U.S. Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low- or flood-flow analyses, depending on the type of data collected.

In addition, discharge measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Discharge measurements made at miscellaneous sites during water year 2003

Station no.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		CARSON RIVER BASIN				
103087898	Aspen Creek above Leviathan Creek, near Markleeville, CA	Lat 38°43'02", long 119°39'30", in NE 1/4 NW 1/4 sec.15, T.10 N., R.21 E., Alpine County, Hydrologic Unit 16050201, 3.2 mi north of Highway 89 and 6.5 mi east of Markleeville	0.92	1999–2003	10-29-02	.13
					11-20-02	.15
					01-29-03	.29
					02-25-03	.25
					03-27-03	.44
					04-29-03	.33
					05-28-03	.27
					06-23-03	.26
					07-25-03	.18
					08-27-03	.15
					09-23-03	.15

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage station is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for the current year is given. Information on some lower floods may have been obtained but is not published here. The years given in the period of record represent water years for which the annual maximum has been obtained.

Annual maximum discharge at crest-stage partial-record stations during water year 2003

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		TULARE LAKE BASIN					
11205690	Lewis Creek near Lindsay, CA	Lat 36°11'11", long 118°59'46", in NW 1/4 SW 1/4 sec.18, T.20 S., R.28 E., Tulare County, Hydrologic Unit 18030012, 0.3 mi upstream from culvert on Road 258, 40 ft upstream from unnamed tributary, and 7.3 mi southeast of the town of Lindsay.	21.5	a1969, 1974–2003	11-8-02	22.80	326

a Published as a miscellaneous measurement.

Water-quality partial-record stations are particular sites where chemical-quality, biological, and (or) sediment data are collected systematically over a period of years for use in hydrologic analyses. The data are collected usually less than quarterly. Samples collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin are referred to as miscellaneous sites.

CARSON RIVER BASIN

384642119550501 WEST FORK CARSON RIVER AT HIGHWAY 89, NEAR WOODFORDS, CA

LOCATION.—Lat 38° 46'42", long 119° 55'05", in SE 1/4 NW 1/4 sec.25, T.11 N., R.18 E., Alpine County, Hydrologic Unit 16050201, 5.2 mi west of Woodfords and 6.5 mi southeast of Meyers.

PERIOD OF RECORD.—September 2002 to current year.
CHEMICAL DATA.—September 2002 to current year.
SEDIMENT DATA.—September 2002 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unf lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC									
12...	1330	8.7	1.7	589	12.6	115	7.9	88	1.0
APR									
07...	1400	81	2.0	588	9.8	101	6.9	60	5.5
AUG									
11...	1445	14	2.0	595	8.0	105	7.5	60	16.5

Date	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
DEC								
12...	1.75	3.7	70	.07	<.022	.007	3	.07
APR								
07...	1.61	2.1	53	.14	.055	.015	5	1.1
AUG								
11...	.99	1.7	55	.09	<.022	.021	2	.08

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Depth at sample location, feet (81903)	Sampling depth, feet (00003)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR										
07...*	1330	.90	.45	588	10.1	104	6.9	60	5.5	6.00
07...*	1331	.60	.30	588	10.0	103	6.9	60	5.5	11.0
07...*	1332	.70	.35	588	9.9	102	6.9	60	5.5	16.0
07...*	1333	.90	.45	588	9.9	102	6.9	60	5.5	21.0
07...*	1334	1.30	.65	588	9.8	101	7.0	60	5.5	26.0
07...*	1335	1.70	.85	588	9.8	101	6.9	60	5.5	31.0
07...*	1336	1.75	.90	588	9.8	100	6.9	60	5.5	36.0
07...*	1337	1.80	.90	588	9.7	100	7.0	60	5.5	41.0
07...*	1338	1.90	.95	588	9.7	100	6.9	60	5.5	46.0
07...*	1339	1.70	.85	588	9.7	100	6.9	60	5.5	50.0

< Actual value is known to be less than the value shown.
* Instantaneous discharge at time of cross-sectional measurement: Apr. 7, 81 ft^3/s.

PYRAMID AND WINNEMUCCA LAKES BASIN

391034120085201 SPRING ABOVE BUNKER DRIVE, AT TAHOE CITY, CA

LOCATION.—Lat 39° 10'34", long 120° 08'52", in NE 1/4 SW 1/4 sec.6, T.15 N., R.17 E., Placer County, Hydrologic Unit 16050102, 0.7 mi north of Lake Tahoe outlet dam, and 0.6 mi north of Tahoe City.

PERIOD OF RECORD.—July 2003.

CHEMICAL DATA.—July 2003.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JUL 03...	1030	.10	605	10.7	115	7.1	91	8.5

Date	Chloride, water, fltrd, mg/L (00940)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)
JUL 03...	.23	98	.12	<.06	.031	.040	.09

< Actual value is known to be less than the value shown.

PYRAMID AND WINNEMUCCA LAKES BASIN

390951120094001 TWIN CRAGS SPRING NEAR TAHOE CITY, CA

LOCATION.—Lat 39° 09'51", long 120° 09'40", in SW 1/4 NE 1/4 sec.12, T.15 N., R.16 E., Placer County, Hydrologic Unit 16050102, 1.0 mi west of Lake Tahoe outlet dam, and 1.05 mi west of Tahoe City.

PERIOD OF RECORD.—July 2003.

CHEMICAL DATA.—July 2003.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduct-ance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JUL 03...	1205	.14	607	10.7	114	7.1	118	8.0

Date	Chloride, water, fltrd, mg/L (00940)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unf by analysis, mg/L (62855)
JUL 03...	.87	93	.04	.10	.030	.036	.14

PYRAMID AND WINNEMUCCA LAKES BASIN

391148120114201 SPRING AT WESTERN STATES TRAIL, NEAR OLYMPIC VALLEY, CA

LOCATION.—Lat 39° 11'48", long 120° 11'42", in NW 1/4 NW 1/4 sec.34, T.16 N., R.16 E., Placer County, Hydrologic Unit 16050102, 0.45 mi above Bear Creek, 1.75 mi west of Olympic Valley, and 3.4 mi northwest of Tahoe City.

PERIOD OF RECORD.—July 2003.

CHEMICAL DATA.—July 2003.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan-taneous dis-charge, cfs (00061)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)
JUL 03...	1405	.69	608	11.3	124	6.9	88	9.5

Date	Chlor-ide, water, fltrd, mg/L (00940)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Total nitro-gen, wat unf by anal ysis, mg/L (62855)
JUL 03...	1.57	88	.08	1.00	.144	.156	1.04

SAN JOAQUIN RIVER BASIN

371903120585400 NEWMAN WASTEWAY AT HIGHWAY 33, NEAR GUSTINE, CA

LOCATION.—Lat 37° 17'36", long 121° 00'40", in SW 1/4 NW 1/4 sec.32, T.7 S., R.9 E., Merced County, Hydrologic Unit 18040002, 1.5 mi southeast of Newman.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—October 1985, June 1994, January 1995, January 2000 to February 2000.
CHEMICAL DATA: October 1985, June 1994, January 1995, January 2000 to February 2000.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
JAN										
06...	1130	1.5	1430	--	--	--	--	--	--	--
12...	1350	1.3	1570	--	--	--	--	--	--	--
19...	1220	2.9	1280	--	--	--	--	--	--	--
FEB										
04...	1140	1.4	1100	--	--	--	--	--	--	--
09...	1140	1.3	1570	--	--	--	--	--	--	--
12...	0500	2.1	1290	--	--	--	--	--	--	--
13...	0000	51	710	--	--	--	--	--	--	--
14...	0300	--	527	.86	.86	.32	3.23	.062	.10	.131
14...	0720	--	466	--	--	--	--	--	--	--

Date	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)	Azinphosmethyl, water, fltrd 0.7u GF ug/L (82686)
JAN									
06...	--	--	<.003	e.004	<.002	<.002	<.002	.004	<.001
12...	--	--	<.003	e.004	<.002	<.002	<.002	e.004	<.001
19...	--	--	<.003	e.005	<.002	<.002	<.002	.011	e.018
FEB									
04...	--	--	<.003	<.002	<.002	<.002	<.002	.007	e.017
09...	--	--	<.003	e.004	<.002	<.002	<.002	<.003	<.001
12...	--	--	<.003	e.003	<.002	<.002	<.002	e.003	<.001
13...	--	--	<.003	e.004	<.002	<.002	<.002	<.001	e.007
14...	.13	9.9	<.003	<.002	<.002	<.002	<.002	.013	e.021
14...	--	--	<.003	<.002	<.002	<.002	<.002	.016	e.025

