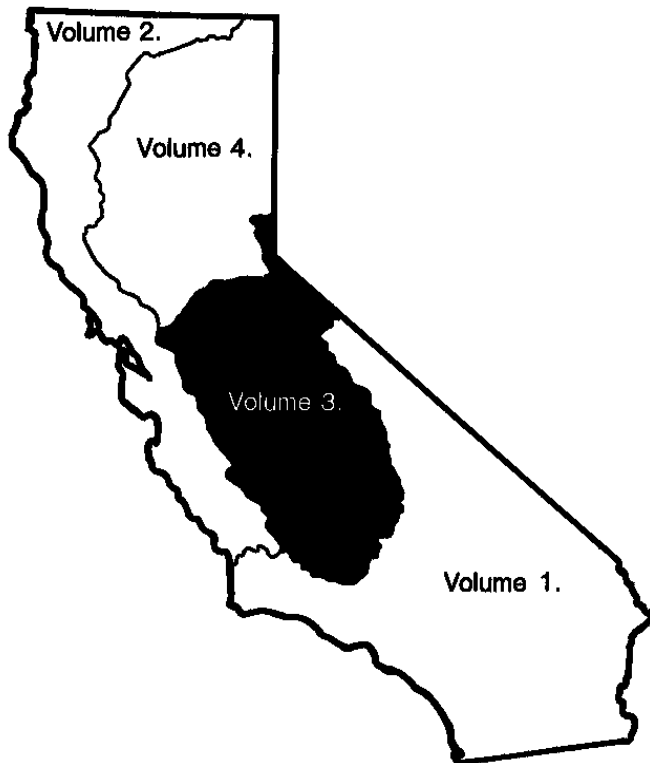


Prepared in cooperation with  
California Department of Water Resources and with other agencies

# Water Resources Data California Water Year 2004

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



Water-Data Report CA-04-3

# Calendar for Water Year 2004

## 2003

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

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## 2004

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

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

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

# **Water Resources Data California Water Year 2004**

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

By G.L. Pope, L.A. Freeman, G.L. Rockwell, and S.J. Brockner

Water-Data Report CA-04-3

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

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## 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, Director, USGS California Water Science Center.

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## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

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## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

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]

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## 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 <sup>2</sup> )	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 Olancho	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

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## DISCONTINUED GAGING STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record (Water Year)
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
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

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Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record (Water Year)
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
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 Nippinawassee	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

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

## DISCONTINUED GAGING STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record (Water Year)
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
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 Tuolumne 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

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

## DISCONTINUED GAGING STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record (Water Year)
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
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
11333000	Camp Creek near Somerset	62.6	1924, 1955–2004
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

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

## DISCONTINUED GAGING STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record (Water Year)
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 <sup>2</sup> )	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 <sup>2</sup> )	Type of record	Period of record (Water Year)
10336593	Grass Lake Creek near Meyers	6.99	S,T	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,S,T	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	S,T	1972–74
10336640	Meeks Creek at Meeks Bay	8.08	S,T	1971–74
10336645	General Creek near Meeks Bay	7.44	C,S,T	1981–92
10336650	Quail Lake Creek at Homewood	.95	S,T	1972–74
10336655	Madden Creek near Homewood	1.40	S,T	1972–74
10336658	Madden Creek at Homewood	2.06	S,T	1972–73
10336670	Ward Creek near Tahoe Pines	2.03	S,T	1973–76
10336672	Ward Creek Tributary near Tahoe Pines	.91	S,T	1973–76
10336684	Dollar Creek near Tahoe City	1.07	S,T	1972–74
10336689	Snow Creek at Tahoe Vista	4.43	C,S,T	1981–85
10336740	Logan House Creek near Glenbrook, NV	2.08	S	1984–87

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

## DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Type of record	Period of record (Water Year)
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,S,T	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,S,T	1975–95
10339380	Martis Creek Lake near Truckee	39.6	WQ,S	1975–95
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, S,T	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,S,T	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	C,T	1959–63, 1972, 1980–81
11208000	Marble Fork Kaweah River at Potwisha Camp	51.4	C,T	1962–72, 1979–82
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	T	1968–76
11209500	North Fork Kaweah River near Three Rivers	129	C,T	1980–82
11209900	Kaweah River at Three Rivers	418	T	1966–88
11210950	Kaweah River below Terminus Dam	561	T	1971–94
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,S,T	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, 1963–70, 1993
11245000	South Fork Willow Creek near North Fork	39.8	T	1961
11246500	Willow Creek at mouth, near Auberry	130	T	1962–72
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	T	1976–94
11260815	San Joaquin River near Stevinson	7,388	C,T	1986–95

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

## DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Type of record	Period of record (Water Year)
11262890	San Luis Drain, Site A, near South Dos Palos	—	C,T	1999
11264500	Merced River at Happy Isles Bridge, near Yosemite	181	WQ,B,T,S	1966–96, 2000–03
11266500	Merced River at Pohono Bridge, near Yosemite	321	T	1995
11268000	South Fork Merced River near El Portal	241	T	1975–78
11268200	Merced River near Briceburg	691	C,T	1976–78
11272500	Merced River at Stevinson	1,273	C,T	1985–95
11274000	San Joaquin River near Newman	9,520	C,T	1986–89, 1992–95
11274554	Spanish Grant Combined Drain near Patterson	—	C,T	1993–95
11274560	Turlock Irrigation District Lateral No. 5 near Crows Landing	—	C,T	1992–95
11274570	San Joaquin River at Patterson Bridge, near Patterson	9,760	C,T	1985–95
11283100	Lily Creek near Pinecrest	11.9	T	1965–74
11292700	Middle Fork Stanislaus River at Hells Half Acre Bridge, near Pinecrest	287	T	1966–71, 1973–79
11294500	North Fork Stanislaus River near Avery	163	T	1990–98
11295400	Stanislaus River near Hathaway Pines	629	T	1970–83
11306000	South Fork Calaveras River near San Andreas	118	S,T	1974–79
11308000	North Fork Calaveras River near San Andreas	85.2	S,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	T	1970–94
11312000	Bear Creek near Lockeford	47.4	C	1976–77
11313010	Delta–Mendota Canal below Tracy Pump Plant, near Tracy	—	S,T	1960–66
11319500	Mokelumne River near Mokelumne Hill	544	T	1961–79
11323500	Mokelumne River below Camanche Dam	621	T	1962–68, 1970–76
11325500	Mokelumne River at Woodbridge	661	C,T	1961–86

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



# WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004 VOLUME 3—SOUTHERN CENTRAL VALLEY BASINS AND THE GREAT BASIN FROM WALKER RIVER TO TRUCKEE RIVER

By G.L. Pope, L.A. Freeman, G.L. Rockwell, and S.J. Brockner

## 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 187 streamflow-gaging stations and 3 partial-record station; (2) stage and content records for 48 lakes and reservoirs; (3) precipitation data for 2 stations; and (4) water-quality records for 49 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-04-1." 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.

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

### 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.

City of Brentwood, David Stoops, Operations and Maintenance Coordinator.

City of Elk Grove, Maynard Flohaug, Senior Engineer.

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

El Dorado Irrigation District, Tim Sullivan, Senior Engineer.

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, Alec 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 indentation 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.

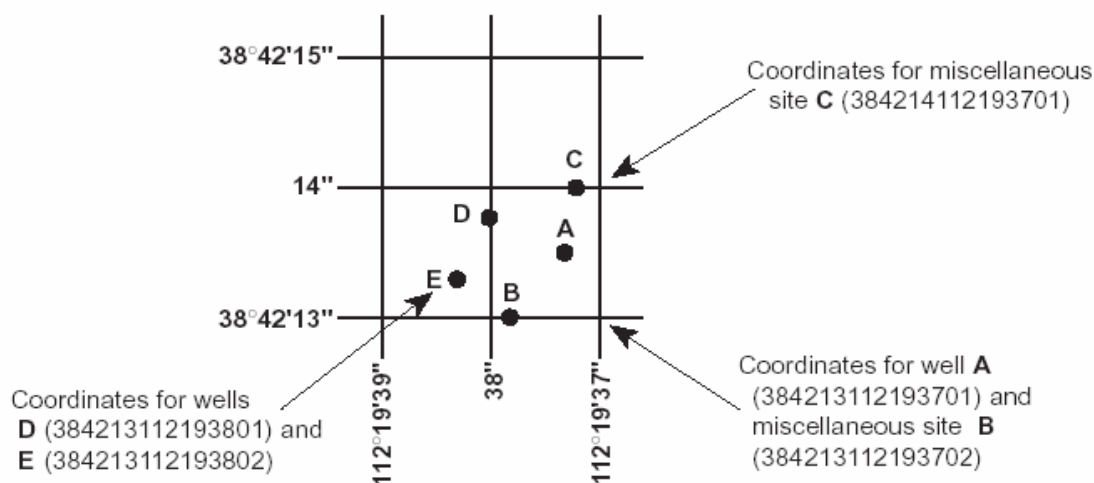
As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These station numbers are in the same downstream order used in this report. In assigning a station number, no distinction is made between partial-record stations and other stations; 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

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

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/>.

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**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, which may be accessed from <http://water.usgs.gov/pubs/twri/>. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standardization (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.

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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.

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**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.

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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

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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<sup>3</sup>/s; to the nearest tenths between 1.0 and 10 ft<sup>3</sup>/s; to whole numbers between 10 and 1,000 ft<sup>3</sup>/s; and to 3 significant figures above 1,000 ft<sup>3</sup>/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).



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### 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 TWRI's, which may be accessed from <http://water.usgs.gov/pubs/twri/>.

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

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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-QUALITY 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.

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

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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 TWRI's Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1-A9. These TWRI's 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 TWRI's, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3,

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

and A4. The TWRI publications may be accessed from <http://water.usgs.gov/pubs/twri/>. 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 RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

### Remark Codes

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

Printed Output	Remark
e	Value is estimated.
>	Actual value is known to be greater than value shown.
<	Actual value is known to be less than value shown.
M	Presence of material verified, but not quantified.
N	Presumptive evidence of presence of material.
U	Material specifically analyzed for, but not detected.
A	Value is an average.
V	Analyte was detected in both the environmental sample and the associated blanks.
S	Most probable value.

### 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:

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

**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>.

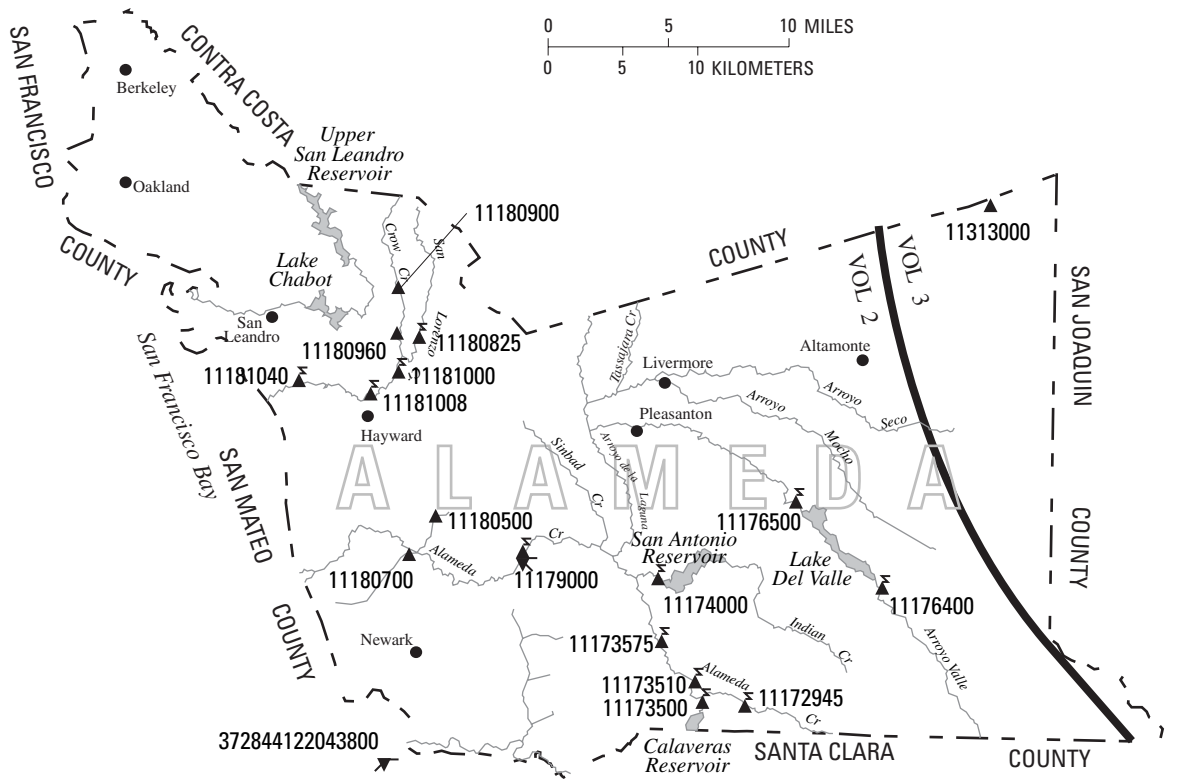
Water-quality data and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on various media. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each Water Discipline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

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

## DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, may be accessed from [http://water.usgs.gov/ADR\\_Defs\\_2004.pdf](http://water.usgs.gov/ADR_Defs_2004.pdf). 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>.

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

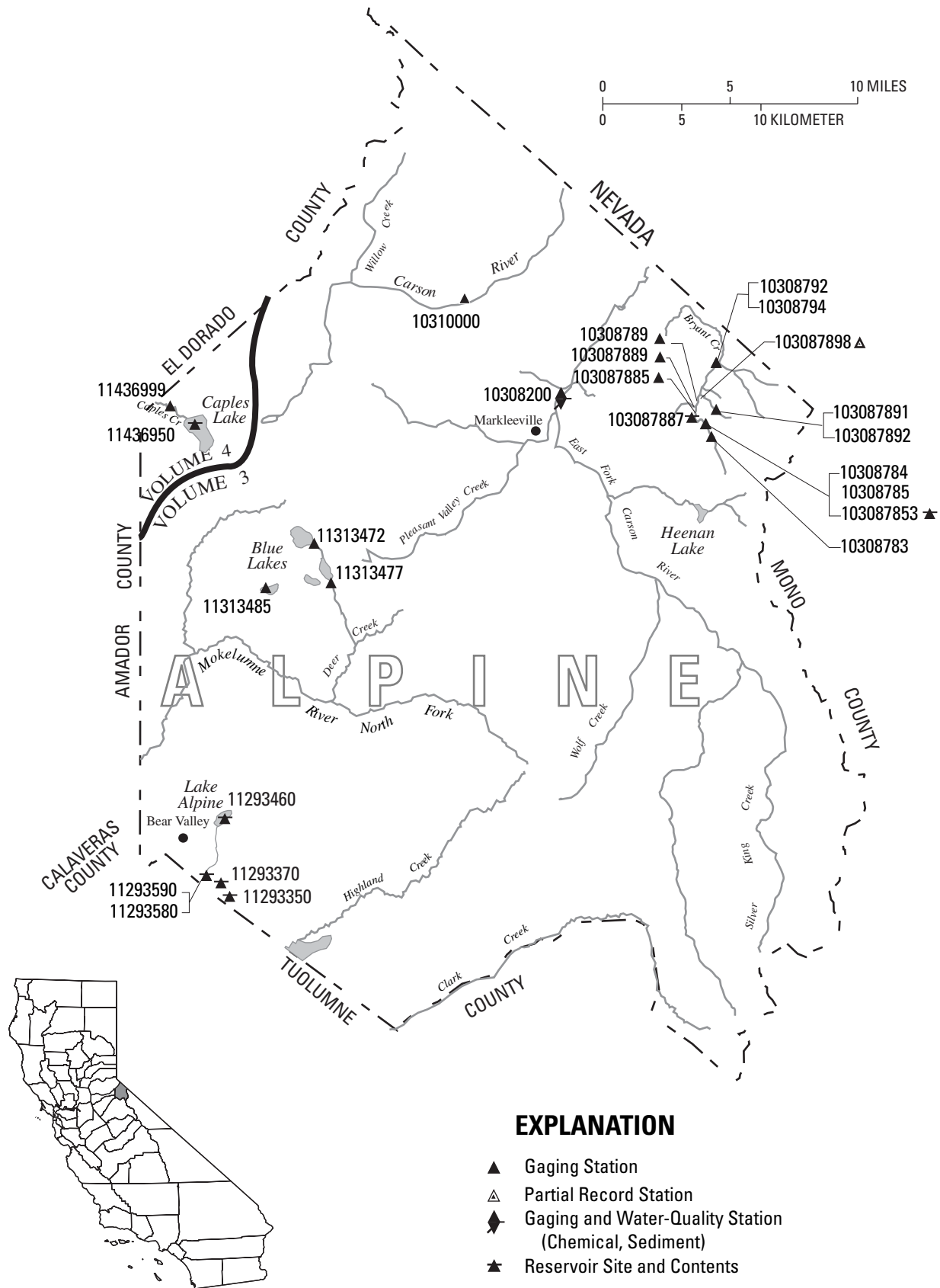


**EXPLANATION**

- ▲ Gaging Station
- ▲ Gaging Station with Telemetry
- ◆ Gaging and Water-Quality Station (Sediment, Temperature)
- ◆ Gaging and Water-Quality Station with Telemetry (Sediment)
- ◆ Gaging and Water-Quality Station with Telemetry (Sediment, Temperature)
- ✦ Water-Quality Station (Chemical, Temperature)
- ◆ Gaging and Water-Quality Station (Sediment, Miscellaneous Measurement Site)

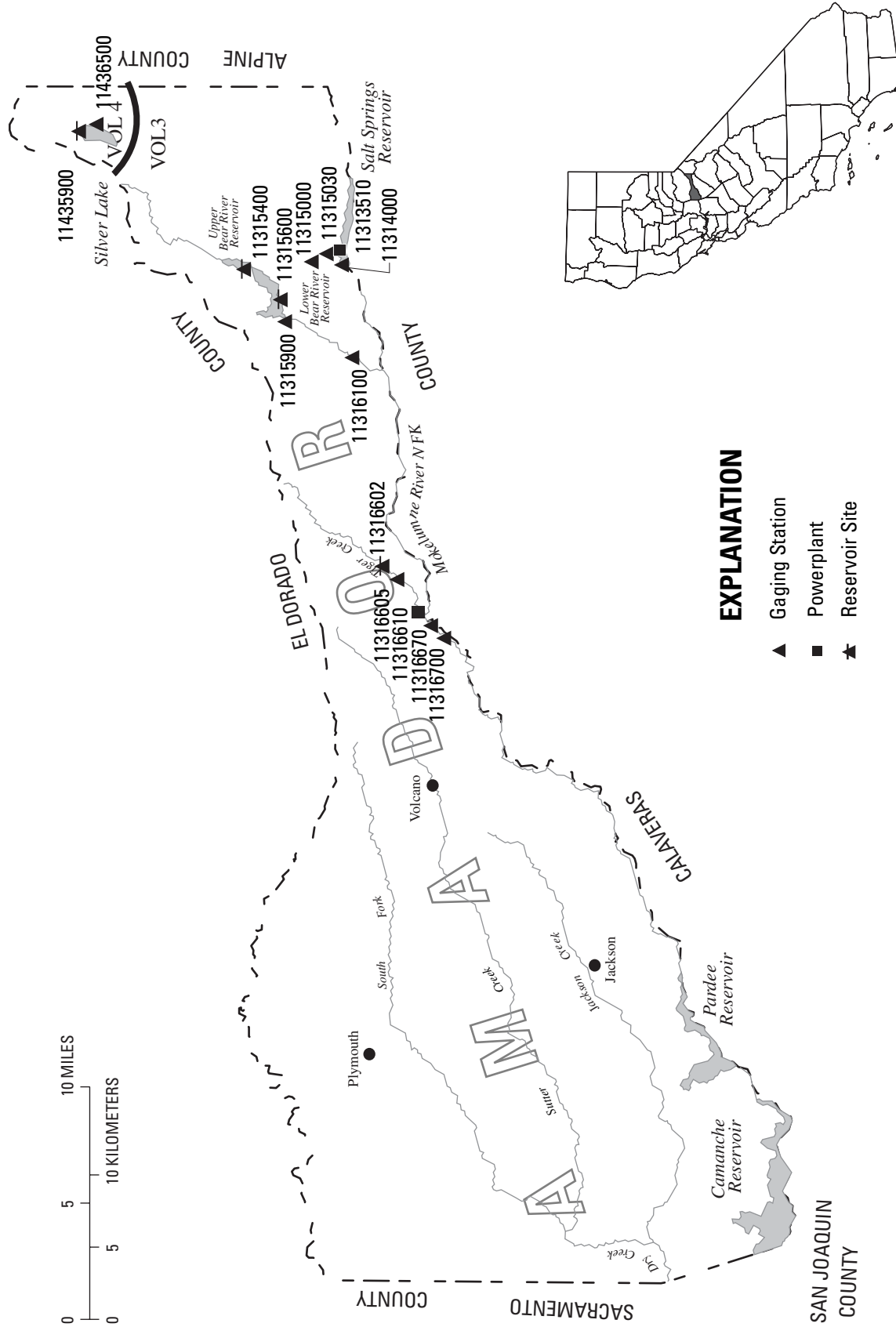
**Figure 2.** Location of discharge and water-quality stations in Alameda County.  
 (NOTE: Records for stations 11172945 through 11181040 published in volume 2.)