Date	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Diazinon, water, fltrd, ug/L (39572)
JAN									
06...	<.002	<.002	<.003	<.003	<.004	<.005	<.004	<.002	<.002
12...	<.002	<.002	e.004	<.003	<.004	<.005	<.004	<.002	.020
19...	<.002	<.002	--	<.003	e.004	<.005	<.004	<.002	.056
FEB									
04...	<.002	<.002	<.003	<.003	.019	<.005	.009	<.002	.082
09...	<.002	<.002	<.003	<.003	.005	<.005	<.004	<.002	e.003
12...	<.002	.006	e.007	<.003	.005	<.005	<.004	e.001	.011
13...	<.002	<.002	<.003	<.003	.017	<.005	.010	<.002	.029
14...	<.002	<.002	e.013	<.003	.030	<.005	.009	e.002	.112
14...	<.002	<.002	e.014	<.003	.037	<.005	.009	e.002	.154

< Actual value is known to be less than value shown.
e Estimated.

SAN JOAQUIN RIVER BASIN

371903120585400 NEWMAN WASTEWAY AT HIGHWAY 33, NEAR GUSTINE, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)
JAN									
06...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
12...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	.006
19...	<.001	<.02	e.002	<.004	<.003	<.003	<.004	<.002	.018
FEB									
04...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	.013
09...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
12...	<.001	<.02	e.002	<.004	<.003	<.003	<.004	<.002	1.14
13...	<.001	<.02	e.003	<.004	<.003	<.003	<.004	<.002	<.005
14...	<.001	<.02	<.005	<.004	<.003	<.003	<.004	<.002	.007
14...	<.001	<.02	<.005	<.004	<.003	<.003	<.004	<.002	.011

Date	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF ug/L (82669)	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)
JAN									
06...	<.006	.013	<.004	<.004	<.003	e.002	<.004	<.004	<.004
12...	<.006	.011	<.004	<.004	.007	<.006	<.004	<.004	<.004
19...	<.006	.016	<.004	<.004	.018	e.003	<.004	<.004	<.004
FEB									
04...	<.006	.022	.015	<.004	.012	e.003	<.004	<.004	<.004
09...	<.006	.016	<.004	<.004	.005	e.003	<.004	<.004	<.004
12...	<.006	.074	<.004	<.004	.010	e.003	<.004	<.004	<.010
13...	<.006	.012	<.004	<.004	.008	e.003	<.004	<.004	<.004
14...	<.006	.016	<.004	<.004	.009	e.004	<.004	<.004	.015
14...	<.006	.015	<.004	<.004	.012	.007	<.004	<.004	.021

Date	Phorate water fltrd 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	Pronamide, water, fltrd 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)
JAN									
06...	<.002	e.01	<.003	<.007	<.004	--	.136	<.01	<.007
12...	<.002	e.01	<.003	<.007	<.004	<.01	.034	<.01	<.007
19...	<.002	e.01	<.003	<.007	<.004	<.01	.958	<.01	<.007
FEB									
04...	<.002	e.01	<.003	<.007	<.004	<.01	4.16	<.01	<.007
09...	<.002	e.01	<.003	<.007	<.004	<.01	.058	<.01	<.007
12...	<.002	e.01	<.003	<.007	<.004	<.15	.295	<.01	<.007
13...	<.002	<.02	<.003	<.007	<.004	<.01	3.31	<.01	<.007
14...	<.002	M	<.003	<.007	<.004	<.01	7.18	<.01	<.007
14...	<.002	M	<.003	<.007	<.004	<.01	9.67	<.01	<.007

< Actual value is known to be less than value shown.
e Estimated.
M Presence of material verified, but not quantified.

SAN JOAQUIN RIVER BASIN

371903120585400 NEWMAN WASTEWAY AT HIGHWAY 33, NEAR GUSTINE, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
JAN				
06...	<.01	<.002	<.001	<.002
12...	<.01	<.002	<.001	.006
19...	<.01	<.002	<.001	e.003
FEB				
04...	<.01	<.002	<.001	<.006
09...	<.01	<.002	<.001	e.003
12...	<.01	<.002	<.001	.006
13...	<.01	<.002	<.001	.011
14...	<.01	<.002	<.001	.011
14...	<.01	<.002	<.001	.017

< Actual value is known to be less than value shown.
e Estimated.

SAN JOAQUIN RIVER BASIN

372424120432800 LIVINGSTON CANAL AT TREATMENT PLANT, NEAR LIVINGSTON, CA

LOCATION.—Lat 37° 24'24", long 120° 43'28", in SE 1/4 SE 1/4 sec.14, T.6 S., R.11 E., Merced County, Hydrologic Unit 18040002, at upstream side of bridge at Livingston Treatment Plant, 200 ft south of Merced River, and 1 mi north of Livingston.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—March 1993 to September 1993, January 2000 to September 2000.
CHEMICAL DATA: March 1993 to September 1993, January 2000 to September 2000.

REMARKS.—Discharge data furnished by Merced Irrigation District, not reviewed by U.S. Geological Survey. Chemical data for water year 2001 available in the files of the U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instan-taneous dis-charge, cfs (00061)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)
JAN									
19...	0900	<.10	260	--	--	--	--	--	--
FEB									
04...	1320	<.10	248	--	--	--	--	--	--
09...	0900	<.10	185	--	--	--	--	--	--
11...	1600	<.10	202	--	--	--	--	--	--
11...	1950	<.10	240	--	--	--	--	--	--
12...	1010	<.10	193	--	--	--	--	--	--
12...	1600	<.10	174	--	--	--	--	--	--
12...	1900	<.10	393	--	--	--	--	--	--
14...	0000	<.10	169	--	--	--	--	--	--
14...	0330	<.10	169	.37	.37	.11	2.04	.036	.05

Date	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atra-zine, water, fltrd, ug/L (39632)
JAN									
19...	--	--	--	<.003	e.006	<.002	<.002	<.002	.005
FEB									
04...	--	--	--	<.003	e.005	<.002	<.002	<.002	.005
09...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
11...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.005
11...	--	--	--	<.003	e.004	<.002	<.002	<.002	e.003
12...	--	--	--	<.003	e.004	<.002	<.002	<.002	.004
12...	--	--	--	<.003	<.005	<.002	<.002	<.002	<.004
12...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
14...	--	--	--	<.003	e.003	<.002	<.002	<.002	.005
14...	.060	.06	5.1	<.003	<.005	<.002	<.002	<.002	.005

Date	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)
JAN									
19...	<.001	<.002	<.002	<.003	<.003	e.003	<.005	<.004	<.002
FEB									
04...	<.001	<.002	<.002	<.003	<.003	.010	<.005	<.004	<.002
09...	<.001	<.002	<.002	<.003	<.003	.005	<.005	<.004	<.002
11...	<.001	<.002	<.002	<.003	<.003	.007	<.005	<.004	e.002
11...	<.001	<.002	<.002	<.003	<.003	.007	<.005	<.004	e.002
12...	<.001	<.002	<.002	<.003	<.003	.009	<.005	<.004	e.002
12...	<.001	<.002	<.002	<.003	<.003	.010	<.005	<.004	e.002
12...	<.001	<.002	<.002	<.003	<.003	.007	<.005	<.004	<.002
14...	<.001	<.002	<.002	<.003	<.003	.012	<.005	<.004	e.002
14...	<.001	<.002	<.002	<.003	<.003	.011	<.005	<.004	e.002

< Actual value is known to be less than value shown.
e Estimated.

SAN JOAQUIN RIVER BASIN

372424120432800 LIVINGSTON TREATMENT PLANT NEAR LIVINGSTON, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Diazinon, water, fltrd, ug/L (39572)	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)
JAN									
19...	e.004	e.002	<.02	.026	<.004	<.003	<.003	<.004	<.002
FEB									
04...	.076	<.001	<.02	e.003	<.004	<.003	<.003	<.004	<.002
09...	.065	<.001	<.02	e.004	<.004	<.003	<.003	<.004	<.002
11...	.086	<.001	<.02	<.005	<.004	<.003	<.003	<.004	<.002
11...	.090	.005	<.02	<.005	<.004	<.003	<.003	<.004	<.002
12...	.084	.005	<.02	<.002	<.004	<.003	<.003	<.004	<.002
12...	.084	e.003	<.02	<.002	<.004	<.003	<.003	<.004	<.002
12...	.024	<.001	<.02	e.001	<.004	<.003	<.003	<.004	<.002
14...	.083	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
14...	.087	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002

Date	Malathion, water, fltrd, ug/L (39532)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF ug/L (82669)
JAN									
19...	<.005	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004
FEB									
04...	<.005	<.006	.005	<.004	<.004	<.003	<.006	<.004	<.004
09...	<.005	<.006	.005	<.004	<.004	<.003	<.006	<.004	<.004
11...	<.005	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004
11...	<.005	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004
12...	<.005	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004
12...	<.005	<.006	.005	<.004	<.004	<.003	<.006	<.004	<.004
12...	<.005	<.006	.007	<.004	<.004	<.003	<.006	<.004	<.004
14...	<.005	<.006	.004	<.004	<.004	<.003	<.006	<.004	<.004
14...	<.005	<.006	e.004	<.004	<.004	<.003	<.006	<.004	<.004

Date	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	Pronamide, water, fltrd 0.7u GF ug/L (82676)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)
JAN									
19...	<.004	<.002	<.02	<.003	<.004	<.01	e.005	<.01	<.007
FEB									
04...	<.004	<.002	<.02	<.003	<.004	<.01	.452	.01	<.007
09...	<.004	<.002	<.02	<.003	<.004	<.01	.214	<.01	<.007
11...	<.020	<.002	<.02	<.003	<.004	<.01	.082	<.01	<.007
11...	<.010	<.002	<.02	<.003	<.004	<.01	.080	<.01	<.007
12...	.014	<.002	M	<.003	.004	<.01	.066	<.01	<.007
12...	.010	<.002	<.02	<.003	<.004	<.01	.069	<.01	<.007
12...	.399	<.002	<.02	<.003	<.004	<.01	.155	<.01	<.007
14...	<.004	<.002	<.02	<.003	.008	<.01	.045	<.01	<.007
14...	.027	<.002	<.02	<.003	.009	<.01	.427	<.01	<.007

e Estimated.
< Actual value is known to be less than value shown.
M Presence of material verified, but not quantified.

SAN JOAQUIN RIVER BASIN

372424120432800 LIVINGSTON TREATMENT PLANT NEAR LIVINGSTON, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
JAN				
19...	<.01	<.002	<.001	e.001
FEB				
04...	<.01	<.002	<.001	.006
09...	<.01	<.002	<.001	.005
11...	<.01	<.002	<.001	e.001
11...	<.01	<.002	<.001	e.001
12...	<.01	<.002	<.001	e.001
12...	<.01	<.002	<.001	.006
12...	<.01	<.002	<.001	<.004
14...	<.01	<.002	<.001	e.002
14...	<.01	<.002	<.001	e.002

< Actual value is known to be less than value shown.
e Estimated.

SAN JOAQUIN RIVER BASIN

372323120481700 HIGHLINE CANAL SPILL NEAR HILMAR, CA

LOCATION.—Lat 37° 23'23", long 120° 48'17", Merced County, Hydrologic Unit 18040002, on right bank, approximately 3 mi southeast of Hilmar, and on south side of paved levee road.

DRAINAGE AREA.—Indeterminate.

PERIOD OF RECORD.—February 1994 to September 1994, January 2000 to February 2000.
CHEMICAL DATA: February 1994 to September 1994, January 2000 to February 2000.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)
JAN									
19...	0930	.60	--	--	--	--	--	--	--
FEB									
11...	1700	<.10	474	--	--	--	--	--	--
11...	2030	<.10	466	--	--	--	--	--	--
12...	0940	<.10	461	--	--	--	--	--	--
12...	1455	<.10	475	--	--	--	--	--	--
12...	1800	2.5	479	--	--	--	--	--	--
13...	0100	4.8	175	--	--	--	--	--	--
14...	0030	13	288	--	--	--	--	--	--
14...	0400	25	246	4.0	3.8	1.85	5.05	.202	1.10
14...	0800	33	440	--	--	--	--	--	--

Date	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	2,6-Diethylaniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Acetochlor, water, fltrd, ug/L (49260)	Alachlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atrazine, water, fltrd, ug/L (39632)
JAN									
19...	--	--	--	<.003	<.002	<.002	<.002	<.002	e.003
FEB									
11...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
11...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
12...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
12...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
12...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
13...	--	--	--	<.003	<.002	<.002	<.002	<.002	e.003
14...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.010
14...	1.30	1.25	31.8	<.003	<.002	<.002	<.002	<.002	<.020
14...	--	--	--	<.003	<.002	<.002	<.002	<.002	.008

Date	Azinphos-methyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)
JAN									
19...	<.001	<.002	<.002	e.010	<.003	.004	<.005	<.004	e.002
FEB									
11...	<.001	<.002	<.002	e.004	<.003	e.003	<.005	<.004	<.002
11...	<.001	<.002	<.002	<.003	<.003	.005	<.005	<.004	<.002
12...	<.001	<.002	<.002	<.003	<.003	.005	<.005	.009	<.002
12...	<.001	<.002	<.002	<.003	<.003	e.003	<.005	<.004	<.002
12...	<.001	<.002	<.002	<.003	<.003	.005	<.005	<.004	<.002
13...	<.001	<.002	<.002	<.003	<.003	.008	<.005	<.004	e.002
14...	<.001	<.002	<.002	e.028	<.020	.011	<.005	<.004	e.002
14...	<.001	<.002	<.002	e.014	<.020	.010	<.005	<.010	e.002
14...	<.001	<.002	e.003	e.021	<.003	.009	<.005	<.004	<.002

< Actual value is known to be less than value shown.
e Estimated.

SAN JOAQUIN RIVER BASIN

372323120481700 HIGHLINE CANAL SPILL NEAR HILMAR, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Diazinon, water, fltrd, ug/L (39572)	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)
JAN									
19...	.006	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
FEB									
11...	.011	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
11...	.014	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
12...	.011	<.001	<.02	e.001	<.004	<.003	<.003	<.004	<.002
12...	.012	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
12...	.011	<.001	<.02	e.001	<.004	<.003	<.003	<.004	<.002
13...	.070	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
14...	.126	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
14...	.114	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
14...	.122	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002

Date	Malathion, water, fltrd, ug/L (39532)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF ug/L (82669)
JAN									
19...	<.005	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004
FEB									
11...	<.005	<.006	.006	<.004	<.004	<.003	<.006	<.004	<.004
11...	<.005	<.006	.006	<.004	<.004	<.003	<.006	<.004	<.004
12...	<.005	<.006	.007	<.004	<.004	<.003	<.006	<.004	<.004
12...	<.005	<.006	.006	<.004	<.004	<.003	<.006	<.004	<.004
12...	<.005	<.006	.007	<.004	<.004	<.003	<.006	<.004	<.004
13...	<.005	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004
14...	.018	<.006	.018	<.004	<.004	.005	e.006	<.004	<.004
14...	<.005	<.006	.013	<.004	<.004	.012	.007	<.004	<.004
14...	<.015	<.006	.023	<.004	<.004	.009	e.006	<.004	<.004

Date	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	Pronamide, water, fltrd 0.7u GF ug/L (82676)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)	Terbacil, water, fltrd 0.7u GF ug/L (82665)
JAN									
19...	.340	<.002	<.02	<.003	<.004	<.01	.103	<.01	<.007
FEB									
11...	.405	<.002	<.02	<.003	<.004	<.01	.036	<.01	<.007
11...	.583	<.002	<.02	<.003	<.004	<.01	.039	<.01	<.007
12...	.300	<.002	<.02	<.003	<.004	<.01	.054	<.01	<.007
12...	.290	<.002	<.02	<.003	<.004	<.01	.045	<.01	<.007
12...	.262	<.002	<.02	<.003	<.004	<.01	.040	<.01	<.007
13...	<.004	<.002	<.02	<.003	<.004	<.01	.045	<.01	<.007
14...	.679	<.002	<.02	<.003	<.004	<.01	10.6	<.01	<.007
14...	.618	<.002	<.02	<.003	<.004	<.01	e33.3	<.01	<.007
14...	.465	<.002	<.02	<.003	<.004	<.01	8.26	<.01	<.007

< Actual value is known to be less than value shown.
e Estimated.