**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.)

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

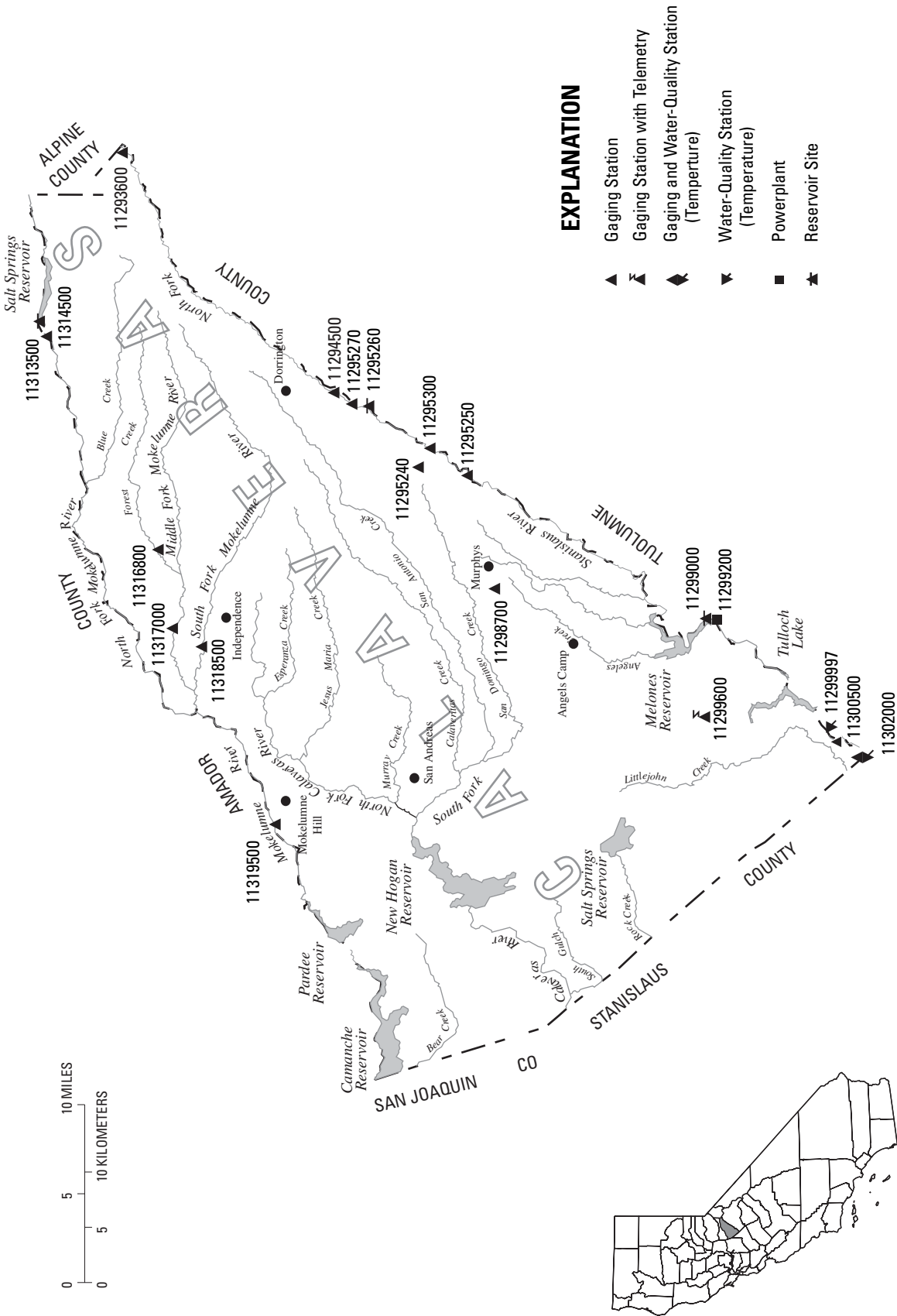
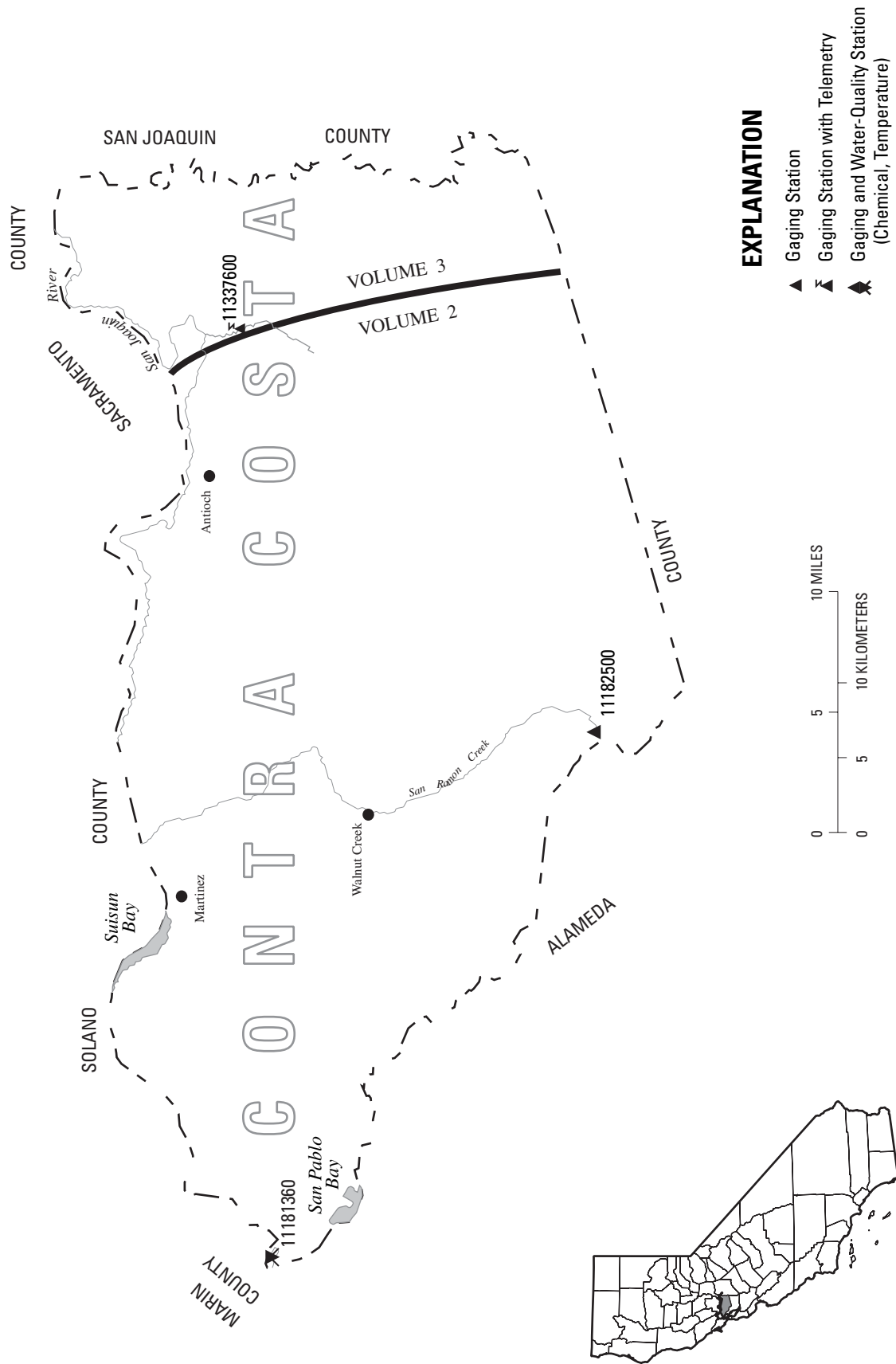
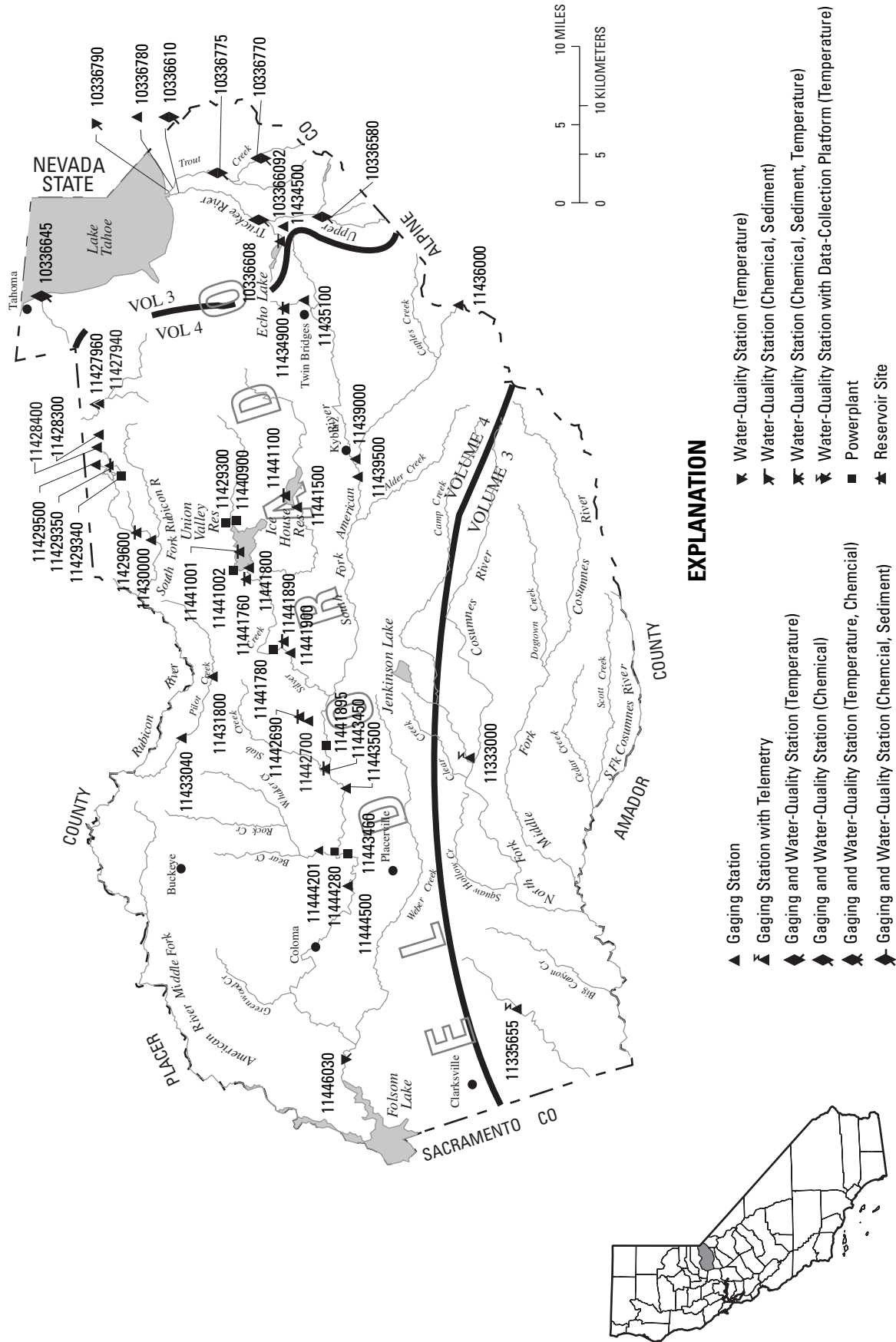


Figure 5. Location of discharge and water-quality stations in Calaveras County.

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**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.)

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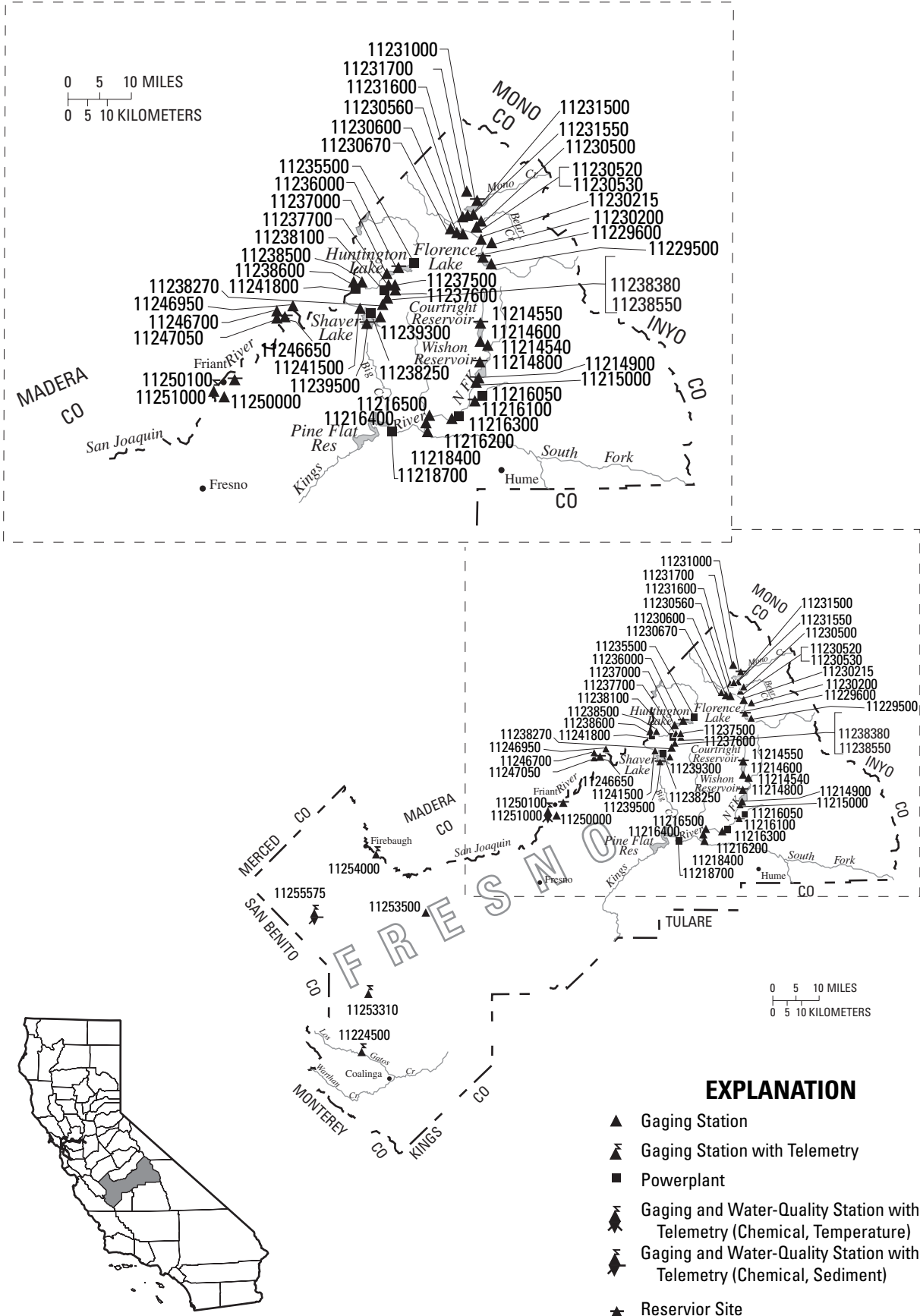
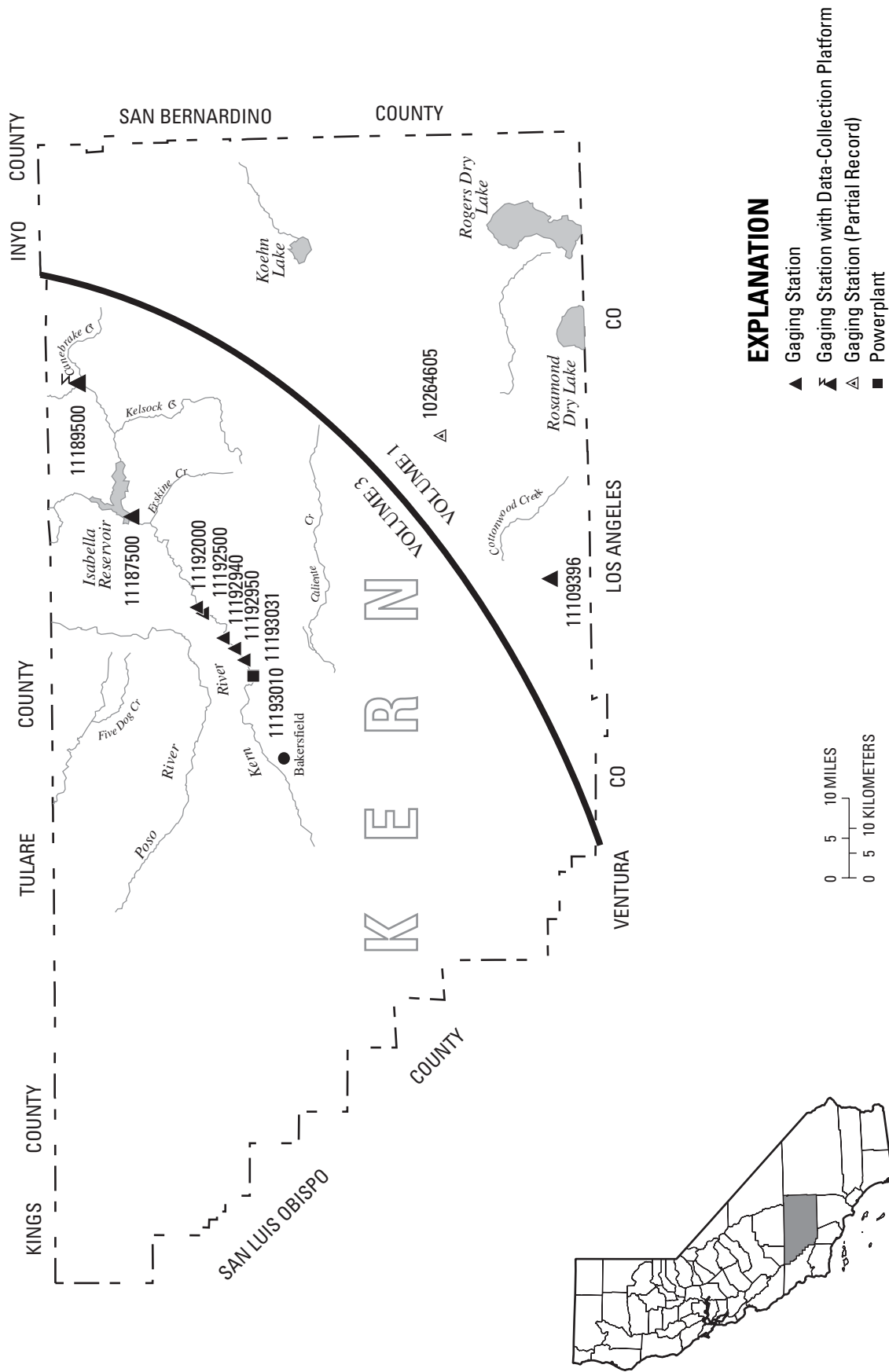


Figure 8. Location of discharge and water-quality stations in Fresno County.



**Figure 9.** Location of discharge stations in Kern County.  
 (NOTE: Records for stations 10264640 through 10264675, and 11109396 published in volume 1.)

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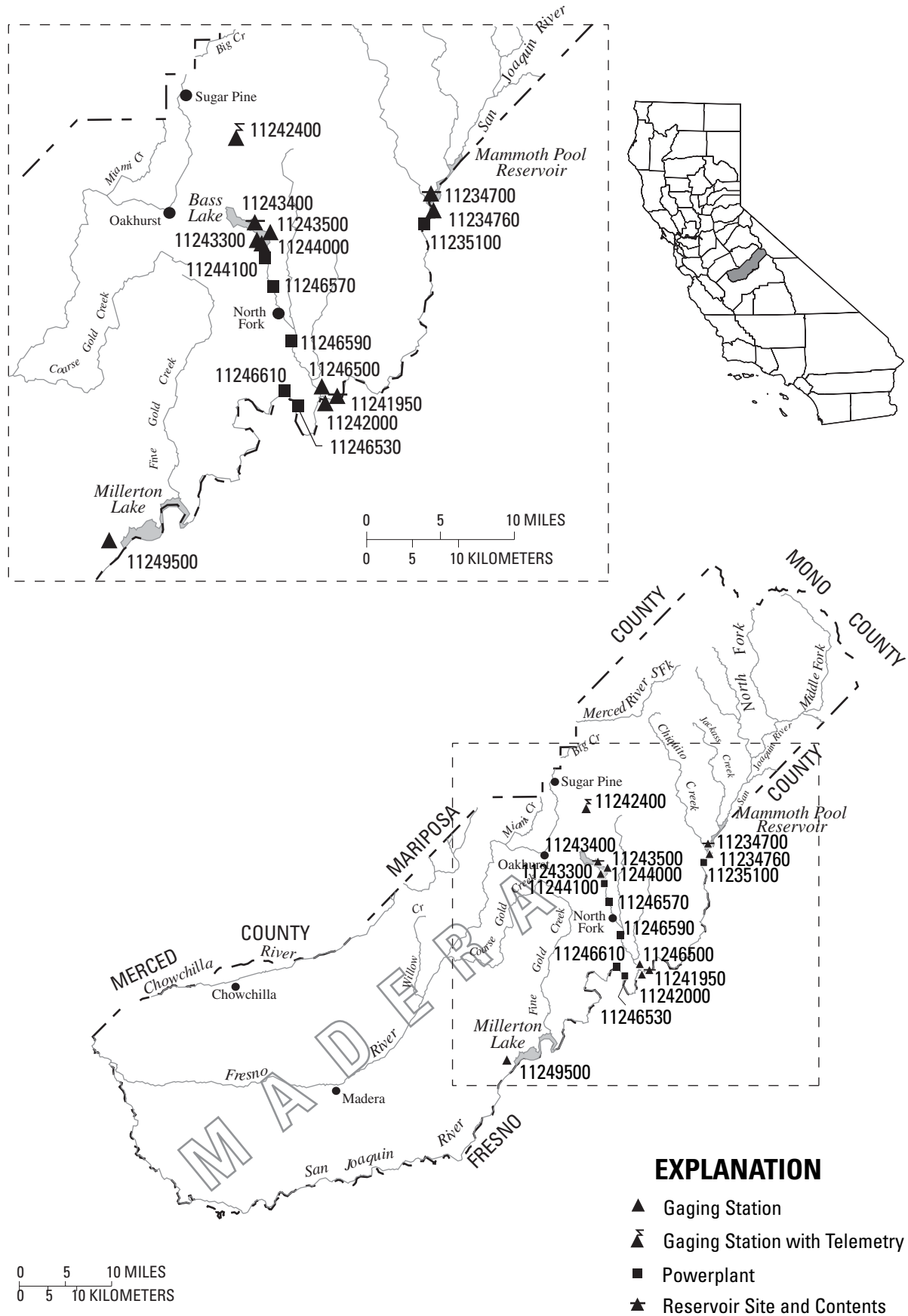
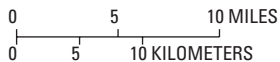
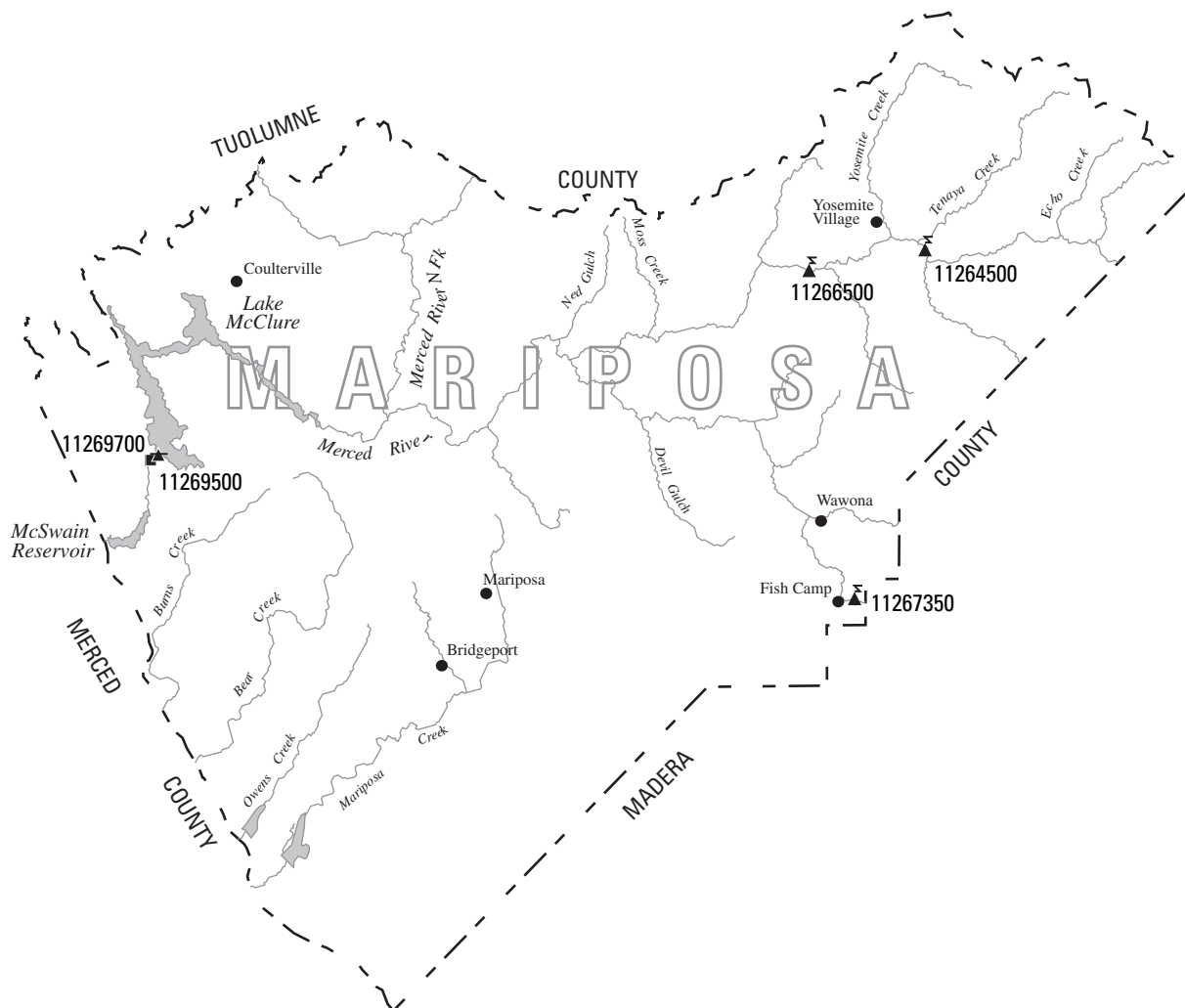


Figure 10. Location of discharge stations in Madera County.



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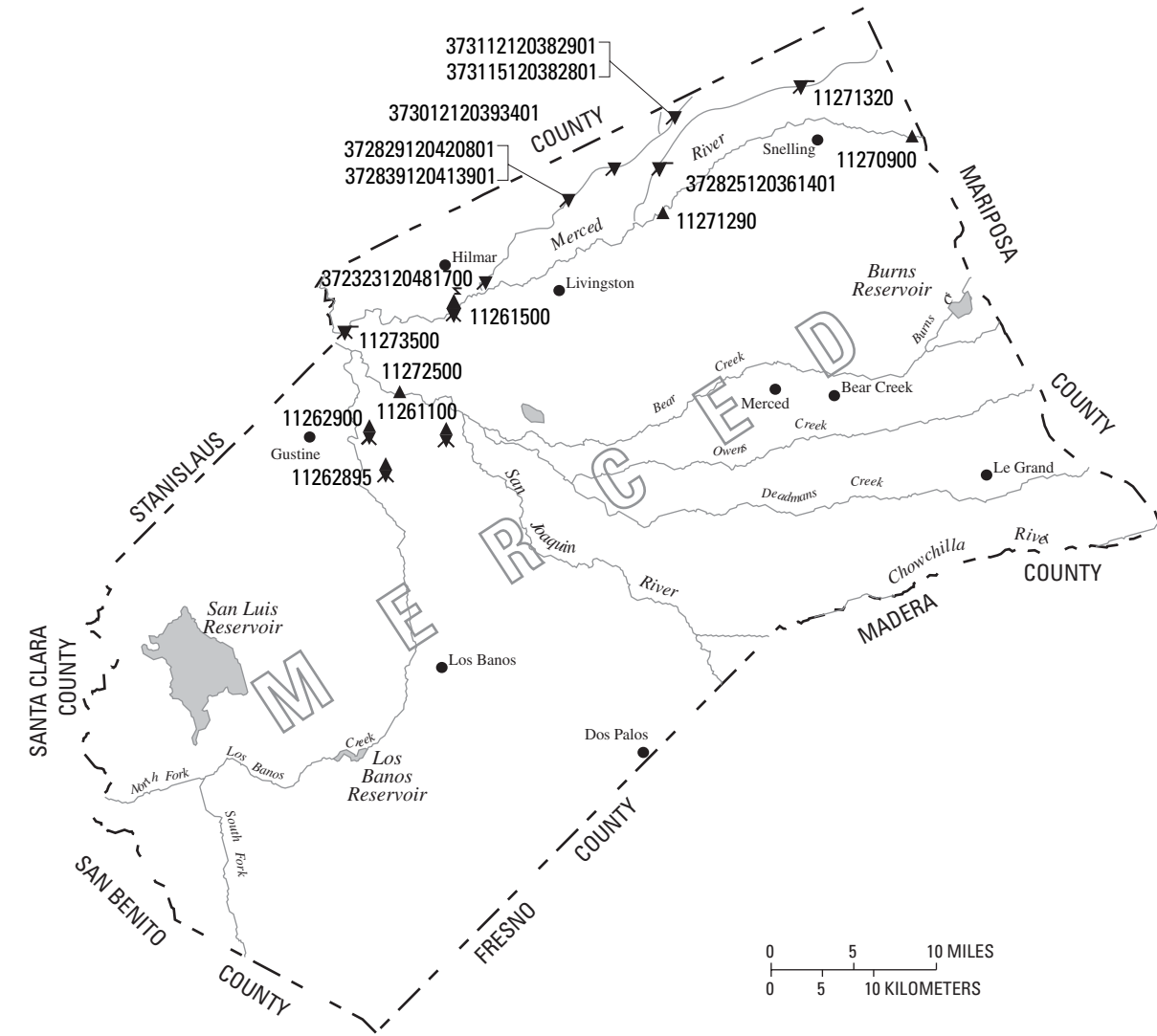


**EXPLANATION**

- ▲ Gaging Station with Telemetry
- ◆ Gaging and Water-Quality Station with Telemetry (Chemical)
- ▲ Reservoir Site and Contents
- Powerplant

**Figure 11.** Location of discharge stations in Mariposa County.

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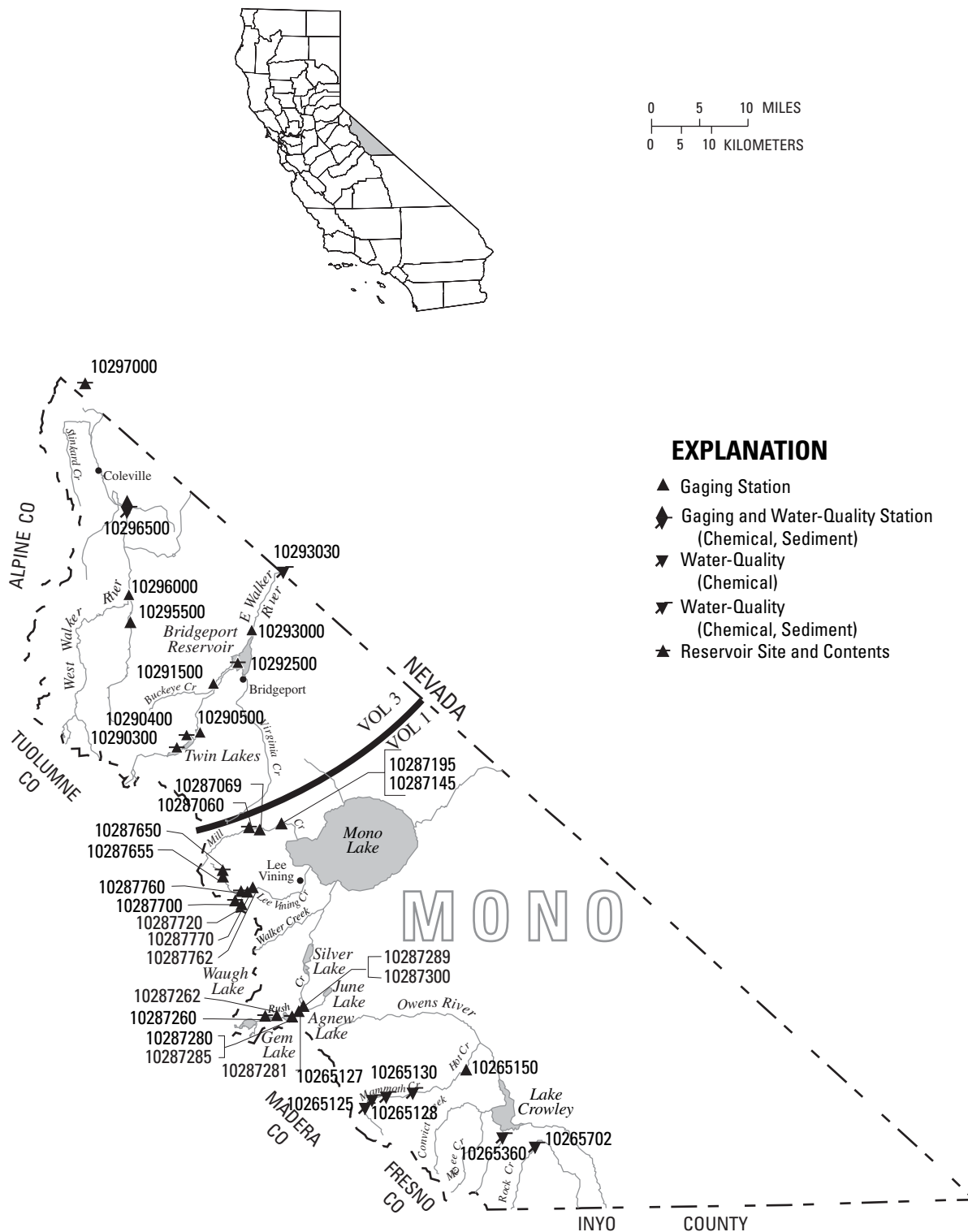


**EXPLANATION**

- ▲ 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.

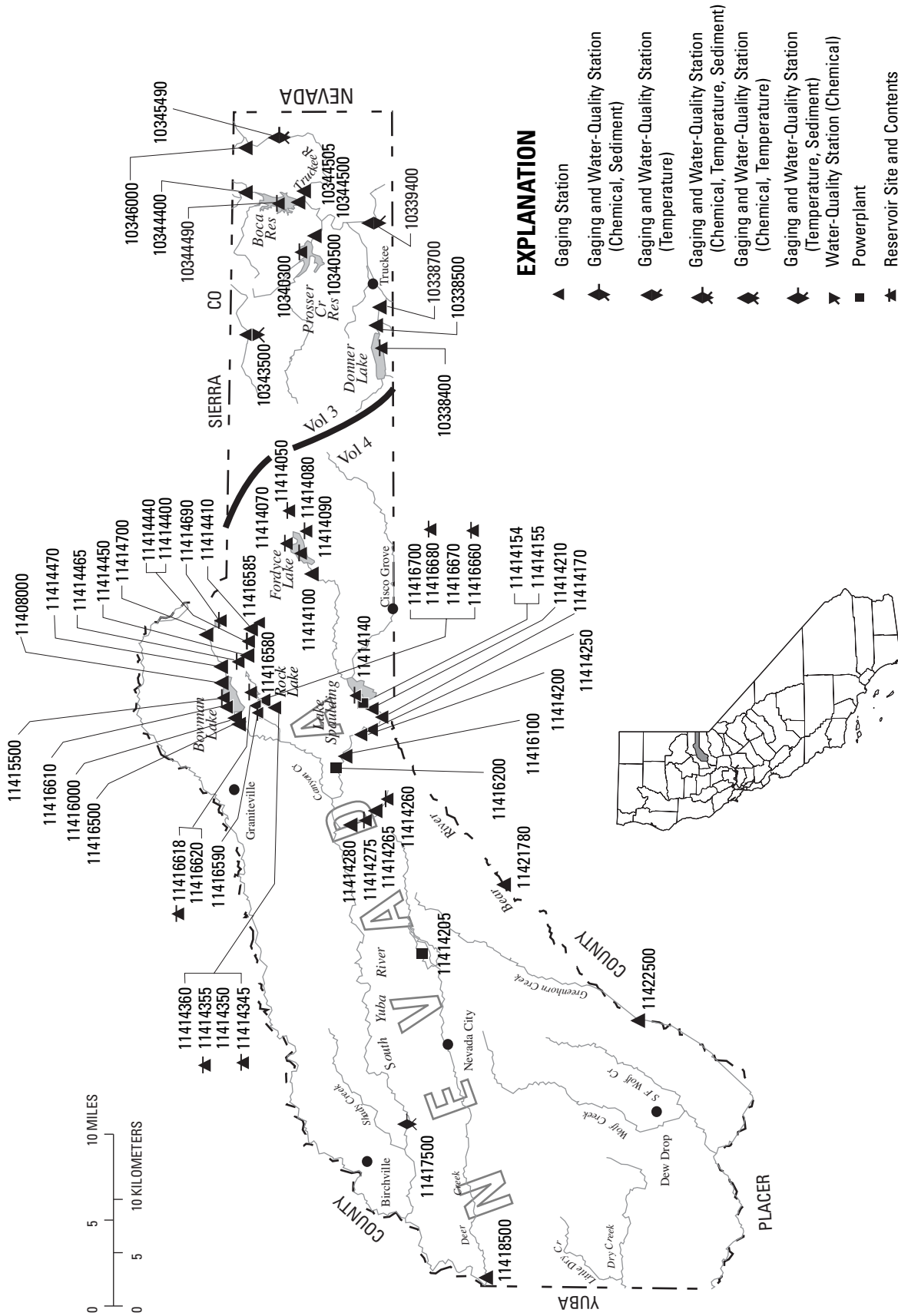
WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004