SAN JOAQUIN RIVER BASIN

372323120481700 HIGHLINE CANAL SPILL NEAR HILMAR, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)
JAN				
19...	<.01	<.002	<.001	e.003
FEB				
11...	<.01	<.002	<.001	e.001
11...	<.01	<.002	<.001	e.001
12...	<.01	<.002	<.001	e.004
12...	<.01	<.002	<.001	<.002
12...	<.01	<.002	<.001	<.002
13...	<.01	<.002	<.001	e.001
14...	<.01	<.002	<.001	e.002
14...	<.01	<.002	<.001	e.002
14...	<.01	<.002	<.001	e.002

< Actual value is known to be less than value shown.
e Estimated.

SAN JOAQUIN RIVER BASIN

371521120390800 BEAR CREEK AT BERT CRANE ROAD, NEAR MERCED, CA

LOCATION.—Lat 37° 15'21", long 120° 39'08", in NE 1/4 NE 1/4 sec.9, T.8 S., R.12 E., Merced County, Hydrologic Unit 18040001.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—March 1993,to August 1993, June 1994, February 2000, June 2001 to August 2001.
CHEMICAL DATA: March 1993,to August 1993, June 1994, February 2000, June 2001 to August 2001.

REMARKS.—Chemical data for water year 2001 available in the files of the U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instan-taneous dis-charge, cfs (00061)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Phos-phorus, water, unfltrd mg/L (00665)
FEB 11...	1600	52	152	.68	2.1	.10	.22	<.010	.44

Date	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)
FEB 11...	.05	.083	<.003	<.002	<.002	<.002	<.001	<.001	<.002

Date	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-pyrifos water, fltrd, ug/L (38933)	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Diazi-non, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)
FEB 11...	<.002	e.005	<.003	.004	<.004	e.003	.048	<.001	<.02

Date	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, ug/L (39415)
FEB 11...	<.002	<.004	<.003	<.003	<.004	<.002	<.005	<.006	<.002

< Actual value is known to be less than value shown.
e Estimated.

SAN JOAQUIN RIVER BASIN

371521120390800 BEAR CREEK AT BERT CRANE ROAD, NEAR MERCED, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prome-ton, water, fltrd, ug/L (04037)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)
FEB									
11...	<.004	<.004	<.003	<.004	<.004	<.012	<.002	<.02	<.003

Date	Organic carbon, water, unfltrd mg/L (00680)	alpha-HCH, water, fltrd, ug/L (34253)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Sima-zine, water, fltrd, ug/L (04035)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)
FEB									
11...	24.2	<.002	<.007	<.004	<.01	.087	<.01	<.007	<.01

Date	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	p,p'-DDE, water, fltrd, ug/L (34653)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
FEB					
11...	<.005	<.006	<.002	<.001	<.002

< Actual value is known to be less than value shown.

SAN JOAQUIN RIVER BASIN

372006120571701 SAN JOAQUIN RIVER UPSTREAM OF MERCED RIVER, NEAR HILLS FERRY, CA

LOCATION.—Lat 37° 20'06", long 120° 57'17", in NE 1/4 NE 1/4 sec.11, T.7 S., R.9 E., Stanislaus County, Hydrologic Unit 18040002, 0.7 mi southeast of intersection of River Road and Hills Ferry Road, and 0.15 mi east of Newman Wasteway.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—July 2000 to November 2001.
CHEMICAL DATA: July 2000 to November 2001.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	Transparency Secchi disc, inches (00077)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)
JUL									
26...	1400	e327	e8.00	.149	.113	760	10.6	137	8.3
AUG									
09...	1200	e358	7.00	.135	.101	760	8.2	103	8.5
22...	1220	e336	8.00	--	--	757	8.2	99	8.3
SEP									
06...	1240	e284	11.0	.114	.086	760	10.2	115	8.6
19...	1230	e197	11.0	.135	.103	753	8.7	107	8.2

Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
JUL									
26...	1660	28.0	330	200	77.7	34.2	3.75	5	208
AUG									
09...	1350	26.5	290	150	67.0	29.0	.97	4	156
22...	1340	24.5	280	140	61.4	29.6	3.85	4	156
SEP									
06...	1620	21.0	350	180	81.4	35.5	3.18	5	216
19...	1340	25.0	270	120	61.4	29.4	3.66	4	156

Date	Sodium, percent (00932)	Alkalinity, wat flt Gran, field, mg/L as CaCO3 (29802)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)
JUL									
26...	57	132	219	.2	15.1	345	1000	1.42	1050
AUG									
09...	54	136	165	.3	16.7	274	805	1.16	854
22...	55	140	168	.2	16.1	259	789	1.13	830
SEP									
06...	57	172	210	.2	16.2	336	1010	1.43	1050
19...	55	154	180	.3	14.1	240	784	1.14	838

e Estimated.

SAN JOAQUIN RIVER BASIN

372006120571701 SAN JOAQUIN RIVER UPSTREAM OF MERCED RIVER, NEAR HILLS FERRY, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Residue vola-tile, sus-pended, mg/L (00535)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)
JUL									
26...	124	14	.66	1.8	<.02	4.74	.204	.09	.115
AUG									
09...	145	12	.47	1.2	<.02	3.05	.083	.14	.171
22...	143	14	.49	1.3	<.02	2.18	.043	.10	.128
SEP									
06...	70	<10	.41	1.3	<.02	2.70	.034	.05	.073
19...	97	12	.44	1.2	<.02	1.31	.028	.11	.137

Date	Phos-phorus, water, unfltrd mg/L (00665)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
JUL							
26...	.40	1.9	5.2	95.9	4.1	<10	5.0
AUG							
09...	.44	1.9	5.0	e35.9	1.2	<10	3.0
22...	.37	1.1	4.8	31.4	3.2	<10	6.9
SEP							
06...	.26	1.0	4.2	28.1	1.8	<10	12.4
19...	.33	1.5	6.6	35.2	1.4	<10	9.0

< Actual value is known to be less than value shown.
e Estimated.

SAN JOAQUIN RIVER BASIN

373324121090401 SAN JOAQUIN RIVER AT LAIRD PARK, NEAR GRAYSON, CA

LOCATION.—Lat 37° 33'24", long 121° 09'04", in SW 1/4 NE 1/4 sec.25, T.4 S., R.7 E., El Pescadero Land Grant, Stanislaus County, Hydrologic Unit 18040002, 0.25 mi south of Grayson Road at Laird Park, and 0.3 mi upstream of Grayson Road Bridge.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—July 2000 to November 2001.
CHEMICAL DATA: July 2000 to November 2001.
SEDIMENT DATA: July 2000 to November 2001.

INSTRUMENTATION.— None.

REMARKS.—Estimated discharge based on measured discharge at an upstream gage (San Joaquin River near Patterson, Department of Water Resources) and historical differences between measurements at the two sites.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	Transparency Secchi disc, inches (00077)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)
JUL									
12...	1330	e1030	e12.0	.103	.072	762	10.1	124	8.2
25...	1800	e890	e11.0	.116	.089	759	16.4	211	8.8
AUG									
08...	1300	e782	12.0	.099	.074	758	11.0	133	8.4
23...	1130	e847	13.0	--	--	--	8.1	--	8.1
SEP									
07...	1220	e1090	11.0	.084	.064	759	10.3	120	8.1
20...	1330	e750	12.0	.092	.070	753	8.1	99	8.0

Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
JUL									
12...	1080	25.5	250	110	53.0	27.6	3.18	3	124
25...	1220	28.0	270	--	56.9	30.6	3.91	4	136
AUG									
08...	1160	24.5	250	100	55.7	27.8	3.37	3	122
23...	959	23.0	230	87	49.6	25.8	3.35	3	110
SEP									
07...	1060	22.5	240	96	54.5	25.7	3.12	4	126
20...	974	24.5	220	67	47.9	23.9	3.25	3	106

Date	Sodium, percent (00932)	Alkalinity, wat flt Gran, field, mg/L as CaCO3 (29802)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)
JUL									
12...	52	136	138	.2	15.1	181	643	.91	670
25...	52	298	159	.2	12.8	202	800	1.03	754
AUG									
08...	51	149	148	.2	15.8	177	658	.96	704
23...	50	143	124	.2	16.9	147	581	.82	602
SEP									
07...	53	146	135	.2	17.6	157	624	.86	634
20...	51	151	124	.1	17.1	122	552	.81	594

e Estimated.