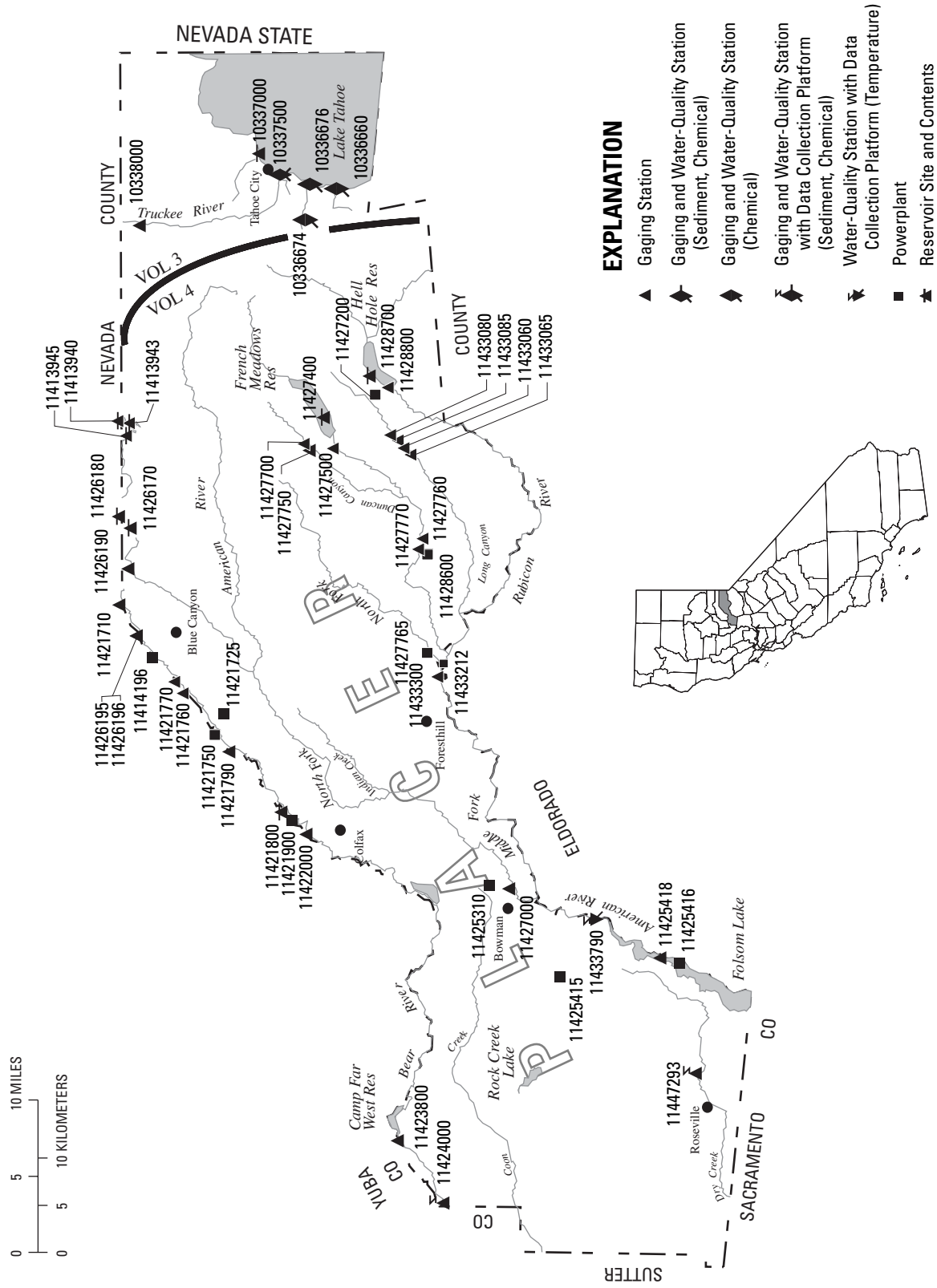
**Figure 13.** Location of discharge stations in Mono County.

(NOTE: Records for stations 10265150 through 10287780 published in volume 1. Station 10297000 is located in Douglas County, Nevada.)

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

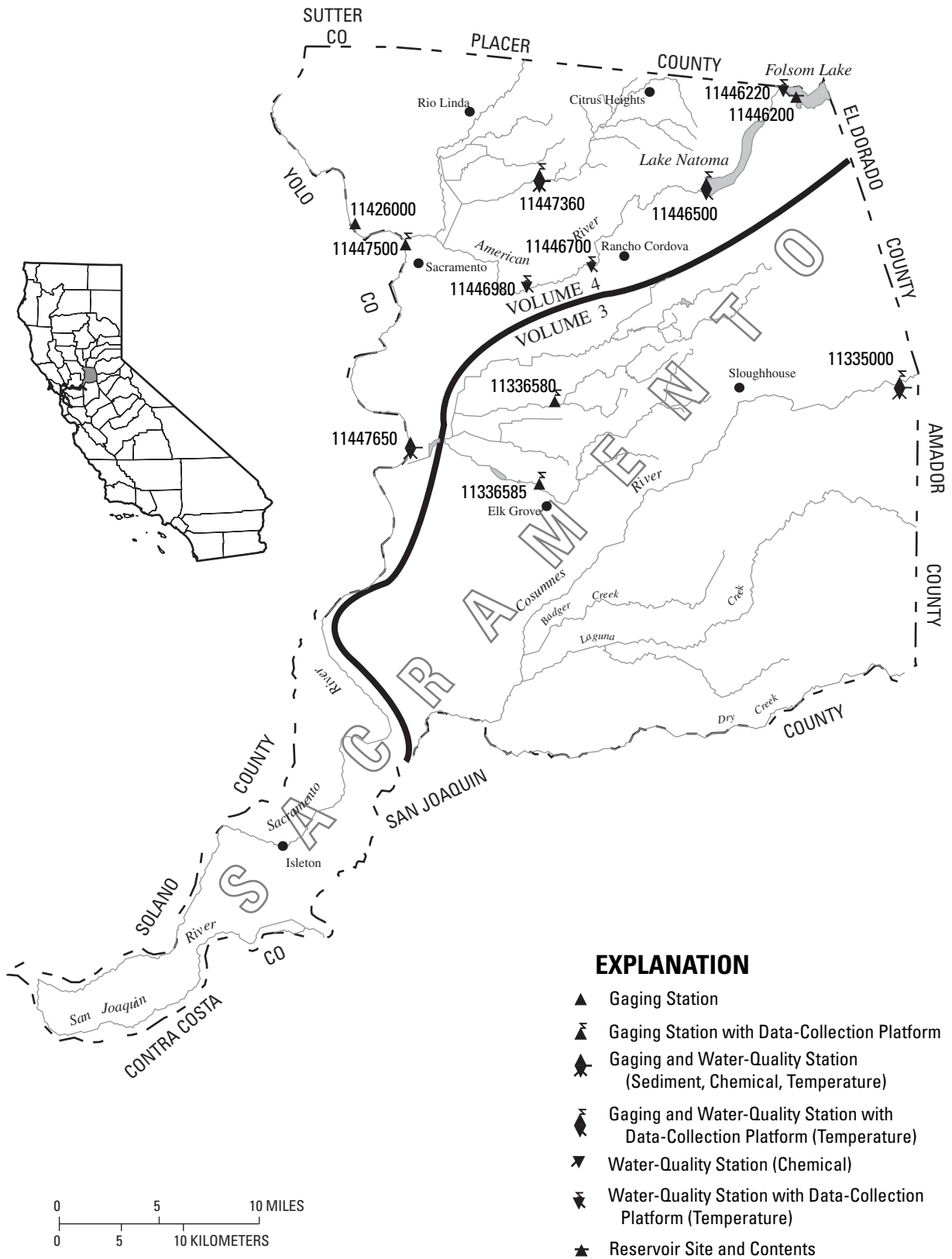


**Figure 14.** Location of discharge and water-quality stations in Nevada County.  
 (NOTE: Records for stations 11408000 through 11422500 published in volume 4.)



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

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

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

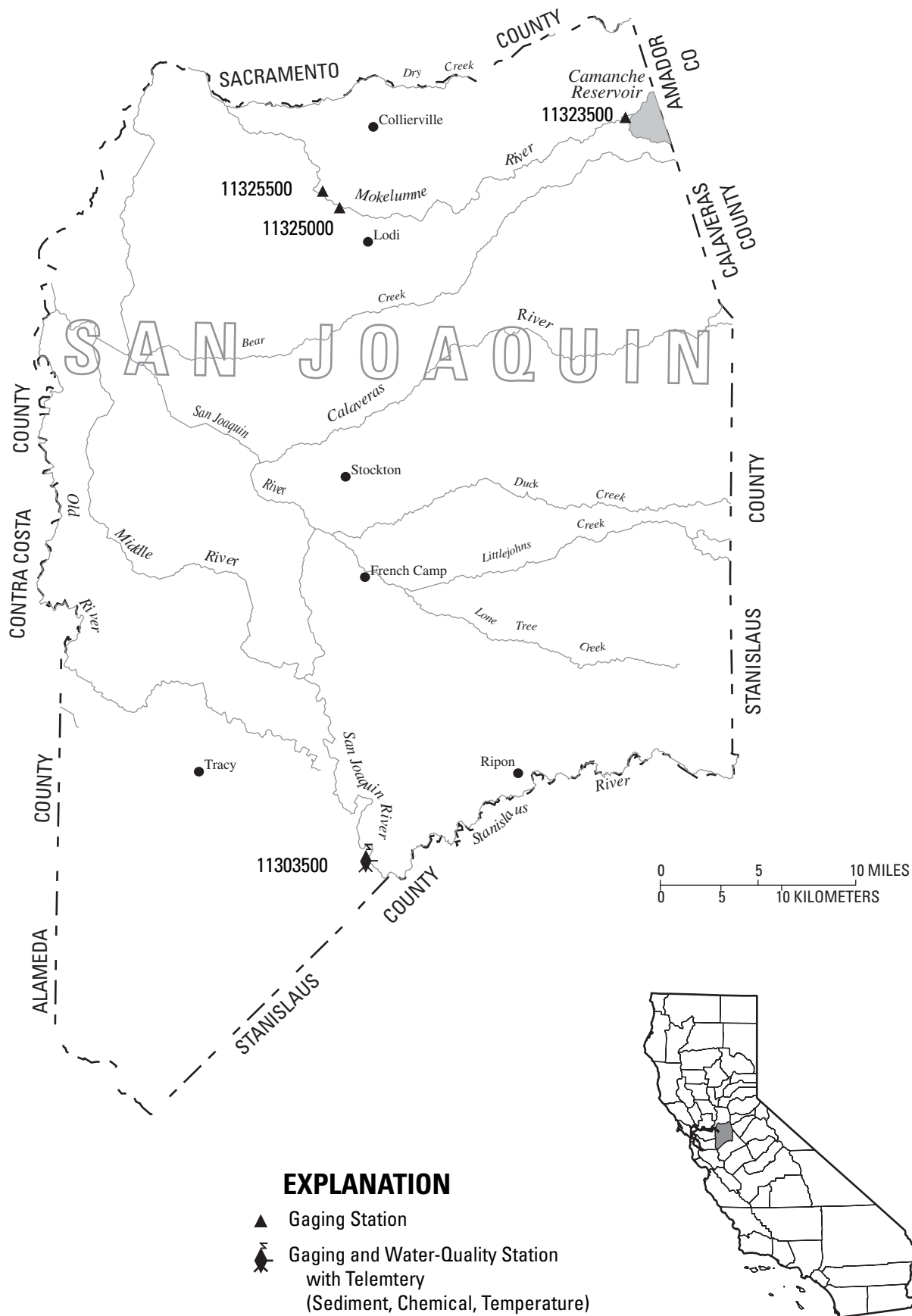
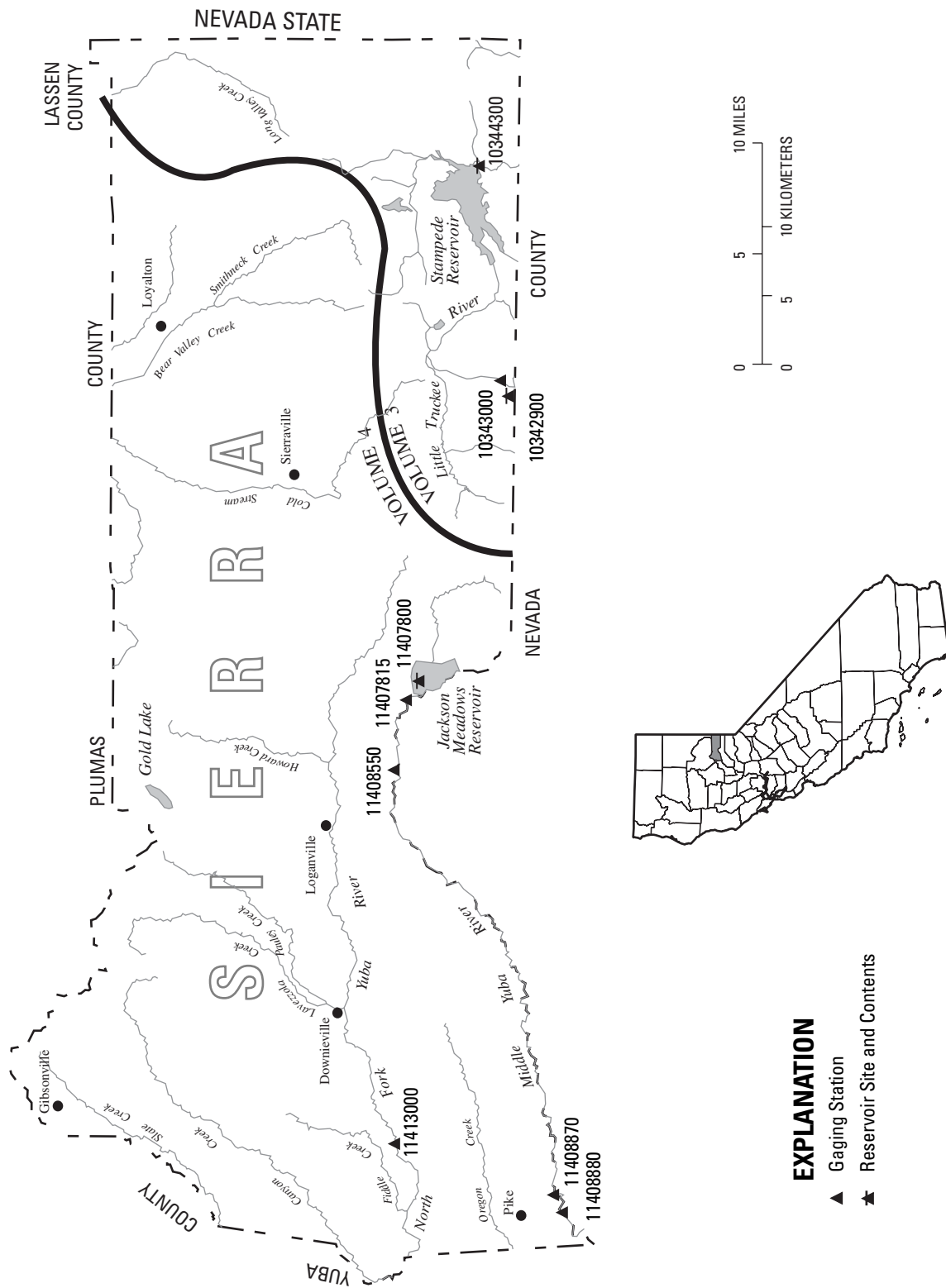


Figure 17. Location of discharge and water-quality stations in San Joaquin County.

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



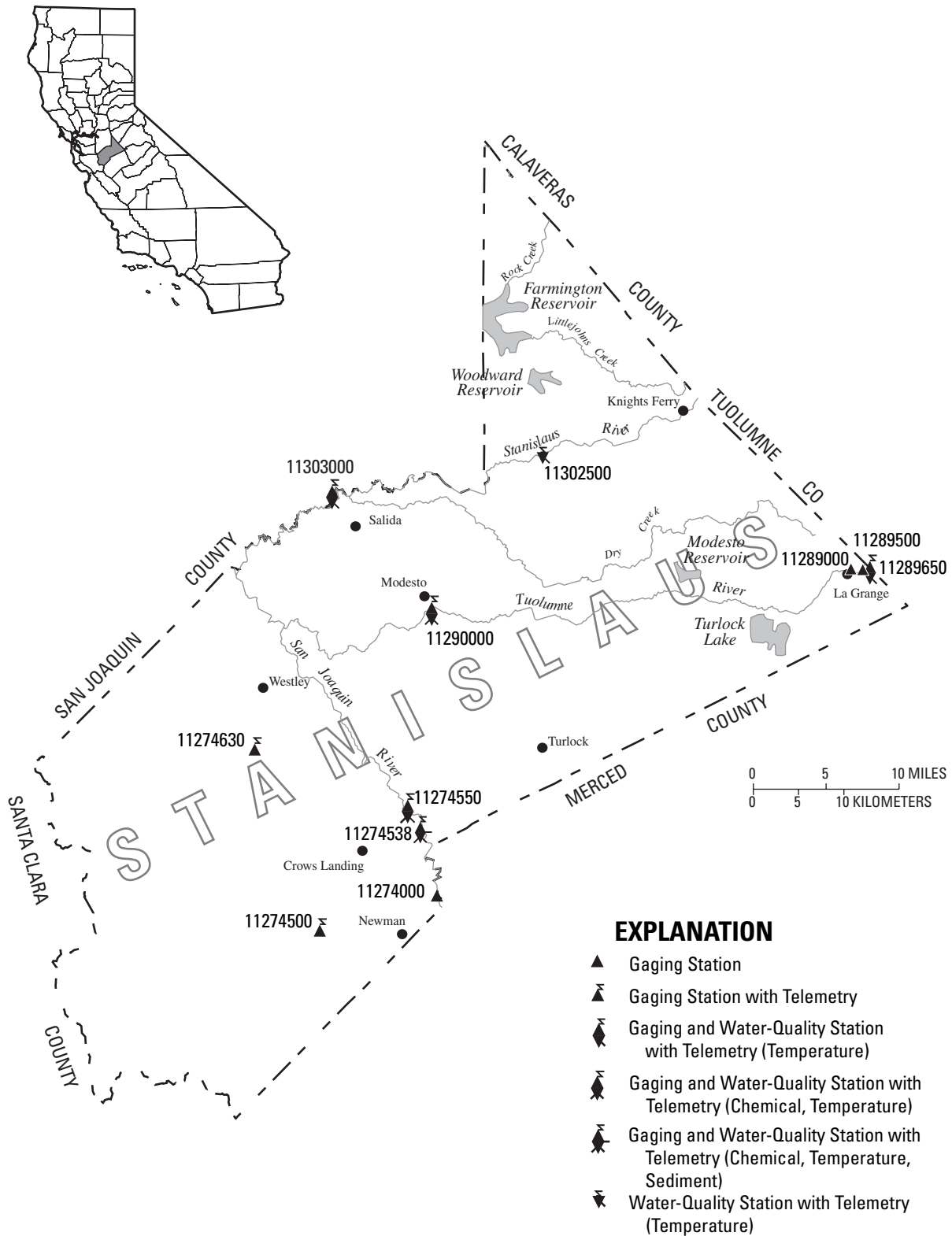


Figure 19. Location of discharge and water-quality stations in Stanislaus County.

WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

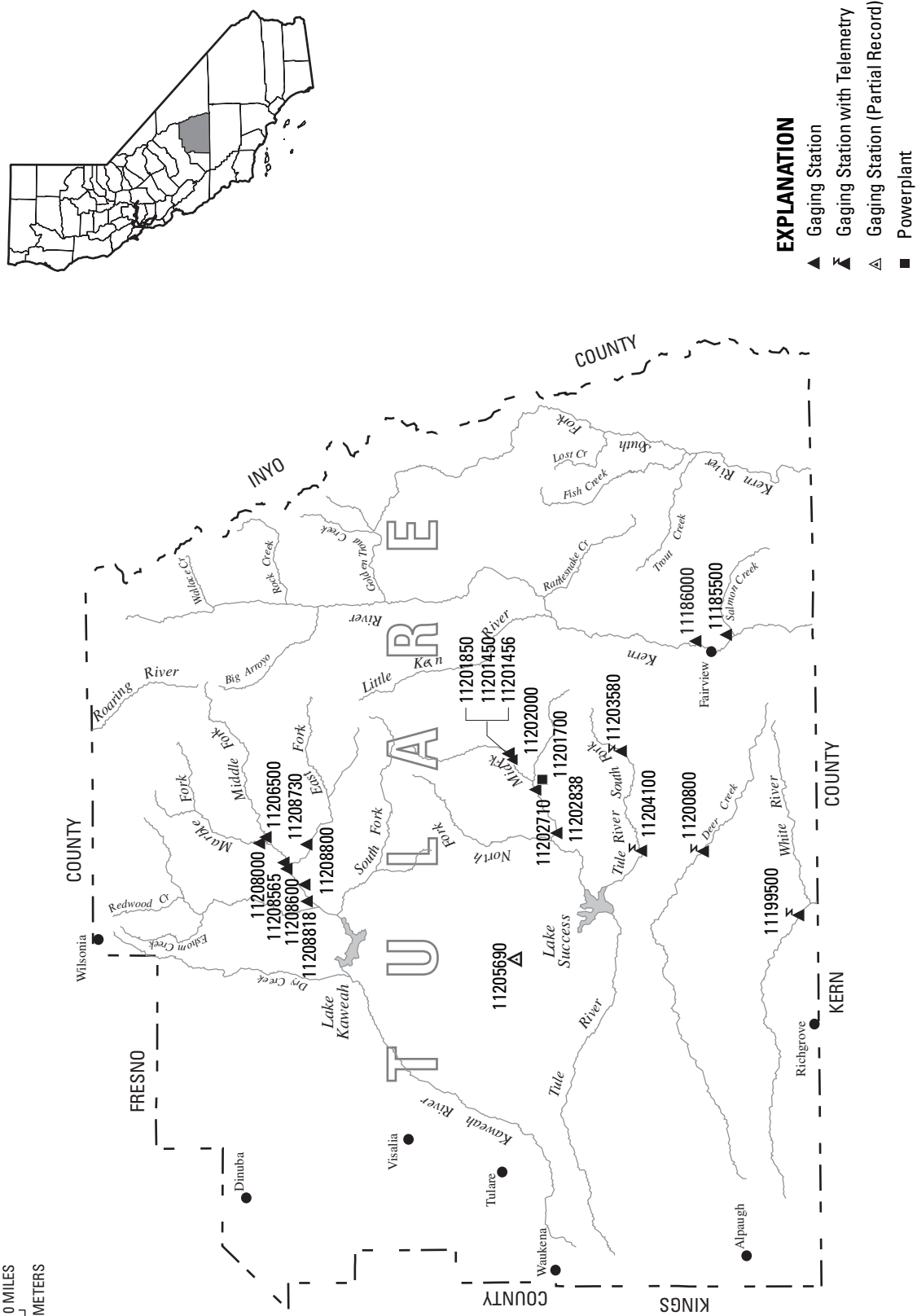


Figure 20. Location of discharge stations in Tulare County.



## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2004

## SURFACE-WATER-DISCHARGE AND SURFACE-WATER-QUALITY RECORDS

## Remark Codes—Continued

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

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
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).
ND	Not detected.
SS	Suspended-sediment data determined from a sample collected and processed according to National Water-Quality Assessment (NAWQA) program protocol.
&	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 ( $\mu\text{g/L}$ ) 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 ( $\text{ng/L}$ ). Data above the  $\mu\text{g/L}$  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.

## 10290300 UPPER TWIN LAKE NEAR BRIDGEPORT, CA

LOCATION.—Lat 38°09'15", long 119°20'58" referenced to North American Datum of 1927, 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.—29.50 mi<sup>2</sup>.

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

GAGE.—Non-recording 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 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, November 1, 1990, elevation, 7,200.11 ft.

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

EXTREMES FOR CURRENT YEAR.—Maximum contents observed, 2,580 acre-ft, June 3, elevation, 7,208.59 ft; minimum observed, 1,150 acre-ft, September 14, elevation, 7,204.05 ft.

MONTHEND ELEVATION, IN FEET ABOVE NGVD OF 1929, AND TOTAL CONTENT  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
September 30.....	7,204.77	1,370	—
October 31.....	7,205.06	1,460	+90
November 30.....	7,205.58	1,620	+160
December 31.....	7,207.27	2,160	+540
CALENDAR YEAR 2003.....	—	—	-30
January 31.....	7,207.04	2,080	-80
February 29.....	7,207.10	2,100	+20
March 31.....	7,207.64	2,270	+170
April 30.....	7,208.30	2,490	+220
May 31.....	7,208.56	2,570	+80
June 30.....	7,208.15	2,440	-130
July 31.....	7,207.61	2,260	-180
August 31.....	7,204.94	1,420	-840
September 30.....	7,204.40	1,250	-170
WATER YEAR 2004.....	—	—	-120

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" referenced to North American Datum of 1927, 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.—38.90 mi<sup>2</sup>.

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, November 17, 1966.

EXTREMES FOR CURRENT YEAR.—Maximum contents observed, 4,830 acre-ft, June 3, elevation, 7,201.93 ft; minimum observed, 2,680 acre-ft, October 1, elevation 7,196.71 ft.

MONTHEND ELEVATION, IN FEET ABOVE NGVD OF 1929, AND TOTAL CONTENTS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
September 30.....	7,196.72	2,690	—
October 31.....	7,196.80	2,720	+30
November 30.....	7,197.51	3,000	+280
December 31.....	7,199.36	3,750	+750
CALENDAR YEAR 2003.....	—	—	-400
January 31.....	7,200.25	4,120	+370
February 29.....	7,200.62	4,270	+150
March 31.....	7,200.85	4,370	+100
April 30.....	7,201.53	4,660	+290
May 31.....	7,201.90	4,820	+160
June 30.....	7,201.66	4,710	-110
July 31.....	7,200.68	4,300	-410
August 31.....	7,196.92	2,770	-1,530
September 30.....	7,197.07	2,830	+60
WATER YEAR 2004.....	—	—	+140

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" referenced to North American Datum of 1927, in SE ¼ SE ¼ sec. 28, T.04 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.—39.10 mi<sup>2</sup>.

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

REVISIONS.—WSP 1927: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 7,050 ft. above National Geodetic Vertical Datum 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.

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

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 183 ft<sup>3</sup>/s, June 7, 8, gage height, 2.96 ft; minimum daily discharge, 1.9 ft<sup>3</sup>/s, December 17, 18, 19, 20, 21.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	6.0	3.2	3.7	16	24	43	67	141	115	60	34
2	12	6.0	3.1	3.7	16	24	43	72	142	108	73	34
3	12	6.0	3.0	3.6	22	24	43	80	148	103	74	31
4	12	6.0	3.0	3.4	21	23	43	92	158	101	79	26
5	12	6.0	3.0	3.4	20	22	44	108	167	100	84	24
6	12	6.0	3.0	3.2	19	21	46	123	174	102	88	24
7	12	6.0	2.8	3.2	19	21	47	133	179	105	88	20
8	12	6.0	2.7	3.2	18	21	49	133	179	105	88	19
9	11	6.3	2.7	3.2	17	20	50	129	172	107	87	19
10	8.2	6.2	2.6	5.3	17	20	51	128	157	106	86	18
11	7.2	6.4	2.6	7.3	17	20	53	124	141	103	85	17
12	6.7	6.4	e2.6	9.1	16	20	54	118	129	97	86	16
13	6.6	6.2	e2.5	11	16	20	56	111	124	92	86	15
14	6.2	5.8	e2.3	12	15	21	56	105	128	89	83	14
15	5.4	5.7	e2.2	13	15	21	56	102	140	87	67	14
16	5.1	5.7	e2.0	14	15	22	56	100	153	86	55	14
17	5.0	5.7	e1.9	14	19	23	54	101	160	86	55	13
18	4.8	5.7	e1.9	15	24	24	52	103	164	87	60	10
19	4.6	5.5	e1.9	15	23	24	50	104	164	86	61	9.4
20	4.6	4.8	e1.9	16	23	25	48	106	159	83	60	8.6
21	4.6	4.3	e1.9	16	23	27	48	106	153	82	61	7.5
22	4.6	4.0	e2.0	16	23	29	42	105	149	81	60	6.3
23	4.5	4.0	e2.0	16	23	33	40	103	146	80	54	6.0
24	4.3	3.9	e2.0	16	22	37	39	101	146	77	53	6.1
25	4.1	3.7	e2.1	16	22	41	39	101	146	73	47	5.8
26	4.0	3.6	e2.1	16	29	44	41	102	145	70	40	5.7
27	4.0	3.5	e4.7	15	28	43	44	104	143	69	36	5.7
28	3.8	3.5	4.0	14	26	43	49	117	139	73	36	5.5
29	3.7	3.3	4.0	15	25	43	55	138	131	74	35	5.4
30	5.9	3.2	4.0	12	---	43	61	147	123	67	34	7.0
31	7.6	---	4.0	17	---	43	---	143	---	63	34	---
TOTAL	222.5	155.4	83.7	331.3	589	866	1,452	3,406	4,500	2,757	1,995	441.0
MEAN	7.18	5.18	2.70	10.7	20.3	27.9	48.4	110	150	88.9	64.4	14.7
MAX	12	6.4	4.7	17	29	44	61	147	179	115	88	34
MIN	3.7	3.2	1.9	3.2	15	20	39	67	123	63	34	5.4
AC-FT	441	308	166	657	1,170	1,720	2,880	6,760	8,930	5,470	3,960	875

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2004, BY WATER YEAR (WY)

MEAN	20.5	9.01	7.43	16.3	16.8	17.7	45.3	108	189	157	93.6	47.5
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	0.00	0.00	0.00	0.00	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)

## 10290500 ROBINSON CREEK AT TWIN LAKES OUTLET, NEAR BRIDGEPORT, CA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1954 - 2004	
ANNUAL TOTAL	18,422.6		16,798.9			
ANNUAL MEAN	50.5		45.9		62.2	
HIGHEST ANNUAL MEAN					100	1995
LOWEST ANNUAL MEAN					33.8	1961
HIGHEST DAILY MEAN	329	Jun 1	179	Jun 7	998	Jan 3, 1997
LOWEST DAILY MEAN	1.9	Dec 17	1.9	Dec 17	0.00	Nov 3, 1953
ANNUAL SEVEN-DAY MINIMUM	1.9	Dec 16	1.9	Dec 16	0.00	Nov 3, 1953
MAXIMUM PEAK FLOW			183	Jun 7	1,170	Jan 3, 1997
MAXIMUM PEAK STAGE			2.96	Jun 7	5.44	Jan 3, 1997
ANNUAL RUNOFF (AC-FT)	36,540		33,320		45,090	
10 PERCENT EXCEEDS	117		124		159	
50 PERCENT EXCEEDS	16		23		28	
90 PERCENT EXCEEDS	4.0		3.6		0.70	

e Estimated



## 10291500 BUCKEYE CREEK NEAR BRIDGEPORT, CA

LOCATION.—Lat 38°14'20", long 119°19'30" referenced to North American Datum of 1927, in NE ¼ NE ¼ sec. 04, T.04 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.

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

REVISIONS.—WSP 1927: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 6,900 ft. above National Geodetic Vertical Datum 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.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,750 ft<sup>3</sup>/s, January 02, 1997; gage height, 7.49 ft.; minimum daily, 4.5 ft<sup>3</sup>/s, January 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.

PEAK DISCHARGES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
March 23	0115	101	2.31	May 28	1145	*233	*2.83
May 5	0100	204	2.74	July 6	0100	118	2.40

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	14	13	e18	16	20	64	111	147	82	29	15
2	14	14	13	e18	16	17	55	126	155	81	28	15
3	14	14	13	e18	e15	16	53	152	167	77	27	16
4	14	e14	13	e18	e15	15	60	168	168	78	26	16
5	14	e14	22	e18	e15	16	79	174	165	81	25	16
6	14	14	26	e18	e15	17	83	159	170	96	23	16
7	14	14	20	e18	e15	18	74	139	173	84	23	15
8	13	14	16	e18	e15	20	74	130	153	81	22	15
9	13	e14	e16	e18	e15	23	77	135	131	77	21	14
10	14	15	e17	18	e15	29	83	134	113	73	20	14
11	14	e15	18	17	e15	29	82	109	113	67	20	13
12	13	e15	e18	16	e16	32	86	102	117	63	20	13
13	14	15	e18	16	e18	34	91	106	129	62	23	13
14	13	15	19	16	e20	38	78	114	146	61	26	13
15	13	15	e19	17	23	47	73	120	148	56	24	14
16	13	14	e19	19	25	50	68	123	148	56	24	14
17	13	15	e18	20	24	50	62	127	141	55	22	14
18	13	15	e18	18	20	57	57	125	137	55	21	14
19	13	15	e18	17	19	68	54	117	129	53	22	15
20	13	15	19	17	18	71	52	119	124	50	22	16
21	13	14	17	17	18	80	50	116	120	47	22	16
22	13	12	e17	e17	17	86	50	113	117	47	21	15
23	13	e13	18	e18	17	90	50	115	122	45	20	15
24	13	e14	21	e18	16	82	55	115	121	41	20	14
25	13	15	20	18	17	73	67	118	115	40	19	14
26	13	15	19	e17	15	63	84	114	113	38	18	14
27	13	e15	e19	17	17	56	105	129	108	36	19	13
28	13	15	e19	16	19	55	119	193	101	34	18	13
29	13	15	e19	16	20	59	112	145	93	32	17	14
30	12	14	e19	16	---	66	103	134	87	31	16	14
31	12	---	e18	16	---	66	---	145	---	30	16	---
TOTAL	411	432	559	539	506	1,443	2,200	4,027	3,971	1,809	674	433
MEAN	13.3	14.4	18.0	17.4	17.4	46.5	73.3	130	132	58.4	21.7	14.4
MAX	14	15	26	20	25	90	119	193	173	96	29	16
MIN	12	12	13	16	15	15	50	102	87	30	16	13
AC-FT	815	857	1,110	1,070	1,000	2,860	4,360	7,990	7,880	3,590	1,340	859

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2004, BY WATER YEAR (WY)

MEAN	22.2	21.6	21.5	23.6	21.2	26.3	52.0	140	200	123	49.4	28.3
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)

## WALKER LAKE BASIN

10291500 BUCKEYE CREEK NEAR BRIDGEPORT, CA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1911 - 2004	
ANNUAL TOTAL	17,019		17,004			
ANNUAL MEAN	46.6		46.5		59.5	
HIGHEST ANNUAL MEAN					114	1969
LOWEST ANNUAL MEAN					19.5	1977
HIGHEST DAILY MEAN	298	May 30	193	May 28	1,050	Jan 2,1997
LOWEST DAILY MEAN	12	Jan 11	12	Oct 30	4.5	Jan12,1963
ANNUAL SEVEN-DAY MINIMUM	13	Jan 8	13	Oct 25	5.5	Jan11,1963
MAXIMUM PEAK FLOW			233	May 28	2,750	Jan 2,1997
MAXIMUM PEAK STAGE			2.83	May 28	7.49	Jan 2,1997
ANNUAL RUNOFF (AC-FT)	33,760		33,730		43,120	
10 PERCENT EXCEEDS	120		120		162	
50 PERCENT EXCEEDS	20		20		27	
90 PERCENT EXCEEDS	14		14		13	

e Estimated

10292500 BRIDGEPORT RESERVOIR NEAR BRIDGEPORT, CA

LOCATION.—Lat 38°19'30", long 119°12'40" referenced to North American Datum of 1927, in SE ¼ NE ¼ sec. 34, T.06 N., R.25 E., Mono County, Hydrologic Unit 16050301, in Toiyabe National Forest, at Bridgeport Dam on East Walker River, and 4.5 miles north of Bridgeport.

DRAINAGE AREA.—358.00 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929 (project datum).

REMARKS.—Reservoir is formed by earthfill, rock-faced dam. Storage began December 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, 45,100 acre-ft, January 6, gage height, 60.87 ft; minimum contents, 452 acre-ft, January 4, gage height, 26.27 ft.

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

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

RESERVOIR STORAGE, ACRE FEET  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9,980	7,440	9,330	12,340	15,340	19,170	24,660	21,460	20,720	19,940	13,090	7,140
2	9,890	7,460	9,400	12,430	15,470	19,330	24,640	21,400	20,780	19,790	12,790	6,810
3	9,770	7,480	9,460	e12,500	15,610	19,520	24,600	21,420	20,860	19,610	12,530	6,550
4	9,670	7,520	9,540	e12,580	15,710	19,640	24,620	21,440	20,930	19,480	12,240	6,320
5	9,570	7,560	9,720	e12,660	15,760	19,830	24,580	21,460	21,030	19,390	11,900	6,030
6	9,470	7,600	9,820	e12,740	15,850	20,030	24,490	21,520	21,130	19,310	11,600	5,720
7	9,390	7,630	10,010	e12,820	15,960	20,270	24,410	21,600	21,130	19,170	11,330	5,430
8	9,290	7,730	10,080	e12,900	16,030	20,530	24,220	21,560	21,150	18,980	11,110	5,130
9	9,170	7,870	10,220	12,980	16,110	20,860	24,040	21,580	21,170	18,820	10,860	4,820
10	9,050	7,930	10,270	13,110	16,190	21,310	23,810	21,540	21,190	18,660	10,610	4,550
11	8,970	7,980	10,310	13,210	16,260	21,780	23,640	21,400	21,130	18,450	10,380	4,270
12	8,870	8,060	10,370	13,340	16,310	22,210	23,500	21,310	21,070	18,250	10,160	4,010
13	8,750	8,160	10,450	13,450	16,360	22,580	23,310	21,190	21,030	18,010	9,920	3,770
14	8,680	8,230	10,550	13,550	16,460	22,910	23,250	21,070	20,990	17,830	9,740	3,530
15	8,600	8,310	10,580	13,650	16,540	23,270	22,930	20,930	21,010	17,660	9,550	3,350
16	8,520	8,410	10,650	13,750	16,660	23,580	22,790	20,800	21,010	17,460	9,410	3,190
17	8,440	8,450	10,710	13,840	16,850	23,770	22,730	20,700	21,010	17,230	9,290	3,040
18	8,350	8,520	10,780	13,920	17,060	23,950	22,620	20,530	21,030	17,000	9,210	2,900
19	8,300	8,530	10,930	14,020	17,230	24,100	22,520	20,360	21,050	16,740	9,140	2,820
20	8,240	8,710	11,000	14,110	17,440	24,290	22,340	20,200	21,050	16,470	9,140	2,720
21	8,140	8,720	11,120	14,210	17,590	24,450	22,030	20,030	21,010	16,220	9,130	2,610
22	8,050	8,790	11,210	14,270	17,780	24,580	22,130	19,960	20,870	15,980	9,080	2,520
23	7,970	8,830	11,320	14,360	17,970	24,680	22,010	19,850	20,720	15,760	9,010	2,450
24	7,900	8,890	11,480	14,430	18,160	24,730	21,890	19,810	20,620	15,490	8,900	2,420
25	7,800	8,960	11,680	14,570	18,330	24,770	21,850	19,810	20,560	15,220	8,690	2,400
26	7,720	8,980	11,790	14,660	18,500	24,730	21,760	19,810	20,470	14,920	8,470	2,370
27	7,650	9,040	11,820	14,770	18,660	24,700	21,660	19,790	20,360	14,610	8,240	2,350
28	7,570	9,100	11,890	14,880	18,840	24,680	21,540	19,990	20,270	14,270	8,030	2,320
29	7,570	9,170	12,020	15,010	18,980	24,730	21,520	20,250	20,160	13,940	7,870	2,300
30	7,390	9,180	12,100	15,110	---	24,730	21,520	20,440	20,030	13,680	7,690	2,270
31	7,410	---	12,200	15,220	---	24,660	---	20,580	---	13,410	7,470	---
MAX	6,441.30	6,443.07	6,445.66	6,447.83	6,450.11	6,453.00	6,451.46	6,450.98	6,450.68	6,446.57	6,441.36	6,433.56
MIN	-2,700	+1,770	+3,020	+3,020	+3,760	+5,680	-3,140	-940	-550	-6620	-5940	-5200
#												
##												
CAL YR 2003	MAX 29,620	MIN 7,390	## +2,100									
WTR YR 2004	MAX 24,770	MIN 2,270	## -7,840									

e Estimated  
# Elevation, in feet above NGVD 1929, at end of month, present datum.  
## Change in contents, in acre-feet.