SAN JOAQUIN RIVER BASIN

373324121090401 SAN JOAQUIN RIVER AT LAIRD PARK, NEAR GRAYSON, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Residue vola-tile, sus-pended, mg/L (00535)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)
JUL									
12...	147	13	.47	1.2	<.02	4.25	.059	.18	.195
25...	76	14	.43	1.4	<.02	4.30	.077	.14	.160
AUG									
08...	69	12	.40	1.3	<.02	4.28	.068	.17	.200
23...	86	<10	.41	1.0	<.02	4.04	.072	.21	.24
SEP									
07...	76	<10	.33	1.1	<.02	3.88	.063	.20	.23
20...	56	<10	.35	.90	<.02	3.82	.074	.27	.30

Date	Phos-phorus, water, unfltrd mg/L (00665)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Chloro-phyll a phyto-plank-ton, fluoro, ug/L (70953)	Chloro-phyll b phyto-plank-ton, fluoro, ug/L (70954)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
JUL							
12...	.41	1.7	4.2	71.8	<.1	<10	4.1
25...	.38	3.6	4.2	64.4	3.5	<10	11.3
AUG							
08...	.37	1.1	3.6	e43.0	E.7	<10	16.5
23...	.41	.9	3.7	18.9	1.1	<10	26.5
SEP							
07...	.42	1.3	3.2	25.3	1.0	<10	31.5
20...	.44	1.0	3.4	21.7	.7	<10	18.3

PARTICLE-SIZE DISTRIBUTION, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instan-taneous dis-charge, cfs (00061)	Temper-ature, water, deg C (00010)	Sus-pended sedi-ment concen-tration mg/L (80154)	Sus-pended sedi-ment load, tons/d (80155)	Suspnd. sedi-ment, sieve diametr percent <.063mm (70331)
JUL						
12...SS	1330	e1030	25.5	185	e514	93
25...SS	1800	e890	28.0	85	e204	81
AUG						
08...SS	1300	e782	24.5	76	e160	82

< Actual value is known to be less than value shown.
e Estimated.
SS Suspenedd-sediment data determined from a sample collected and processed according to National Water Quality Assessment (NAWQA) protocol.

SAN JOAQUIN RIVER BASIN

373811120590001 DRY CREEK AT GALLO BRIDGE, BELOW HIGHWAY 132, NEAR MODESTO, CA

LOCATION.—Lat 37° 38'11", long 120° 59'00", in Stanislaus County, Hydrologic Unit 18040002, at old bridge just upstream of Beard Brook Park.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—February 1995 to March 1995, January 2000 to February 2000, June 2001 to November 2001.
CHEMICAL DATA: February 1995 to March 1995, January 2000 to February 2000, June 2001 to November 2001.
SPECIFIC CONDUCTANCE: February 1995 to March 1995, June 2001 to November 2001.
WATER TEMPERATURE: February 1995 to March 1995, June 2001 to November 2001.
SEDIMENT DATA: February 1995 to March 1995, June 2001 to October 2001.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Organic carbon, water, unfltrd mg/L (00680)	2,6-Di- ethyl- aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Aceto- chlor, water, fltrd, ug/L (49260)	Ala- chlor, water, fltrd, ug/L (46342)	alpha- HCH, water, fltrd, ug/L (34253)	Atra- zine, water, fltrd, ug/L (39632)
JAN									
06...	1400	283	--	<.003	<.002	<.002	<.002	<.002	e.003
12...	1230	248	--	<.003	<.002	<.002	<.002	<.002	<.005
19...	1100	209	--	<.003	<.002	<.002	<.002	<.002	<.001
FEB									
04...	1040	185	--	<.003	<.002	<.002	<.002	<.002	<.001
09...	1110	195	--	<.003	<.002	<.002	<.002	<.002	<.001
12...	0405	183	14.5	<.003	<.002	<.002	<.002	<.002	<.001
12...	1040	448	--	<.003	<.002	<.002	<.002	<.002	<.001
14...	0120	108	--	<.003	<.002	<.002	<.002	<.002	e.004

Date	Azin- phos- methyl, water, fltrd 0.7u GF ug/L (82686)	Ben- flur- alin, water, fltrd ug/L (82673)	Butyl- ate, water, fltrd, ug/L (04028)	Car- baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo- furan, water, fltrd 0.7u GF ug/L (82674)	Chlor- pyrifos water, fltrd, ug/L (38933)	cis- Per- methrin water fltrd 0.7u GF ug/L (82687)	Cyana- zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)
JAN									
06...	<.001	<.002	<.002	e.009	<.003	.005	<.005	<.004	e.002
12...	<.001	<.002	<.002	e.095	<.003	.020	<.005	.008	e.003
19...	<.001	<.002	<.007	e.015	<.003	.011	<.005	<.004	e.003
FEB									
04...	<.001	<.002	<.002	e.008	<.003	.005	<.005	<.004	<.002
09...	<.001	<.002	<.002	<.003	<.003	<.004	<.005	<.004	<.002
12...	<.001	<.002	<.002	e.037	<.003	.009	<.005	<.004	e.002
12...	<.001	<.002	<.002	e.007	<.003	.004	<.005	<.004	<.002
14...	<.001	<.002	<.002	e.005	<.003	.004	<.005	<.004	<.002

Date	Diazi- non, water, fltrd, ug/L (39572)	Diel- drin, water, fltrd, ug/L (39381)	Disul- foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal- flur- alin, water, fltrd 0.7u GF ug/L (82663)	Etho- prop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)
JAN									
06...	.047	<.001	<.02	e.003	<.004	<.003	<.003	<.004	<.002
12...	.352	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
19...	.042	<.001	<.02	.007	<.004	<.003	<.003	<.004	<.002
FEB									
04...	.029	<.001	<.02	e.002	<.004	<.003	<.003	<.004	<.002
09...	.011	<.001	<.02	e.002	<.004	<.003	<.003	<.004	<.002
12...	.052	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
12...	.025	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
14...	.017	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002

< Actual value is known to be less than value shown.
e Estimated.

SAN JOAQUIN RIVER BASIN

3738111205901 DRY CREEK AT GALLO BRIDGE, BELOW HIGHWAY 132, NEAR MODESTO, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Mala-thion, water, fltrd, ug/L (39532)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)
JAN									
06...	<.005	<.006	e.004	<.004	<.004	<.003	<.006	<.004	<.004
12...	.028	<.006	.006	<.004	<.004	<.003	<.006	<.004	<.004
19...	<.015	<.006	<.005	<.004	<.004	<.003	<.006	<.004	<.004
FEB									
04...	<.005	<.006	.006	<.004	<.004	<.003	<.006	<.004	<.004
09...	<.005	<.006	.006	<.004	<.004	<.003	<.006	<.004	<.004
12...	.016	<.006	.005	<.004	<.004	<.003	<.006	<.004	<.004
12...	<.005	<.006	.007	.007	<.004	<.003	<.006	<.004	<.004
14...	<.005	<.006	.009	.029	<.004	<.007	<.006	<.004	<.004

Date	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prome-ton, water, fltrd, ug/L (04037)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Sima-zine, water, fltrd, ug/L (04035)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)
JAN									
06...	.009	<.002	M	<.003	<.007	<.004	<.01	.028	<.01
12...	.039	<.002	<.02	<.003	<.007	<.004	<.01	.131	<.01
19...	.031	<.002	M	<.003	<.007	<.004	<.01	.065	<.01
FEB									
04...	<.010	<.002	<.02	<.003	<.007	<.004	<.01	.047	<.01
09...	<.004	<.002	<.02	<.003	<.007	<.004	<.01	.381	<.01
12...	.018	<.002	<.02	<.003	<.007	<.004	<.01	.083	<.01
12...	.012	<.002	.03	<.003	<.007	<.004	<.01	.071	<.01
14...	<.004	<.002	<.02	<.003	<.007	<.004	<.01	.514	<.01

Date	Terba-cil, water, fltrd 0.7u GF ug/L (82665)	Terbu-fos, water, fltrd ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd ug/L (82678)	Tri-flur-alin, water fltrd 0.7u GF ug/L (82661)
JAN					
06...	<.007	<.01	<.002	<.001	<.002
12...	<.007	<.01	<.002	<.001	.006
19...	<.007	<.01	<.002	<.001	e.002
FEB					
04...	<.007	<.01	<.002	<.001	.006
09...	<.007	<.01	<.002	<.001	.005
12...	<.007	<.01	<.002	<.001	e.002
12...	<.007	<.01	<.002	<.001	.006
14...	<.007	<.01	<.002	<.001	.006

< Actual value is known to be less than value shown.
e Estimated.
M Presence of material verified,but not quantified.