## 10293000 EAST WALKER RIVER NEAR BRIDGEPORT, CA

LOCATION.—Lat 38°19'40", long 119°12'50" referenced to North American Datum of 1927, in SW ¼ NE ¼ sec. 34, T.06 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.—359.00 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 01, 1921, nonrecording gage at site 0.5 mi upstream at different datum. October 01, 1921, to February 21, 1924, water-stage recorder at site 1 mi downstream at different datum. February 22, 1924, to September 30, 1931, water-stage recorder, and October 01, 1931 to May 25, 1939, nonrecording gage at present site at datum 2.34 ft lower. May 26, 1939, to November 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<sup>3</sup>/s, January 4, 1997, gage height, 6.74 ft; minimum daily, 0.20 ft<sup>3</sup>/s, November 2, 1955.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 271 ft<sup>3</sup>/s, June 22, 23, 24, gage height, 3.84 ft; minimum daily discharge, 18 ft<sup>3</sup>/s, December 20, 21, 22, 23, 24.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	29	22	19	21	25	106	105	153	202	172	174
2	102	29	19	19	21	26	93	109	210	210	162	183
3	99	29	19	26	20	21	102	96	217	233	158	161
4	93	29	19	32	28	21	114	117	222	213	180	148
5	93	29	19	32	33	21	114	135	237	183	187	168
6	93	29	19	32	33	21	126	125	249	182	174	187
7	89	29	19	23	33	21	158	113	249	183	158	176
8	86	29	22	19	33	25	175	117	250	167	146	180
9	91	29	23	20	33	27	187	123	246	148	140	186
10	91	29	22	20	33	25	181	140	235	157	138	173
11	90	29	30	20	33	36	173	176	230	170	143	171
12	90	29	30	20	33	46	168	177	216	177	149	158
13	86	29	30	20	33	57	160	166	197	162	138	153
14	81	29	30	23	33	63	147	158	192	139	130	142
15	81	29	30	27	33	68	131	177	185	155	129	124
16	81	29	30	27	26	79	124	193	195	168	113	104
17	81	29	25	28	21	86	115	170	206	177	92	99
18	77	29	25	32	21	92	97	178	203	190	81	89
19	73	23	23	27	21	99	106	187	200	184	81	75
20	76	19	18	32	21	101	115	193	197	178	80	78
21	80	19	18	28	21	102	98	186	220	172	91	82
22	76	19	18	32	21	112	91	166	260	161	106	75
23	75	19	18	32	21	137	91	145	267	154	110	62
24	80	25	18	25	21	152	88	139	257	163	116	52
25	80	28	19	20	21	146	81	133	242	176	144	46
26	79	28	22	20	21	134	90	128	248	175	166	46
27	78	28	30	20	21	122	97	121	256	185	165	46
28	78	28	28	21	21	116	91	122	240	197	147	46
29	78	28	19	21	21	116	91	123	218	183	123	45
30	61	28	19	21	---	99	91	123	214	162	122	45
31	29	---	19	21	---	103	---	123	---	166	143	---
TOTAL	2,561	814	702	759	752	2,299	3,601	4,464	6,711	5,472	4,184	3,474
MEAN	82.6	27.1	22.6	24.5	25.9	74.2	120	144	224	177	135	116
MAX	114	29	30	32	33	152	187	193	267	233	187	187
MIN	29	19	18	19	20	21	81	96	153	139	80	45
AC-FT	5,080	1,610	1,390	1,510	1,490	4,560	7,140	8,850	13,310	10,850	8,300	6,890

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2004, BY WATER YEAR (WY)

MEAN	61.8	29.6	37.8	45.3	50.8	89.1	173	253	308	296	237	153
MAX	301	325	398	804	345	417	721	880	1,001	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)

## 10293000 EAST WALKER RIVER NEAR BRIDGEPORT, CA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1922 - 2004	
ANNUAL TOTAL	35,227		35,793			
ANNUAL MEAN	96.5		97.8		145	
HIGHEST ANNUAL MEAN					443	1983
LOWEST ANNUAL MEAN					37.5	1931
HIGHEST DAILY MEAN	251	Aug 12	267	Jun 23	1,880	Jan 4,1997
LOWEST DAILY MEAN	18	Dec 20	18	Dec 20	0.20	Nov 2,1955
ANNUAL SEVEN-DAY MINIMUM	19	Dec 20	19	Dec 20	0.20	Nov 2,1955
MAXIMUM PEAK FLOW			271		1,910	Jan 4,1997
MAXIMUM PEAK STAGE			3.84		6.74	Jan 4,1997
ANNUAL RUNOFF (AC-FT)	69,870		71,000		104,900	
10 PERCENT EXCEEDS	208		188		341	
50 PERCENT EXCEEDS	76		91		92	
90 PERCENT EXCEEDS	24		21		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<sup>2</sup>.

PERIOD OF RECORD.—Water year 2001 to current year.

CHEMICAL DATA: Water year 2001 to current year.

SEDIMENT DATA: Water year 2001 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, unfiltered at 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, unfiltered field, std units (00400)	Specific conductance, uS/cm 25 degC (00095)	Temperature, deg C (00010)	Chloride, water, filtered, mg/L (00940)
NOV										
24...	1100	20	6.5	610	12.0	102	7.8	187	.0	2.68
FEB										
19...	1110	23	11	618	11.4	103	8.2	216	2.5	3.42
MAY										
20...	1100	179	12	612	7.1	88	8.3	211	15.0	3.37
AUG										
20...	1130	89	<2.0	617	9.0	118	8.1	174	18.0	1.79

Date	Time	Sulfate water, filtered, mg/L (00945)	Residue on evap. at 180degC, water, filtered, mg/L (70300)	Residue at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, unfiltered, mg/L as N (00625)	Nitrite + nitrate, water, filtered, mg/L as N (00631)	Phosphorus, unfiltered, mg/L (00665)	Fecal coliform, M-FC 0.7u MF 100 mL (31625)	Boron, water, filtered, ug/L (01020)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV											
24...	10.0	121	11	.45	.013	.062	K6	59	11	.59	
FEB											
19...	16.0	154	--	.53	.036	.070	K2	86	6	.37	
MAY											
20...	14.1	139	<10	.39	.015	.043	--	114	10	4.8	
AUG											
20...	6.3	122	--	.69	.370	.126	K1	71	7	1.7	

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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, unfiltered field, std units (00400)	Specific conductance, uS/cm 25 degC (00095)	Temperature, deg C (00010)	Location in X-sect. looking downstream 1 bank ft from (00009)
FEB										
19...*	1105	.50	.20	612	11.4	106	8.2	215	3.0	3.00
19...*	1106	.60	.20	612	11.4	106	8.2	215	3.0	6.00
19...*	1107	.90	.20	612	11.4	106	8.2	215	3.0	9.00
19...*	1108	.80	.20	612	11.5	107	8.2	215	3.0	12.0
19...*	1109	1.10	.20	612	11.5	107	8.2	215	3.0	15.0
19...*	1110	1.00	.20	612	11.5	107	8.2	215	3.0	18.0
19...*	1111	.50	.20	612	11.6	108	8.2	215	3.0	21.0
19...*	1112	.70	.20	612	11.5	107	8.2	215	3.0	24.0
MAY										
20...*	1123	1.50	1.00	612	6.6	82	8.3	211	15.0	6.00
20...*	1124	1.90	1.00	612	6.8	84	8.3	211	15.0	11.0
20...*	1125	2.30	1.00	612	7.1	88	8.4	211	15.0	16.0
20...*	1126	1.95	1.00	612	7.4	92	8.3	211	15.0	21.0
20...*	1127	1.70	1.00	612	7.5	93	8.3	211	15.0	26.0
20...*	1128	1.30	.70	612	7.4	92	8.3	211	15.0	31.0
20...*	1129	1.10	.70	612	7.3	91	8.4	212	15.0	36.0

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

K Results based on colony count outside the acceptance range (non-ideal colony count).

\* Instantaneous discharge at time of cross-sectional measurements: Feb 19, 23 ft<sup>3</sup>/s; May 20, 179 ft<sup>3</sup>/s.

## 10295500 LITTLE WALKER RIVER NEAR BRIDGEPORT, CA

LOCATION.—Lat 38°21'39", long 119°26'38" referenced to North American Datum of 1927, in NW ¼ NW ¼ sec. 22, T.06 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.—63.10 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929, from topographic map. April to August 1910, nonrecording gage at site 1 mi upstream at different datum. Prior to January 02, 1997 at same site, at datum 1.0 ft. higher.

REMARKS.—Records good, except for 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<sup>3</sup>/s, January 02, 1997, gage height, 5.70 ft; minimum daily, 2.6 ft<sup>3</sup>/s, August 16, 1977.

PEAK DISCHARGES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 28	1000	*153	*2.17				

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	13	13	e16	e15	16	42	68	115	65	22	11
2	11	e13	13	e16	15	14	37	75	128	61	22	11
3	11	13	14	e16	e15	15	37	93	127	59	21	11
4	11	e14	16	e17	e15	13	43	109	125	58	21	12
5	12	14	20	e17	e15	14	51	110	124	57	20	12
6	12	16	21	e17	e14	15	50	108	129	62	19	11
7	12	13	17	e17	e14	16	46	104	129	59	19	11
8	12	13	15	e17	e14	19	47	97	120	53	19	12
9	12	13	e14	e17	e14	21	48	96	108	51	18	11
10	12	e13	14	17	e14	25	50	102	94	48	18	10
11	12	e13	e14	18	e14	26	50	92	85	45	20	9.9
12	12	e14	e15	16	e14	28	52	86	77	43	19	9.3
13	12	14	15	18	e13	29	55	85	85	42	20	9.8
14	12	17	e15	21	e13	32	50	86	91	40	20	9.4
15	12	14	e15	19	13	42	47	92	96	38	19	10
16	12	15	e15	e19	16	45	44	97	113	39	18	10
17	12	14	e15	e18	16	44	42	91	117	40	18	10
18	12	14	e14	17	14	56	40	87	109	38	17	11
19	12	15	14	e17	15	59	38	83	104	37	17	11
20	12	14	15	e17	14	59	38	80	100	35	21	11
21	12	13	14	16	14	73	37	75	96	35	19	11
22	12	13	e14	e16	13	72	37	74	94	37	17	11
23	12	e14	14	e17	13	62	37	75	93	35	17	11
24	12	e15	16	17	13	59	39	75	92	32	16	10
25	12	16	15	e17	13	52	42	84	89	30	15	10
26	12	e15	e15	e16	e13	44	50	93	86	29	14	10
27	12	e14	e16	15	e14	38	61	93	81	27	13	10
28	12	14	e16	18	e15	32	68	126	77	25	13	10
29	12	15	e16	16	e16	34	66	97	71	24	12	11
30	12	14	e16	15	---	36	62	90	68	23	13	11
31	13	---	e16	15	---	42	---	93	---	22	12	---
TOTAL	369	422	472	525	411	1,132	1,406	2,816	3,023	1,289	549	318.4
MEAN	11.9	14.1	15.2	16.9	14.2	36.5	46.9	90.8	101	41.6	17.7	10.6
MAX	13	17	21	21	16	73	68	126	129	65	22	12
MIN	11	13	13	15	13	13	37	68	68	22	12	9.3
AC-FT	732	837	936	1,040	815	2,250	2,790	5,590	6,000	2,560	1,090	632

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2004, BY WATER YEAR (WY)

MEAN	19.9	21.3	21.5	22.2	22.3	27.4	50.5	125	172	99.9	38.0	22.6
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)

## WALKER LAKE BASIN

10295500 LITTLE WALKER RIVER NEAR BRIDGEPORT, CA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1945 - 2004	
ANNUAL TOTAL	15,500		12,732.4			
ANNUAL MEAN	42.5		34.8		53.7	
HIGHEST ANNUAL MEAN					113	1983
LOWEST ANNUAL MEAN					13.9	1977
HIGHEST DAILY MEAN	328	May 30	129	Jun 6	730	May16,1996
LOWEST DAILY MEAN	11	Sep 24	9.3	Sep 12	2.6	Aug16,1977
ANNUAL SEVEN-DAY MINIMUM	11	Sep 24	9.8	Sep 10	3.0	Aug11,1977
MAXIMUM PEAK FLOW			153	May 28	2,540	Jan 2,1997
MAXIMUM PEAK STAGE			2.17	May 28	5.70	Jan 2,1997
ANNUAL RUNOFF (AC-FT)	30,740		25,250		38,880	
10 PERCENT EXCEEDS	103		91		142	
50 PERCENT EXCEEDS	18		17		25	
90 PERCENT EXCEEDS	12		12		13	

e Estimated



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

LOCATION.—Lat 38°22'47", long 119°26'57" referenced to North American Datum of 1927, in NE ¼ SE ¼ sec. 09, T.06 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.—181.00 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929. Prior to October 01, 1939, at site, 125 ft. downstream at datum 1.00 ft. higher. October 01, 1939, to September 30, 1969, at present site and datum. October 01, 1969, to July 10, 1987, at site 100 ft. downstream at same datum. July 10, 1987 to March 05, 1997, at site upstream 100 ft. at same datum. March 06, 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 FOR PERIOD OF RECORD.—Maximum discharge, 12,300 ft<sup>3</sup>/s, January 02, 1997, gage height, 10.11 ft; minimum daily, 9.7 ft<sup>3</sup>/s, September 11, 1997.

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

PEAK DISCHARGES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,120 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 5	0300	*1,350	*4.16	May 28	1645	1,350	4.16

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	31	e34	e32	e38	63	370	745	867	277	83	34
2	26	27	e34	e32	38	60	317	893	925	288	78	33
3	26	31	33	e32	e38	50	301	1,050	984	295	75	36
4	26	28	34	e32	e38	49	356	1,150	983	308	71	38
5	26	31	54	e32	e38	50	474	1,220	944	291	67	38
6	26	30	e58	e32	e38	53	523	1,140	997	321	64	34
7	25	32	e49	e32	e38	62	467	1,000	1,000	303	62	34
8	24	31	e45	e32	e38	74	461	918	816	279	58	32
9	23	e32	e40	e36	e39	89	496	936	612	257	57	30
10	23	e32	e37	e40	e39	115	513	910	485	242	55	28
11	24	e32	e33	e41	e39	129	492	705	483	212	53	28
12	24	e33	e40	e41	e39	146	520	602	505	188	51	27
13	23	e34	e44	e40	e40	158	561	634	600	185	56	27
14	23	e35	e39	e40	e40	180	493	730	731	192	63	26
15	22	e36	e35	e40	40	230	430	777	762	185	56	26
16	21	36	e35	e40	48	260	391	765	718	190	59	26
17	22	40	e35	e40	60	271	349	796	680	199	52	25
18	22	39	e39	e40	53	308	319	765	645	196	47	27
19	22	40	e41	e40	55	359	310	694	580	191	73	29
20	21	41	e41	e40	49	398	279	705	549	178	95	30
21	21	38	e42	e40	53	451	258	657	528	166	85	32
22	21	32	e37	e40	51	492	263	629	487	167	69	32
23	21	e32	e38	e40	48	517	262	653	519	164	66	30
24	20	e33	e40	e40	50	481	306	659	503	160	61	28
25	21	e33	e40	e40	40	430	386	652	460	147	53	27
26	21	e33	e38	e39	41	371	526	616	434	137	47	26
27	25	e33	e32	e39	51	313	728	708	406	118	45	25
28	29	e33	e32	e39	51	300	862	1,170	363	108	43	26
29	29	e34	e32	e39	56	323	774	907	316	94	41	26
30	27	e34	e32	e38	---	358	674	743	299	86	39	27
31	24	---	e32	e38	---	370	---	833	---	87	36	---
TOTAL	733	1,006	1,195	1,166	1,286	7,510	13,461	25,362	19,181	6,211	1,860	887
MEAN	23.6	33.5	38.5	37.6	44.3	242	449	818	639	200	60.0	29.6
MAX	29	41	58	41	60	517	862	1,220	1,000	321	95	38
MIN	20	27	32	32	38	49	258	602	299	86	36	25
MED	23	33	38	40	40	260	446	765	590	190	58	28
AC-FT	1,450	2,000	2,370	2,310	2,550	14,900	26,700	50,310	38,050	12,320	3,690	1,760

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2004, BY WATER YEAR (WY)

MEAN	54.0	66.7	70.3	77.4	74.2	112	303	784	954	485	149	72.8
MAX	219	539	448	854	246	369	609	1,655	2,066	1,864	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)

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

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1938 - 2004	
ANNUAL TOTAL	94,872		79,858			
ANNUAL MEAN	260		218		265	
HIGHEST ANNUAL MEAN					537	1983
LOWEST ANNUAL MEAN					65.3	1977
HIGHEST DAILY MEAN	2,550	May 30	1,220	May 5	8,660	Jan 2,1997
LOWEST DAILY MEAN	20	Oct 24	20	Oct 24	9.7	Sep11,1977
ANNUAL SEVEN-DAY MINIMUM	21	Oct 20	21	Oct 20	10	Sep 5,1977
MAXIMUM PEAK FLOW			1,350	May 5	12,300	Jan 2,1997
MAXIMUM PEAK STAGE			4.16	May 5	10.11	Jan 2,1997
ANNUAL RUNOFF (AC-FT)	188,200		158,400		191,800	
10 PERCENT EXCEEDS	712		697		800	
50 PERCENT EXCEEDS	67		51		86	
90 PERCENT EXCEEDS	28		27		34	

e Estimated

10296500 WEST WALKER RIVER NEAR COLEVILLE, CA

LOCATION.—Lat 38°30'48", long 119°26'56" referenced to North American Datum of 1927, in NE ¼ NE ¼ sec. 28, T.08 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.—250.00 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929, from topographic map. See WSP 1927 for history of changes prior to July 25, 1964. July 26, 1964 to January 02, 1997(gage destroyed by flood) at several sites and datums 2,000 ft. downstream from present location, when re-established October 28, 1997, at new datum.

REMARKS.—Records fair except for estimated daily discharges and discharges greater than 220 ft<sup>3</sup>/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<sup>3</sup>/s, January 02, 1997, gage height, 10.23 ft; minimum daily, 14 ft<sup>3</sup>/s, several days July-September 1924 and September 12, 1977.