SAN JOAQUIN RIVER BASIN

373925120550701 DRY CREEK AT CLAUS ROAD BRIDGE, AT MODESTO, CA

LOCATION.—Lat 37° 39'25", long 120° 55'07", in Stanislaus County, Hydrologic Unit 18040002, just upstream of Farabuindo storm drain on right bank.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.— February 1995 to September 1995, January 2000 to September 2000.
CHEMICAL DATA: February 1995 to September 1995, January 2000 to September 2000.

REMARKS.—Discharge data furnished by California Department of Water Resources, not reviewed by U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instan-taneous dis-charge, cfs (00061)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)
JAN									
06...	1330	e.90	385	--	--	--	--	--	--
12...	1300	e3.7	313	--	--	--	--	--	--
19...	1130	e15	219	--	--	--	--	--	--
FEB									
04...	0950	e46	188	--	--	--	--	--	--
09...	1050	e35	192	--	--	--	--	--	--
11...	2000	e183	146	--	--	--	--	--	--
11...	2330	e323	127	1.1	2.0	.44	.68	.020	.15
12...	0745	e252	314	--	--	--	--	--	--
12...	2000	e1950	131	--	--	--	--	--	--
12...	2300	e2460	124	--	--	--	--	--	--
13...	0730	e1690	108	--	--	--	--	--	--
13...	2230	e1620	114	1.5	2.5	.60	.67	.020	.49
14...	0210	e2700	107	--	--	--	--	--	--
14...	0610	e3070	89	--	--	--	--	--	--

Date	Phos-phorus, water, fltrd, mg/L (00666)	Phos-phorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atra-zine, water, fltrd, ug/L (39632)
JAN									
06...	--	--	--	<.003	e.007	<.002	<.002	<.002	e.004
12...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
19...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
FEB									
04...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
09...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.003
11...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
11...	.185	.51	17.2	<.003	e.003	<.002	<.002	<.002	<.001
12...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
12...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
12...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
13...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
13...	.56	.91	19.8	<.003	<.002	<.002	<.002	<.002	<.001
14...	--	--	--	<.003	<.002	<.002	<.002	<.002	<.001
14...	--	--	--	<.003	<.002	<.002	<.002	<.002	e.003

e Estimated.
< Actual value is known to be less than value shown.

SAN JOAQUIN RIVER BASIN

373925120550701 DRY CREEK AT CLAUS ROAD BRIDGE, AT MODESTO, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Azinphos-methyl, water, fltrd 0.7u GF ug/L (82686)	Benfluralin, water, fltrd 0.7u GF ug/L (82673)	Butylate, water, fltrd, ug/L (04028)	Carbaryl, water, fltrd 0.7u GF ug/L (82680)	Carbofuran, water, fltrd 0.7u GF ug/L (82674)	Chlorpyrifos water, fltrd, ug/L (38933)	cis-Permethrin water fltrd 0.7u GF ug/L (82687)	Cyanazine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)
JAN									
06...	<.001	<.002	<.002	e.038	<.003	.005	<.005	<.004	<.002
12...	<.001	<.002	<.007	e.007	<.003	e.003	<.005	.007	<.002
19...	<.001	<.002	<.007	<.007	<.003	.009	<.005	<.004	e.002
FEB									
04...	<.001	<.002	<.002	<.003	<.003	<.004	<.005	<.004	<.002
09...	<.001	<.002	<.002	<.003	<.003	<.004	<.005	<.004	<.002
11...	<.001	.007	<.002	e.071	<.003	.010	<.005	<.004	e.002
11...	<.001	.014	<.002	e.083	<.003	.025	<.005	<.004	e.002
12...	<.001	<.002	<.002	e.004	<.003	e.003	<.005	<.004	<.002
12...	<.001	<.002	<.002	e.005	<.003	e.003	<.005	<.004	<.002
12...	<.001	<.002	<.002	e.005	<.003	.004	<.005	<.004	e.001
13...	<.001	<.002	<.002	e.004	<.003	.005	<.005	<.004	<.002
13...	<.001	<.002	<.002	e.004	<.003	.005	<.005	<.004	<.002
14...	<.001	<.002	<.002	<.003	<.003	.006	<.005	<.004	<.002
14...	<.001	<.002	<.002	e.005	<.003	.004	<.005	<.004	<.002

Date	Diazinon, water, fltrd, ug/L (39572)	Dieldrin, water, fltrd, ug/L (39381)	Disulfoton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethalfluralin, water, fltrd 0.7u GF ug/L (82663)	Ethoprop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)
JAN									
06...	<.002	<.001	<.02	.013	<.004	<.003	<.003	<.004	<.002
12...	.015	<.001	<.02	.023	<.004	<.003	<.003	<.004	<.002
19...	.016	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
FEB									
04...	.010	<.001	<.02	e.002	<.004	<.003	<.003	<.004	<.002
09...	.009	<.001	<.02	e.002	<.004	<.003	<.003	<.004	<.002
11...	.347	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
11...	.126	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
12...	.021	<.001	<.02	e.002	<.004	<.003	<.003	<.004	<.002
12...	.018	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
12...	.018	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
13...	.020	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002
13...	.017	<.001	<.02	<.005	<.004	<.003	<.003	<.004	<.002
14...	.016	<.001	<.02	e.002	<.004	<.003	<.003	<.004	<.002
14...	.013	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002

Date	Malathion, water, fltrd, ug/L (39532)	Methyl parathion, water, fltrd 0.7u GF ug/L (82667)	Metolachlor, water, fltrd, ug/L (39415)	Metribuzin, water, fltrd, ug/L (82630)	Molinate, water, fltrd 0.7u GF ug/L (82671)	Napropamide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Parathion, water, fltrd, ug/L (39542)	Pebulate, water, fltrd 0.7u GF ug/L (82669)
JAN									
06...	<.005	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004
12...	<.005	<.006	.006	<.004	<.004	<.003	<.006	<.004	<.004
19...	<.005	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004
FEB									
04...	.008	<.006	.006	<.004	<.004	<.006	<.006	<.004	<.004
09...	<.005	<.006	.006	<.004	<.004	<.003	<.006	<.004	<.004
11...	.013	<.006	.006	<.004	<.004	<.003	<.006	<.004	<.004
11...	.009	<.006	.005	<.004	<.004	<.003	<.006	<.004	<.004
12...	.006	<.006	.006	<.004	<.004	<.003	<.006	<.004	<.004
12...	<.005	<.006	.006	.019	<.004	.007	<.006	<.004	<.004
12...	<.005	<.006	.008	.037	<.004	.006	<.006	<.004	<.004
13...	<.005	<.006	.009	.009	<.004	<.003	<.006	<.004	<.004
13...	<.005	<.006	.011	.010	<.004	.008	<.006	<.004	<.004
14...	<.005	<.006	.009	.031	<.004	.009	E.005	<.004	<.004
14...	<.005	<.006	.008	.013	<.004	.006	<.006	<.004	<.004

< Actual value is known to be less than value shown.
e Estimated.

SAN JOAQUIN RIVER BASIN

373925120550701 DRY CREEK AT CLAUS ROAD BRIDGE, AT MODESTO, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Pendimethalin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prometon, water, fltrd, ug/L (04037)	Pronamide, water, fltrd 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd 0.7u GF ug/L (82679)	Propargite, water, fltrd 0.7u GF ug/L (82685)	Simazine, water, fltrd, ug/L (04035)	Tebuthiuron water fltrd 0.7u GF ug/L (82670)
JAN									
06...	<.004	<.002	M	<.003	<.007	<.004	<.01	.025	<.01
12...	<.004	<.002	<.02	<.003	<.007	<.004	--	.031	<.01
19...	<.004	<.002	<.02	<.003	<.007	<.004	<.01	.055	<.01
FEB									
04...	<.008	<.002	<.02	<.003	<.007	<.004	<.01	.042	<.01
09...	<.008	<.002	<.02	<.003	<.007	<.004	<.01	.353	<.01
11...	<.020	<.002	M	<.003	<.007	<.004	<.01	.253	<.01
11...	.039	<.002	M.01	<.003	<.007	<.004	<.01	.043	<.01
12...	<.004	<.002	M.01	<.003	<.007	<.004	<.01	.079	<.01
12...	<.010	<.002	<.02	<.003	<.007	<.004	<.01	.216	<.01
12...	<.010	<.002	<.02	<.003	<.007	<.004	<.01	.387	<.01
13...	<.004	<.002	<.02	<.003	<.007	<.004	<.01	1.22	<.01
13...	<.004	<.002	<.02	<.003	<.007	<.004	<.01	.591	<.01
14...	.015	<.002	<.02	<.003	<.007	<.004	<.01	.398	M
14...	<.011	<.002	<.02	<.003	<.007	<.004	<.01	.838	<.01

Date	Terbacil, water, fltrd 0.7u GF ug/L (82665)	Terbufos, water, fltrd 0.7u GF ug/L (82675)	Thiobencarb water fltrd 0.7u GF ug/L (82681)	Triallate, water, fltrd 0.7u GF ug/L (82678)	Trifluralin, water, fltrd 0.7u GF ug/L (82661)
JAN					
06...	<.007	<.01	<.002	<.001	<.002
12...	<.007	<.01	<.002	<.001	<.002
19...	<.007	<.01	<.002	<.001	e.001
FEB					
04...	<.007	<.01	<.002	<.001	<.006
09...	<.007	<.01	<.002	<.001	<.002
11...	<.007	<.01	<.002	<.001	.006
11...	<.007	<.01	<.002	<.001	.012
12...	<.007	<.01	<.002	<.001	<.002
12...	<.007	<.01	<.002	<.001	<.002
12...	<.007	<.01	<.002	<.001	<.002
13...	<.007	<.01	<.002	<.001	<.002
13...	<.007	<.01	<.002	<.001	e.001
14...	<.007	<.01	<.002	<.001	<.002
14...	<.007	<.01	<.002	<.001	<.002

< Actual value is known to be less than value shown.
e Estimated.
M Presence of material verified, but not quantified.

SAN JOAQUIN RIVER BASIN

374209121103800 STANISLAUS RIVER AT CASWELL STATE PARK, NEAR RIPON, CA

LOCATION.—Lat 37° 42'09", long 121° 10'38", in SE 1/4 SE 1/4 sec.3, T.3 S., R.7 E., Stanislaus County, Hydrologic Unit 18040002, 2.5 mi upstream of pumping station at park, and 3.5 mi southwest of Ripon.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—September 1994, January 2000 to February 2000, January 2001 to August 2001.
CHEMICAL DATA: September 1994, January 2000 to February 2000, January 2001 to August 2001.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, fltrd, mg/L (00666)
JAN									
06...	1100	128	--	--	--	--	--	--	--
12...	1400	137	--	--	--	--	--	--	--
19...	1000	123	--	--	--	--	--	--	--
25...	1640	98	--	--	--	--	--	--	--
26...	0920	109	--	--	--	--	--	--	--
FEB									
04...	1430	137	--	--	--	--	--	--	--
09...	1350	152	--	--	--	--	--	--	--
11...	2100	145	--	--	--	--	--	--	--
12...	0540	151	--	--	--	--	--	--	--
12...	1600	131	--	--	--	--	--	--	--
13...	0105	115	.24	.53	.09	.59	.013	.05	.065
13...	0800	100	--	--	--	--	--	--	--
13...	1500	108	.94	1.6	.30	.41	.016	.29	.36
13...	2200	115	--	--	--	--	--	--	--
14...	0600	123	--	--	--	--	--	--	--
14...	1615	105	--	--	--	--	--	--	--
15...	0150	103	--	--	--	--	--	--	--
15...	0900	95	--	--	--	--	--	--	--
15...	1745	83	--	--	--	--	--	--	--
16...	0425	83	--	--	--	--	--	--	--

Date	Phos-phorus, water, unfltrd mg/L (00665)	Organic carbon, water, unfltrd mg/L (00680)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)
JAN									
06...	--	--	<.003	<.002	<.002	<.002	<.002	.004	<.001
12...	--	--	<.003	e.008	<.002	<.002	<.002	.006	<.001
19...	--	--	<.003	<.002	<.002	<.002	<.002	.004	<.001
25...	--	--	<.003	<.002	<.002	<.002	<.002	e.003	<.001
26...	--	--	<.003	<.002	<.002	<.002	<.002	<.005	<.001
FEB									
04...	--	--	<.003	e.004	<.002	<.002	<.002	.005	<.001
09...	--	--	<.003	<.002	<.002	<.002	<.002	.005	<.001
11...	--	--	<.003	e.003	<.002	<.002	<.002	e.004	<.001
12...	--	--	<.003	e.003	<.002	<.002	<.002	.004	<.001
12...	--	--	<.003	e.003	<.002	<.002	<.002	e.003	<.001
13...	.177	4.3	<.003	<.002	<.002	<.002	<.002	<.001	<.001
13...	--	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001
13...	.58	12.0	<.003	<.002	<.002	<.002	<.002	<.001	<.001
13...	--	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001
14...	--	17.0	<.003	<.002	<.002	<.002	<.002	.005	<.001
14...	--	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001
15...	--	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001
15...	--	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001
15...	--	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001
16...	--	--	<.003	<.002	<.002	<.002	<.002	<.001	<.001

< Actual value is known to be less than value shown.
e Estimated.

SAN JOAQUIN RIVER BASIN

374209121103800 STANISLAUS RIVER AT CASWELL STATE PARK, NEAR RIPON, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Diazi-non, water, fltrd, ug/L (39572)
JAN									
06...	<.002	<.002	<.003	<.003	<.004	<.005	<.004	e.002	<.002
12...	<.002	<.002	e.013	<.003	.004	<.005	<.004	e.002	.013
19...	<.002	<.002	e.013	<.003	e.004	<.005	<.004	e.002	.016
25...	<.002	<.002	e.013	<.003	.007	<.005	<.004	e.003	.030
26...	<.002	<.002	e.011	<.003	.010	<.005	<.004	e.003	.019
FEB									
04...	<.002	<.002	e.153	<.003	<.004	<.005	<.004	<.002	.014
09...	<.002	<.002	e.004	<.003	<.004	<.005	<.004	<.002	e.004
11...	<.002	<.002	e.106	<.003	e.003	<.005	<.004	e.002	.013
12...	<.002	<.002	e.051	<.003	.007	<.005	<.004	e.002	.037
12...	<.002	<.002	e.016	<.003	e.004	<.005	<.004	e.001	.015
13...	<.002	<.002	e.022	<.003	.005	<.005	<.004	e.002	.029
13...	<.002	<.002	e.010	<.003	.006	<.005	<.004	e.002	.035
13...	<.002	<.002	e.015	<.003	.005	<.005	<.004	e.002	.054
13...	<.002	<.002	e.013	<.003	.004	<.005	<.004	e.002	.036
14...	<.002	<.002	e.010	<.003	.006	<.005	<.004	<.002	.042
14...	<.002	<.002	e.006	<.003	.006	<.005	<.010	<.002	.028
15...	<.002	<.002	<.003	<.003	.006	<.005	.012	<.002	.016
15...	<.002	<.002	e.004	<.003	e.003	<.005	<.004	e.001	.014
15...	<.002	<.002	e.004	<.003	<.004	<.005	<.004	<.002	.007
16...	<.002	<.002	e.003	<.003	<.004	<.005	<.004	<.002	.007

Date	Diel-drin, water, fltrd, ug/L (39381)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)
JAN									
06...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
12...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
19...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
25...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
26...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
FEB									
04...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
09...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
11...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
12...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	.008
12...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	.016
13...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	.009
13...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	e.005
13...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
13...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
14...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
14...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
15...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
15...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
15...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005
16...	<.001	<.02	<.002	<.004	<.003	<.003	<.004	<.002	<.005

< Actual value is known to be less than value shown.
e Estimated.