PEAK DISCHARGES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,120 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 28	2000	1,400	6.97	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	32	29	e42	49	75	318	598	732	310	102	e38
2	30	e33	29	44	52	77	275	725	766	313	98	38
3	31	34	29	e44	49	74	256	898	796	299	95	38
4	31	e33	28	e46	e50	73	291	1,020	790	302	92	e38
5	30	32	34	e49	e52	72	384	1,160	752	293	88	e38
6	32	29	55	59	e53	76	421	1,080	799	314	85	e38
7	32	31	59	60	55	80	377	885	812	307	83	e38
8	31	30	39	59	e54	86	381	795	690	292	79	e36
9	30	e32	37	58	54	98	400	819	534	266	76	e36
10	30	34	44	59	49	117	424	814	434	253	73	e32
11	32	e35	36	59	e49	132	409	621	429	225	71	32
12	31	35	40	58	e50	138	419	531	445	203	68	31
13	31	37	44	57	e51	148	446	544	504	195	e76	32
14	31	36	39	55	51	174	401	631	617	197	e87	32
15	31	37	36	56	51	213	363	682	640	185	e72	33
16	31	35	40	53	58	228	321	668	615	186	e80	32
17	31	36	54	55	75	236	292	699	604	194	e64	32
18	31	37	54	57	71	258	265	671	607	193	e70	32
19	31	37	54	55	64	312	246	602	580	187	e98	35
20	30	37	60	56	67	334	233	612	549	182	e102	35
21	30	36	56	56	65	375	228	575	522	177	e85	37
22	30	32	50	51	65	400	232	547	492	171	e76	37
23	30	e35	54	e53	65	421	228	564	523	168	e70	36
24	31	e35	62	58	62	401	264	568	517	164	e65	35
25	31	33	68	50	64	364	328	562	474	153	e60	34
26	31	e35	59	51	57	318	433	526	456	144	e52	33
27	30	31	e53	55	63	271	580	594	432	136	e46	33
28	30	32	e51	49	64	255	725	1,100	401	130	e46	33
29	30	30	54	53	66	262	654	837	346	117	e42	33
30	30	31	e46	52	---	295	553	640	327	111	e42	34
31	29	---	e44	52	---	311	---	708	---	108	e40	---
TOTAL	949	1,012	1,437	1,661	1,675	6,674	11,147	22,276	17,185	6,475	2,283	1,041
MEAN	30.6	33.7	46.4	53.6	57.8	215	372	719	573	209	73.6	34.7
MAX	32	37	68	60	75	421	725	1,160	812	314	102	38
MIN	29	29	28	42	49	72	228	526	327	108	40	31
AC-FT	1,880	2,010	2,850	3,290	3,320	13,240	22,110	44,180	34,090	12,840	4,530	2,060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2004, BY WATER YEAR (WY)

MEAN	68.9	69.9	67.1	78.4	80.9	128	307	792	989	520	164	82.4
MAX	299	214	270	905	280	403	636	1,756	2,055	2,492	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)

## WALKER LAKE BASIN

10296500 WEST WALKER RIVER NEAR COLEVILLE, CA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1903 - 2004	
ANNUAL TOTAL	100,052		73,815			
ANNUAL MEAN	274		202		279	
HIGHEST ANNUAL MEAN					669	
LOWEST ANNUAL MEAN					74.5	
HIGHEST DAILY MEAN	2,670	May 30	1,160	May 5	9,000	Jan 2,1997
LOWEST DAILY MEAN	28	Dec 4	28	Dec 4	14	Jul24,1924
ANNUAL SEVEN-DAY MINIMUM	30	Nov 28	30	Nov 28	14	Aug28,1924
MAXIMUM PEAK FLOW			1,400	May 28	12,500	Jan 2,1997
MAXIMUM PEAK STAGE			6.97	May 28	10.23	Jan 2,1997
ANNUAL RUNOFF (AC-FT)	198,500		146,400		201,800	
10 PERCENT EXCEEDS	732		599		832	
50 PERCENT EXCEEDS	77		65		94	
90 PERCENT EXCEEDS	31		31		37	

e Estimated

## 10296500 WEST WALKER RIVER NEAR COLEVILLE, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1995, 2002 to current year.

CHEMICAL DATA: Water years 1995, 2002 to current year.

SEDIMENT DATA: Water year 2002 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)
NOV										
24...	1340	25	<2.0	617	10.6	106	8.1	160	6.0	5.01
FEB										
19...	1330	52	14	621	10.2	102	8.0	142	6.5	3.96
MAY										
21...	1045	591	17	622	9.2	92	7.7	49	6.5	1.01
AUG										
20...	0945	62	500	625	10.2	117	7.4	127	12.5	2.55

Date	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC, wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, unfltrd, mg/L as N (00625)	Nitrite + nitrate, fltrd, mg/L as N (00631)	Phosphorus, water, unfltrd, mg/L (00665)	Fecal coliform, M-FC, 0.7u MF col/100 mL (31625)	Boron, water, fltrd, ug/L (01020)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV										
24...	9.8	109	--	.09	.032	.026	K1	151	3	.20
FEB										
19...	10.2	101	--	.14	.149	.152	<1	129	8	1.1
MAY										
21...	2.0	27	<10	.13	.002	.030	K1	21	29	46
AUG										
20...	6.7	81	--	1.5	.083	1.41	>240	101	790	132

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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 25 degC (00095)	Temperature, water, deg C (00010)	Location in X-sect. looking downstrm ft from 1 bank (00009)
FEB										
19...	1315	.48	.20	621	10.2	102	8.2	142	6.5	3.00
19...	1316	.30	.20	621	10.3	103	8.1	142	6.5	6.00
19...	1317	1.00	.20	621	10.3	103	8.0	142	6.5	9.00
19...	1318	1.50	.20	621	10.3	103	8.0	142	6.5	12.0
19...	1319	1.60	.20	621	10.3	103	8.0	142	6.5	15.0
19...	1320	1.80	.20	621	10.3	103	8.0	142	6.5	18.0
19...	1321	1.80	.20	621	10.2	102	8.0	142	6.5	21.0
19...	1322	1.70	.20	621	10.2	102	8.0	142	6.5	24.0
19...	1324	.80	.20	621	10.2	102	8.0	142	6.5	30.0
19...	1325	.80	.20	621	10.2	102	8.0	142	6.5	33.0

&lt; Actual value is known to be less than the value shown.

K Results based on colony count outside the acceptance range (non-ideal colony count).

&gt; Actual value is known to be greater than the value shown.

\* Instantaneous discharge at time of cross-sectional measurement: Feb. 19, 52 ft<sup>3</sup>/s.

## 10297000 TOPAZ LAKE NEAR TOPAZ, CA

LOCATION.—Lat 38°41'35.64", long 119°31'13.11" referenced to North American Datum of 1983, in NW ¼ NE ¼ sec. 33, T.10 N., R.22 E., Douglas County, Nevada, Hydrologic Unit 16050302, 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 above National Geodetic Vertical Datum of 1929. Prior to October 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. See schematic diagram of Walker River Basin. 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, 23,260 acre-ft, June 8, gage height, 86.69 ft; minimum contents, 2,340 acre-ft, September 28, 30, gage height, 73.82 ft.

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

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

RESERVOIR STORAGE, ACRE FEET  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13,510	6,750	8,470	11,770	14,740	18,350	21,360	19,920	21,340	19,420	10,950	4,330
2	13,220	6,640	8,590	11,890	14,900	18,470	21,410	19,890	21,590	19,150	10,610	4,190
3	12,930	6,610	8,660	11,970	14,970	18,570	21,410	20,060	21,880	18,900	10,180	3,910
4	12,630	6,660	8,690	12,050	15,050	18,670	21,440	20,360	22,220	18,680	9,790	3,820
5	12,390	6,740	8,820	12,110	15,120	18,770	21,540	20,850	22,440	18,480	9,440	3,650
6	12,160	6,780	8,910	12,230	15,200	18,870	21,680	21,100	22,750	18,270	9,060	3,520
7	11,920	6,850	9,090	12,280	15,280	18,970	21,730	21,220	23,090	18,110	8,770	3,400
8	11,630	6,910	9,180	12,340	15,350	19,080	21,640	21,240	23,190	17,950	8,500	3,290
9	11,290	7,160	9,310	12,410	15,450	19,200	21,540	21,290	23,050	17,780	8,260	3,180
10	10,980	7,240	9,390	12,540	15,530	19,280	21,420	21,340	22,760	17,570	8,020	3,150
11	10,710	7,320	9,490	12,650	15,650	19,420	21,290	21,250	22,460	17,370	7,780	3,050
12	10,470	7,400	9,600	12,760	15,760	19,520	21,170	21,030	22,200	17,130	7,750	2,960
13	10,260	7,460	9,650	12,890	e15,910	19,590	21,120	20,810	22,080	16,870	7,510	2,900
14	10,050	7,540	9,890	12,990	e16,060	19,650	21,050	20,660	22,170	16,600	7,350	2,820
15	9,890	7,590	9,970	13,110	e16,210	19,770	20,870	20,610	22,360	16,400	7,230	2,790
16	9,760	7,640	10,000	13,200	e16,360	19,890	20,680	20,560	22,490	16,220	7,100	2,740
17	9,580	7,690	10,130	13,320	e16,500	19,970	20,530	20,540	22,540	15,990	6,970	2,710
18	9,490	7,770	10,230	13,420	16,600	20,040	20,390	20,490	22,540	15,710	6,820	2,650
19	9,310	7,850	10,400	13,530	16,740	20,210	20,290	20,440	22,440	15,450	6,660	2,510
20	9,220	7,860	10,480	13,690	16,890	20,390	20,060	20,410	22,300	15,120	6,550	2,510
21	9,090	7,910	10,580	13,790	17,030	20,650	19,960	20,330	22,100	14,820	6,500	2,500
22	8,940	7,960	10,630	13,870	17,170	20,900	19,840	20,220	21,810	14,530	6,360	2,500
23	8,820	8,040	10,790	13,970	17,330	21,080	19,720	20,060	21,590	14,230	6,150	2,480
24	8,590	8,120	10,850	14,040	17,470	21,150	19,600	19,970	21,340	13,900	6,030	2,480
25	8,310	8,130	11,110	14,130	17,750	21,140	19,540	19,920	21,100	13,580	5,870	2,470
26	8,040	8,180	11,210	14,250	17,900	21,070	19,600	19,840	20,870	13,190	5,600	2,450
27	7,780	8,270	11,270	14,330	18,000	20,970	19,840	19,740	20,580	12,800	5,400	2,430
28	7,480	8,350	11,300	14,410	18,110	20,980	20,120	20,220	20,280	12,440	5,220	2,400
29	7,230	8,390	11,450	14,510	18,230	21,030	20,190	20,710	19,970	12,100	5,080	2,430
30	6,930	8,500	11,580	14,590	---	21,140	20,090	20,880	19,700	11,690	4,910	2,420
31	6,880	---	11,680	14,660	---	21,250	---	21,100	---	11,350	4,740	---
MAX	13,510	8,500	11,680	14,660	18,230	21,250	21,730	21,340	23,190	19,420	10,950	4,330
MIN	6,880	6,610	8,470	11,770	14,740	18,350	19,540	19,740	19,700	11,350	4,740	2,400
#	4,972.10	4,973.12	4,975.10	4,976.93	4,979.09	4,980.89	4,980.20	4,980.80	4,979.97	4,974.90	4,970.74	4,969.25
##	-6,930	+1,620	+3,180	+2,980	+3,570	+3,020	-1,160	+1,010	-1,400	-8,350	-6,610	-2,320
CAL YR 2003	MAX	5,7820	MIN	6,610	##	+1,280						
WTR YR 2004	MAX	2,3190	MIN	2,400	##	-11,390						

e Estimated

# Elevation, in feet above NGVD 1929, at end of month, present datum.

## Change in contents, in acre-feet.

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

LOCATION.—Lat 38°42'53", long 119°45'50" referenced to North American Datum of 1927, in SW ¼ NE ¼ 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.—276.00 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—August 1960 to current year.

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

REMARKS.—Records fair except for estimated daily discharges, which are poor. 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<sup>3</sup>/s, January 2, 1997, gage height, 11.78 ft; minimum daily, 12 ft<sup>3</sup>/s, September 10–13, 23, 1997.

PEAK DISCHARGES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,300 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 5	0000	*1,560	*4.32	May 28	1015	1,390	4.15

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	40	44	63	62	111	545	792	696	178	67	38
2	46	35	44	58	67	108	452	960	699	171	71	38
3	47	44	42	60	60	101	443	1,150	711	166	72	46
4	45	35	42	65	64	103	525	1,270	687	156	81	47
5	44	45	67	e70	58	110	648	1,330	653	147	89	40
6	45	42	166	e75	66	130	685	1,230	640	148	95	39
7	45	46	178	e80	69	157	605	1,070	621	144	95	38
8	43	43	80	82	57	197	634	999	542	131	81	37
9	41	55	67	86	73	247	658	973	479	123	74	44
10	41	38	68	78	65	303	671	952	424	116	71	38
11	43	45	59	77	58	316	645	787	404	107	68	35
12	43	49	57	75	58	319	674	700	392	100	63	34
13	43	53	72	74	60	331	713	706	390	102	74	33
14	44	49	64	75	67	369	632	755	406	102	81	39
15	42	52	42	76	61	425	566	770	402	98	75	37
16	41	48	58	72	127	425	489	769	377	97	85	35
17	42	51	69	74	217	409	444	789	368	93	74	34
18	41	51	71	74	223	481	404	753	357	89	69	34
19	41	51	70	70	155	564	377	684	341	84	73	42
20	41	55	72	72	130	561	363	679	317	80	67	40
21	40	51	69	71	118	663	358	648	299	88	61	42
22	39	42	59	57	111	716	357	623	280	91	60	41
23	39	31	63	85	103	659	338	629	275	91	66	40
24	39	52	137	79	97	659	396	614	266	85	65	38
25	39	51	120	68	166	592	485	594	250	79	57	38
26	39	46	83	61	165	412	598	582	234	77	65	44
27	39	46	53	69	121	363	774	625	222	74	64	44
28	38	47	70	62	115	331	898	1,100	212	76	61	44
29	38	47	85	66	111	351	822	832	201	75	57	45
30	37	45	73	65	---	515	722	714	192	72	51	44
31	37	---	73	64	---	545	---	709	---	70	47	---
TOTAL	1,288	1,385	2,317	2,203	2,904	11,573	16,921	25,788	12,337	3,310	2,179	1,188
MEAN	41.5	46.2	74.7	71.1	100	373	564	832	411	107	70.3	39.6
MAX	47	55	178	86	223	716	898	1,330	711	178	95	47
MIN	37	31	42	57	57	101	338	582	192	70	47	33
AC-FT	2,550	2,750	4,600	4,370	5,760	22,960	33,560	51,150	24,470	6,570	4,320	2,360

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2004, BY WATER YEAR (WY)

MEAN	78.0	107	130	191	203	286	547	1,124	977	384	141	86.5
MAX	346	476	718	1,722	917	983	1,121	2,447	2,996	1,721	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)

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

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1960 - 2004	
ANNUAL TOTAL	109,384		83,393			
ANNUAL MEAN	300		228		355	
HIGHEST ANNUAL MEAN					809	1983
LOWEST ANNUAL MEAN					83.7	1977
HIGHEST DAILY MEAN	2,480	May 30	1,330	May 5	12,500	Jan 2,1997
LOWEST DAILY MEAN	31	Nov 23	31	Nov 23	12	Sep10,1987
ANNUAL SEVEN-DAY MINIMUM	38	Oct 27	35	Sep 12	12	Sep 7,1987
MAXIMUM PEAK FLOW			1,560	May 5	18,900	Jan 2,1997
MAXIMUM PEAK STAGE			4.32	May 5	11.78	Jan 2,1997
ANNUAL RUNOFF (AC-FT)	217,000		165,400		257,100	
10 PERCENT EXCEEDS	844		672		952	
50 PERCENT EXCEEDS	125		76		141	
90 PERCENT EXCEEDS	44		41		50	

e Estimated



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

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water year 2001 to current year.

CHEMICAL DATA: Water year 2001 to current year.

SEDIMENT DATA: Water year 2001 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd 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)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)
NOV											
18...	1040	59	<2.0	629	12.0	107	8.0	148	2.6	4.39	8.6
FEB											
20...	1040	154	14	621	11.6	103	8.1	158	2.0	4.26	11.5
MAY											
19...	1045	688	8.5	622	10.6	104	7.8	58	6.0	.62	1.8
AUG											
19...	0945	68	3.0	631	10.8	130	7.9	112	15.0	1.82	3.8

Date	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	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)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Boron, water, fltrd, ug/L (01020)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV										
18...	105	--	.06	.003	.019	.029	K2	151	2	.32
FEB										
20...	117	--	.13	.020	--	.038	K3	155	8	3.3
MAY										
19...	55	10	.09	<.001	--	.320	K3	28	30	56
AUG										
19...	87	<10	.12	.002	--	.033	>240	96	8	1.5

&lt; Actual value is known to be less than the value shown.

K Results based on colony count outside the acceptance range (non-ideal colony count).

&gt; Actual value is known to be greater than the value shown.

## 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<sup>2</sup>.

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<sup>3</sup>/s and estimated values, which are poor.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 21 ft<sup>3</sup>/s, May 7, 1999, gage height, 4.40 ft, maximum gage height, 4.67 ft, Jan. 7, 2001, backwater from ice; minimum daily, 0.01 ft<sup>3</sup>/s, Sept. 15, 26–28, 2004.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 19	0445	7.0	4.23

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.06	0.14	e0.15	e0.09	e0.16	0.15	e0.79	0.59	0.16	0.07	0.02	0.07
2	0.06	0.13	0.15	e0.09	0.20	0.15	e0.44	0.60	0.15	0.07	0.03	0.10
3	0.07	0.13	0.14	e0.09	e0.14	0.14	e0.61	0.59	0.13	0.07	0.04	0.10
4	0.07	0.16	0.15	e0.09	e0.12	0.14	e1.1	0.48	0.12	0.06	0.06	0.02
5	0.08	0.15	0.21	e0.09	e0.17	0.12	e1.4	0.43	0.13	0.06	0.04	0.03
6	0.07	0.12	0.23	e0.09	0.20	0.13	e0.91	0.37	0.11	0.07	0.03	0.02
7	0.07	0.14	0.19	e0.09	e0.17	0.17	e0.77	0.33	0.12	0.13	0.09	0.04
8	0.07	0.13	e0.11	e0.09	0.20	0.17	e0.76	0.33	0.11	0.07	0.05	0.03
9	0.08	0.27	e0.13	e0.09	0.19	0.19	e0.79	0.32	0.10	0.07	0.05	0.04
10	0.10	0.13	e0.14	e0.09	0.19	0.22	e0.87	0.33	0.09	0.05	0.04	0.02
11	0.09	0.17	e0.12	e0.09	0.20	0.18	e1.0	0.34	0.09	0.11	0.04	0.03
12	0.08	0.15	e0.08	e0.09	0.20	0.19	e0.86	0.35	0.09	0.07	0.27	0.07
13	0.08	0.16	e0.08	e0.09	0.19	0.22	e0.99	0.31	0.11	0.13	0.13	0.02
14	0.08	0.16	e0.08	e0.09	0.20	0.27	e1.2	0.35	0.09	0.05	0.10	0.02
15	0.08	0.17	e0.07	e0.09	0.19	0.39	e0.96	0.43	0.12	0.03	0.09	0.01
16	0.10	0.16	e0.06	e0.09	0.19	0.56	e1.4	0.25	0.12	0.03	0.09	0.02
17	0.09	0.15	e0.07	e0.09	0.18	1.1	e1.7	0.26	0.15	0.02	0.06	0.02
18	0.08	0.15	e0.07	e0.09	0.17	1.8	e0.97	0.30	0.09	0.02	0.06	0.02
19	0.08	0.15	e0.07	e0.09	e0.16	2.2	e1.0	0.25	0.08	0.02	0.10	0.02
20	0.08	0.16	e0.08	e0.09	e0.16	1.1	1.6	0.29	0.08	0.02	0.07	0.02
21	0.09	0.16	e0.08	e0.08	e0.15	1.8	1.3	0.27	0.10	0.02	0.06	0.02
22	0.10	e0.17	e0.08	e0.08	e0.15	1.6	1.1	0.23	0.10	0.03	0.08	0.02
23	0.09	e0.14	e0.08	e0.10	e0.15	1.5	1.0	0.23	0.09	0.03	0.13	0.03
24	0.10	e0.20	e0.08	e0.10	e0.15	1.5	0.72	0.22	0.08	0.02	0.08	0.02
25	0.10	0.20	e0.08	e0.10	e0.15	e1.4	0.84	0.21	0.07	0.02	0.06	0.03
26	0.11	0.18	e0.08	e0.11	e0.15	e1.1	0.93	0.21	0.06	0.02	0.05	0.01
27	0.11	e0.17	e0.08	e0.10	e0.15	e1.2	0.88	0.21	0.06	0.02	0.05	0.01
28	0.10	e0.17	e0.08	e0.14	0.16	1.1	0.73	0.22	0.08	0.02	0.06	0.01
29	0.09	e0.16	e0.09	e0.14	0.15	1.1	0.72	0.18	0.08	0.03	0.06	0.02
30	0.11	e0.16	e0.09	e0.14	---	1.3	0.55	0.18	0.12	0.02	0.06	0.02
31	0.09	---	e0.09	e0.14	---	1.4	---	0.20	---	0.02	0.07	---
TOTAL	2.66	4.79	3.29	3.03	4.94	24.59	28.89	9.86	3.08	1.47	2.22	0.91
MEAN	0.09	0.16	0.11	0.10	0.17	0.79	0.96	0.32	0.10	0.05	0.07	0.03
MAX	0.11	0.27	0.23	0.14	0.20	2.2	1.7	0.60	0.16	0.13	0.27	0.10
MIN	0.06	0.12	0.06	0.08	0.12	0.12	0.44	0.18	0.06	0.02	0.02	0.01
AC-FT	5.3	9.5	6.5	6.0	9.8	49	57	20	6.1	2.9	4.4	1.8

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2004, BY WATER YEAR (WY)

MEAN	0.08	0.13	0.13	0.16	0.16	0.52	1.31	1.43	0.26	0.09	0.06	0.06
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	0.04	0.09	0.07	0.09	0.08	0.29	0.47	0.18	0.08	0.05	0.03	0.03
(WY)	2002	2001	2003	2001	2001	2002	2001	2001	2001	2004	2001	2004

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1999 - 2004

ANNUAL TOTAL	133.04	89.73	
ANNUAL MEAN	0.36	0.25	0.24
HIGHEST ANNUAL MEAN			0.36 2003
LOWEST ANNUAL MEAN			0.13 2001
HIGHEST DAILY MEAN	2.5	Apr 12	2.2 Mar 19
LOWEST DAILY MEAN	0.03	Aug 8	0.01 Sep 15
ANNUAL SEVEN-DAY MINIMUM	0.03	Aug 8	0.02 Sep 24
MAXIMUM PEAK FLOW			7.0 Mar 19
MAXIMUM PEAK STAGE			4.23 Mar 19
ANNUAL RUNOFF (AC-FT)	264	178	175
10 PERCENT EXCEEDS	1.3	0.79	0.60
50 PERCENT EXCEEDS	0.14	0.11	0.10
90 PERCENT EXCEEDS	0.05	0.03	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 good.