SAN JOAQUIN RIVER BASIN

374209121103800 STANISLAUS RIVER AT CASWELL STATE PARK, NEAR RIPON, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)
JAN									
06...	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004	<.004
12...	<.006	<.002	<.004	<.004	<.003	<.006	<.004	<.004	<.004
19...	<.006	e.003	<.004	<.004	<.003	<.006	<.004	<.004	<.004
25...	<.006	.004	<.004	<.004	<.003	<.006	<.004	<.004	.019
26...	<.006	.006	<.004	<.004	<.003	<.006	<.004	<.004	.008
FEB									
04...	<.006	.005	<.004	<.004	<.003	<.006	<.004	<.004	<.008
09...	<.006	.004	<.004	<.004	<.003	<.006	<.004	<.004	<.004
11...	<.006	e.004	<.004	<.004	<.003	<.006	<.004	<.004	<.010
12...	<.006	.006	<.004	<.004	<.003	<.006	<.004	<.004	.030
12...	<.006	e.004	<.004	<.004	<.003	<.006	<.004	<.004	<.010
13...	<.006	.005	<.004	<.004	<.003	<.006	<.004	<.004	<.012
13...	<.006	.006	<.004	<.004	<.003	<.006	<.004	<.004	.012
13...	<.006	.006	<.004	<.004	<.003	<.006	<.004	<.004	.014
13...	<.006	.007	<.004	<.004	<.003	<.006	<.004	<.004	.013
14...	<.006	.012	<.004	<.004	<.003	<.006	<.004	<.004	.011
14...	<.006	.009	<.004	<.004	<.003	<.006	<.004	<.004	<.008
15...	<.006	.008	<.004	<.004	<.003	<.006	<.004	<.004	<.004
15...	<.006	.008	<.004	<.004	<.003	<.006	<.004	<.004	<.010
15...	<.006	.006	<.004	<.004	<.003	<.006	<.004	<.004	<.004
16...	<.006	.005	.004	<.004	<.003	<.006	<.004	<.004	<.004

Date	Phorate water fltrd 0.7u GF ug/L (82664)	Prome-ton, water, fltrd, ug/L (04037)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Sima-zine, water, fltrd, ug/L (04035)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)
JAN									
06...	<.002	<.02	<.003	<.007	<.004	<.01	.009	e.01	<.007
12...	<.002	<.02	<.003	<.007	<.004	<.01	.061	e.01	<.007
19...	<.002	M	<.003	<.007	<.004	<.01	.014	e.01	<.007
25...	<.002	M	<.003	<.007	<.004	<.01	.142	<.01	<.007
26...	<.002	M	<.003	<.007	<.004	<.01	.236	<.01	<.007
FEB									
04...	<.002	<.02	<.003	<.007	<.004	<.01	.027	e.01	<.007
09...	<.002	<.02	<.003	<.007	<.004	<.01	.015	<.01	<.007
11...	<.002	<.02	<.003	<.007	<.004	<.01	.028	<.01	<.007
12...	<.002	M	<.003	<.007	<.004	<.01	.063	<.01	<.007
12...	<.002	e.01	<.003	<.007	<.004	<.01	.119	<.01	<.007
13...	<.002	M	<.003	<.007	<.004	<.01	.124	<.01	<.007
13...	<.002	<.02	<.003	<.007	<.004	<.01	.140	<.01	<.007
13...	<.002	<.02	<.003	<.007	<.004	<.01	.225	<.01	<.007
13...	<.002	e.01	<.003	<.007	<.004	<.01	.295	<.01	<.007
14...	<.002	e.01	<.003	<.007	<.004	<.01	.535	<.01	<.007
14...	<.002	e.01	<.003	<.007	<.004	<.01	.394	<.01	<.007
15...	<.002	<.02	<.003	<.007	<.004	<.01	.340	<.01	<.007
15...	<.002	M	<.003	<.007	<.004	<.01	.202	<.01	<.007
15...	<.002	<.02	<.003	<.007	<.004	<.01	.113	<.01	<.007
16...	<.002	<.02	<.003	<.007	<.004	<.01	.094	<.01	<.007

< Actual value is known to be less than value shown.
e Estimated.
M Presence of material verified,but not quantified

SAN JOAQUIN RIVER BASIN

374209121103800 STANISLAUS RIVER AT CASWELL STATE PARK, NEAR RIPON, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

(NOT PREVIOUSLY PUBLISHED)

Date	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
JAN				
06...	<.01	<.002	<.001	<.002
12...	<.01	<.002	<.001	<.002
19...	<.01	<.002	<.001	e.001
25...	<.01	<.002	<.001	e.002
26...	<.01	<.002	<.001	e.001
FEB				
04...	<.01	<.002	<.001	.005
09...	<.01	<.002	<.001	<.005
11...	<.01	<.002	<.001	e.001
12...	<.01	<.002	<.001	e.001
12...	<.01	<.002	<.001	e.001
13...	<.01	<.002	<.001	e.001
13...	<.01	<.002	<.001	<.006
13...	<.01	<.002	<.001	e.001
13...	<.01	<.002	<.001	e.001
14...	<.01	<.002	<.001	.004
14...	<.01	<.002	<.001	e.003
15...	<.01	<.002	<.001	e.004
15...	<.01	<.002	<.001	<.002
15...	<.01	<.002	<.001	<.002
16...	<.01	<.002	<.001	<.002

< Actual value is known to be less than value shown.
e Estimated.

THIS PAGE INTENTIONALLY LEFT BLANK

INDEX

THIS PAGE INTENTIONALLY LEFT BLANK

Conversion Factors

Multiply	By	To obtain
	Length	
inch (in.)	2.54×10^{1}	millimeter (mm)
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter (m)
mile (mi)	1.609×10^{0}	kilometer (km)
	Area	
acre	4.047×10^{3}	square meter (m^2)
	4.047×10^{-1}	square hectometer (hm^2)
	4.047×10^{-3}	square kilometer (km^2)
square mile (mi^2)	2.590×10^{0}	square kilometer (km^2)
	Volume	
gallon (gal)	3.785×10^{0}	liter (L)
	3.785×10^{-3}	cubic meter (m^3)
	3.785×10^{0}	cubic decimeter (dm^3)
million gallons (Mgal)	3.785×10^{3}	cubic meter (m^3)
	3.785×10^{-3}	cubic hectometer (hm^3)
cubic foot (ft^3)	2.832×10^{-2}	cubic meter (m^3)
	2.832×10^{1}	cubic decimeter (dm^3)
cubic-foot-per-second-per-day [(ft^3/s/d]	2.447×10^{3}	cubic meter (m^3)
	2.447×10^{-3}	cubic hectometer (hm^3)
acre-foot (acre-ft)	1.223×10^{3}	cubic meter (m^3)
	1.223×10^{-3}	cubic hectometer (hm^3)
	1.223×10^{-6}	cubic kilometer (km^3)
	Flow rate	
cubic foot per second (ft^3/s)	2.832×10^{1}	liter (L/s)
	2.832×10^{-2}	cubic meter per second (m^3/s)
	2.832×10^{1}	cubic decimeter per second (dm^3/s)
gallon per minute (gal/min)	6.309×10^{-2}	liter per second (L/s)
	6.309×10^{-5}	cubic meter per second (m^3/s)
	6.309×10^{-2}	cubic decimeter per second (dm^3/s)
million gallons per day (Mgal/d)	4.381×10^{-2}	cubic meter per second
	4.381×10^{1}	cubic decimeter per second (dm^3/s)
	Mass	
ton, short (2,000 lb)	9.072×10^{-1}	megagram (Mg) or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$°F = (1.8 \times °C) + 32$$

USGS

Water Resources Data, California, Water Year 2004—CA-03-3