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

EXTREMES FOR CURRENT YEAR.—Maximum daily discharge, 0.0453 ft<sup>3</sup>/s, Apr. 22; minimum daily, 0.0256 ft<sup>3</sup>/s, Feb. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0302	0.0286	0.0269	0.0267	0.0267	0.0259	0.0351	0.0428	0.0311	0.0300	0.0284	0.0272
2	0.0314	0.0289	0.0272	0.0269	0.0270	0.0258	0.0353	0.0426	0.0307	0.0300	0.0284	0.0275
3	0.0321	0.0288	0.0272	0.0267	0.0266	0.0264	0.0359	0.0419	0.0307	0.0296	0.0289	0.0281
4	0.0311	0.0288	0.0267	0.0268	0.0264	0.0263	0.0367	0.0423	0.0305	0.0293	0.0288	0.0280
5	0.0304	0.0284	0.0268	0.0269	0.0269	0.0260	0.0373	0.0426	0.0311	0.0292	0.0287	0.0274
6	0.0295	0.0284	0.0268	0.0266	0.0267	0.0258	0.0379	0.0427	0.0307	0.0294	0.0285	0.0276
7	0.0287	0.0280	0.0271	0.0262	0.0269	0.0259	0.0391	0.0422	0.0312	0.0293	0.0284	0.0272
8	0.0278	0.0282	0.0273	0.0265	0.0268	0.0262	0.0395	0.0423	0.0314	0.0294	0.0282	0.0272
9	0.0280	0.0279	0.0272	0.0266	0.0265	0.0263	0.0398	0.0422	0.0318	0.0291	0.0280	0.0274
10	0.0283	0.0277	0.0275	0.0268	0.0267	0.0264	0.0412	0.0422	0.0311	0.0293	0.0284	0.0271
11	0.0283	0.0282	0.0274	0.0268	0.0268	0.0276	0.0416	0.0426	0.0310	0.0291	0.0282	0.0267
12	0.0275	0.0282	0.0270	0.0264	0.0267	0.0279	0.0419	0.0422	0.0306	0.0290	0.0284	0.0271
13	0.0281	0.0277	0.0270	0.0267	0.0266	0.0281	0.0428	0.0410	0.0303	0.0288	0.0285	0.0272
14	0.0278	0.0278	0.0273	0.0269	0.0265	0.0285	0.0431	0.0401	0.0299	0.0286	0.0279	0.0273
15	0.0277	0.0282	0.0271	0.0268	0.0260	0.0293	0.0437	0.0396	0.0299	0.0288	0.0286	0.0271
16	0.0272	0.0277	0.0270	0.0269	0.0259	0.0297	0.0440	0.0385	0.0302	0.0287	0.0285	0.0272
17	0.0275	0.0272	0.0271	0.0269	0.0256	0.0301	0.0446	0.0377	0.0303	0.0287	0.0281	0.0272
18	0.0273	0.0273	0.0270	0.0267	0.0259	0.0301	0.0445	0.0374	0.0300	0.0288	0.0284	0.0279
19	0.0270	0.0273	0.0268	0.0268	0.0260	0.0303	0.0448	0.0366	0.0299	0.0285	0.0284	0.0281
20	0.0269	0.0270	0.0268	0.0268	0.0265	0.0303	0.0447	0.0358	0.0299	0.0284	0.0284	0.0281
21	0.0272	0.0275	0.0267	0.0270	0.0262	0.0307	0.0450	0.0352	0.0297	0.0289	0.0282	0.0280
22	0.0272	0.0281	0.0271	0.0273	0.0262	0.0307	0.0453	0.0345	0.0299	0.0292	0.0286	0.0277
23	0.0274	0.0279	0.0269	0.0270	0.0259	0.0308	0.0445	0.0333	0.0297	0.0289	0.0283	0.0275
24	0.0274	0.0277	0.0270	0.0269	0.0262	0.0315	0.0447	0.0327	0.0301	0.0282	0.0282	0.0273
25	0.0275	0.0279	0.0270	0.0270	0.0264	0.0315	0.0438	0.0326	0.0296	0.0286	0.0277	0.0271
26	0.0274	0.0273	0.0270	0.0269	0.0258	0.0324	0.0433	0.0318	0.0297	0.0288	0.0279	0.0273
27	0.0277	0.0274	0.0270	0.0268	0.0261	0.0321	0.0433	0.0318	0.0298	0.0287	0.0282	0.0275
28	0.0276	0.0270	0.0272	0.0267	0.0261	0.0323	0.0439	0.0324	0.0297	0.0284	0.0278	0.0272
29	0.0276	0.0269	0.0269	0.0269	0.0258	0.0326	0.0439	0.0315	0.0300	0.0285	0.0277	0.0278
30	0.0279	0.0272	0.0265	0.0271	---	0.0327	0.0434	0.0316	0.0302	0.0285	0.0276	0.0277
31	0.0292	---	0.0265	0.0269	---	0.0334	---	0.0314	---	0.0285	0.0272	---
TOTAL	0.8769	0.8352	0.8370	0.8309	0.7644	0.9036	1.2546	1.1741	0.9107	0.8972	0.8755	0.8237
MEAN	0.03	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.03	0.03	0.03	0.03
MAX	0.0321	0.0289	0.0275	0.0273	0.0270	0.0334	0.0453	0.0428	0.0318	0.0300	0.0289	0.0281
MIN	0.0269	0.0269	0.0265	0.0262	0.0256	0.0258	0.0351	0.0314	0.0296	0.0282	0.0272	0.0267
AC-FT	1.7	1.7	1.7	1.6	1.5	1.8	2.5	2.3	1.8	1.8	1.7	1.6

## 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, 0.0120 ft<sup>3</sup>/s, Apr. 15, 17, 28, 2004; no flow Nov. 10, to Dec. 11, 2003.

EXTREMES FOR CURRENT YEAR.—Maximum daily discharge, 0.0120 ft<sup>3</sup>/s, Apr. 15, 17, 28; no flow Nov. 10, to Dec. 11.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0005	0.0005	e0.0000	0.0006	0.0006	0.0009	0.0045	0.0065	0.0027	0.0012	0.0008	0.0011
2	0.0005	0.0005	e0.0000	0.0006	0.0006	0.0009	0.0042	0.0076	0.0027	0.0012	0.0008	0.0011
3	0.0004	0.0005	e0.0000	0.0006	0.0006	0.0011	0.0042	e0.0080	0.0025	0.0012	0.0008	0.0011
4	0.0004	0.0005	e0.0000	0.0006	0.0006	0.0011	0.0046	e0.0070	0.0023	0.0012	0.0008	0.0011
5	0.0004	e0.0004	e0.0000	0.0006	0.0006	0.0008	0.0061	e0.0070	0.0025	0.0011	0.0008	0.0011
6	0.0004	e0.0003	e0.0000	0.0006	0.0006	0.0008	0.0064	0.0065	0.0026	0.0011	0.0008	0.0011
7	0.0004	e0.0002	e0.0000	0.0006	0.0006	0.0009	0.0065	0.0064	0.0027	0.0012	0.0007	0.0011
8	0.0004	e0.0001	e0.0000	0.0006	0.0006	0.0009	0.0066	e0.0060	0.0027	0.0012	0.0007	0.0011
9	0.0004	e0.0001	e0.0000	0.0006	0.0006	e0.0009	0.0067	e0.0070	0.0023	0.0012	0.0007	0.0011
10	0.0005	e0.0000	e0.0000	0.0006	0.0006	e0.0010	0.0081	0.0073	0.0021	0.0011	0.0006	0.0010
11	0.0004	e0.0000	e0.0000	0.0006	0.0006	e0.0012	0.0094	0.0067	0.0021	0.0010	0.0006	0.0010
12	0.0004	e0.0000	e0.0001	0.0006	0.0006	0.0013	0.0099	0.0065	0.0020	0.0010	0.0006	0.0011
13	0.0005	e0.0000	e0.0001	0.0006	0.0006	0.0016	0.0117	0.0061	0.0019	0.0009	0.0006	0.0011
14	0.0005	e0.0000	e0.0002	0.0006	0.0006	0.0016	0.0114	0.0060	0.0019	0.0009	0.0006	0.0011
15	0.0005	e0.0000	e0.0003	0.0006	0.0006	0.0020	0.0120	0.0064	0.0020	0.0009	0.0006	0.0011
16	0.0005	e0.0000	e0.0003	0.0006	0.0006	0.0023	0.0119	0.0064	0.0019	0.0009	0.0006	0.0011
17	0.0004	e0.0000	e0.0004	0.0006	0.0005	0.0028	0.0120	0.0061	0.0018	0.0009	0.0006	0.0011
18	0.0005	e0.0000	e0.0004	0.0006	0.0006	0.0035	0.0105	0.0050	0.0017	0.0009	0.0006	0.0011
19	0.0005	e0.0000	e0.0005	0.0006	0.0006	0.0086	0.0103	0.0050	0.0016	0.0009	0.0006	0.0011
20	0.0004	e0.0000	0.0006	0.0006	0.0006	0.0085	0.0104	0.0049	0.0016	0.0009	0.0006	0.0011
21	0.0005	e0.0000	0.0006	0.0006	0.0007	0.0085	0.0110	0.0047	0.0016	0.0009	0.0006	0.0010
22	0.0005	e0.0000	0.0006	0.0006	0.0007	0.0092	0.0100	0.0045	0.0016	0.0009	0.0006	0.0011
23	0.0005	e0.0000	0.0006	0.0006	0.0007	0.0080	0.0100	0.0047	0.0015	0.0009	0.0006	0.0010
24	0.0005	e0.0000	0.0006	0.0007	0.0007	0.0075	0.0100	0.0042	0.0014	0.0009	0.0006	0.0010
25	0.0004	e0.0000	0.0006	0.0006	0.0007	0.0067	0.0086	0.0042	0.0014	0.0008	0.0009	0.0010
26	0.0004	e0.0000	0.0006	0.0006	0.0008	0.0053	0.0070	0.0040	0.0015	0.0009	0.0011	0.0011
27	0.0005	e0.0000	0.0006	0.0006	0.0008	0.0041	0.0090	0.0038	0.0015	0.0009	0.0011	0.0011
28	0.0005	e0.0000	0.0006	0.0006	0.0007	0.0044	0.0120	0.0042	0.0014	0.0009	0.0011	0.0011
29	0.0005	e0.0000	0.0006	0.0006	0.0008	0.0052	0.0099	0.0033	0.0013	0.0009	0.0011	0.0011
30	0.0006	e0.0000	0.0006	0.0006	---	0.0054	0.0066	0.0027	0.0012	0.0008	0.0011	0.0011
31	0.0006	---	0.0006	0.0006	---	0.0048	---	0.0027	---	0.0009	0.0011	---
TOTAL	0.0144	0.0031	0.0095	0.0187	0.0185	0.1118	0.2615	0.1714	0.0580	0.0306	0.0234	0.0324
MEAN	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00
MAX	0.0006	0.0005	0.0006	0.0007	0.0008	0.0092	0.0120	0.0080	0.0027	0.0012	0.0011	0.0011
MIN	0.0004	0.0000	0.0000	0.0006	0.0005	0.0008	0.0042	0.0027	0.0012	0.0008	0.0006	0.0010
AC-FT	0.03	0.01	0.02	0.04	0.04	0.2	0.5	0.3	0.1	0.06	0.05	0.06

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, 7.22 ft, May 6; minimum, 4.43 ft, Oct. 2, 5, July 16–18.

## GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.55	4.45	4.72	5.52	5.96	6.65	7.03	7.19	7.18	5.12	4.50	5.14
2	4.43	4.45	4.73	5.54	6.03	6.68	7.05	7.18	7.17	5.10	4.49	5.15
3	4.44	4.45	4.74	5.55	6.03	6.69	7.06	7.18	7.16	5.10	4.50	5.16
4	4.44	4.45	4.75	5.56	6.03	6.70	7.10	7.21	7.15	5.10	4.50	5.18
5	4.43	4.46	4.78	5.57	6.05	6.71	7.11	7.21	7.14	5.10	4.51	5.20
6	4.44	4.46	4.86	5.59	e6.04	6.73	7.11	7.22	7.12	5.23	4.51	5.22
7	4.44	4.46	4.90	5.60	6.03	6.75	7.11	7.16	7.10	5.35	4.52	5.24
8	4.44	4.46	4.90	5.61	6.04	6.77	7.12	7.16	7.09	5.44	4.53	5.25
9	4.44	4.48	4.92	5.62	6.05	6.80	7.12	7.16	7.09	5.61	4.54	5.27
10	4.45	4.49	4.98	5.63	6.07	6.84	7.12	7.15	7.09	5.71	4.55	5.29
11	4.44	4.50	5.00	5.65	6.08	6.85	7.14	7.17	7.09	5.76	4.56	4.67
12	4.45	4.51	5.02	5.66	6.09	6.88	7.14	7.18	7.12	5.66	4.67	4.45
13	4.45	4.51	5.02	5.67	6.10	6.91	7.14	7.18	7.05	5.34	4.71	4.45
14	4.45	4.53	5.10	5.73	6.11	6.94	7.13	7.18	7.04	4.91	4.74	4.45
15	4.46	4.54	5.11	5.74	6.17	6.97	7.13	7.17	6.99	4.49	4.77	4.45
16	4.46	4.55	5.12	5.75	6.26	7.00	7.13	7.19	6.89	4.43	4.80	4.45
17	4.46	4.56	5.13	5.76	6.25	7.03	7.13	7.19	6.79	4.43	4.82	4.45
18	4.47	4.58	5.14	5.78	6.30	7.06	7.14	7.18	6.73	4.43	4.84	4.45
19	4.47	4.59	5.15	5.79	6.31	7.09	7.15	7.18	6.63	4.44	4.87	4.44
20	4.47	4.60	5.17	5.83	6.32	6.97	e7.17	7.18	6.50	4.44	4.91	4.44
21	4.47	4.61	5.18	5.84	6.33	6.96	e7.18	7.18	6.38	4.44	4.92	4.45
22	4.48	4.62	5.17	5.85	6.36	6.97	e7.19	7.18	6.33	4.44	4.96	4.45
23	4.48	4.63	5.18	5.88	6.35	6.98	7.19	7.18	6.49	4.46	4.97	4.46
24	4.47	4.64	5.27	5.88	6.36	6.99	7.18	7.16	e6.49	4.46	4.99	4.46
25	4.48	4.65	5.34	5.88	6.48	7.00	7.19	7.16	5.78	4.47	5.01	4.46
26	4.48	4.66	5.35	5.90	6.64	6.99	7.19	7.16	5.66	4.47	5.02	4.46
27	4.48	4.67	5.36	5.91	6.65	7.02	7.19	7.17	5.53	4.50	5.04	4.46
28	4.46	4.68	5.38	5.93	6.62	7.03	7.18	7.20	5.39	4.48	5.06	4.46
29	4.46	4.70	5.42	5.93	6.64	7.03	7.18	7.20	5.39	4.48	5.08	4.47
30	4.46	4.72	5.44	5.93	---	7.02	7.19	7.19	5.27	4.49	5.10	4.46
31	4.46	---	5.45	5.95	---	7.03	---	7.18	---	4.54	5.12	---
MEAN	4.46	4.56	5.09	5.74	6.23	6.90	7.14	7.18	6.63	4.85	4.78	4.71
MAX	4.55	4.72	5.45	5.95	6.65	7.09	7.19	7.22	7.18	5.76	5.12	5.29
MIN	4.43	4.45	4.72	5.52	5.96	6.65	7.03	7.15	5.27	4.43	4.49	4.44

CAL YR 2003 MEAN 5.73 MAX 7.05 MIN 4.43  
WTR YR 2004 MEAN 5.69 MAX 7.22 MIN 4.43

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. Days that indicate no flow are days when all flow is being pumped to Leviathan Mine Pond 4 (station 103087887) for treatment.

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

EXTREMES FOR CURRENT YEAR.—Maximum daily discharge, 0.0745 ft<sup>3</sup>/s, Apr. 28; no flow on many days.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0249	0.0299	0.0322	0.0326	0.0328	0.0446	0.0580	0.0740	0.0221	0.0000	0.0000	0.0000
2	0.0375	0.0301	0.0318	0.0326	0.0304	0.0469	0.0590	e0.0740	0.0036	0.0000	0.0000	0.0000
3	0.0367	0.0304	0.0313	0.0329	0.0312	0.0473	0.0597	e0.0740	0.0038	0.0000	0.0000	0.0000
4	0.0350	0.0303	0.0310	0.0330	0.0315	0.0483	0.0612	e0.0730	0.0033	0.0000	0.0000	0.0000
5	0.0337	0.0298	0.0313	0.0330	0.0329	e0.0460	0.0630	e0.0730	0.0033	0.0000	0.0000	0.0000
6	0.0329	0.0296	0.0316	0.0330	e0.0325	0.0441	0.0644	0.0730	0.0030	0.0000	0.0000	0.0000
7	0.0321	0.0285	0.0326	0.0334	e0.0325	0.0446	0.0650	0.0679	0.0023	0.0000	0.0000	0.0000
8	0.0317	0.0288	0.0322	0.0382	e0.0325	0.0450	0.0654	0.0637	0.0007	0.0000	0.0000	0.0000
9	0.0332	0.0285	0.0330	0.0396	e0.0325	0.0455	0.0670	0.0615	0.0000	0.0000	0.0000	0.0000
10	0.0348	0.0287	0.0328	0.0368	e0.0325	0.0456	0.0701	0.0613	0.0000	0.0000	0.0000	0.0000
11	0.0340	0.0290	0.0342	0.0369	e0.0325	0.0441	0.0715	0.0595	0.0000	0.0000	0.0000	0.0000
12	0.0353	0.0293	0.0338	0.0364	e0.0325	0.0425	e0.0712	0.0704	0.0000	0.0000	0.0000	0.0000
13	0.0336	0.0295	0.0332	0.0359	e0.0325	0.0427	e0.0712	0.0568	0.0000	0.0000	0.0000	0.0000
14	0.0342	0.0297	0.0332	0.0354	0.0323	0.0413	0.0709	0.0511	0.0000	0.0000	0.0000	0.0000
15	0.0345	0.0300	0.0360	0.0349	0.0326	0.0394	0.0711	0.0492	0.0000	0.0000	0.0000	0.0000
16	0.0341	0.0302	0.0354	0.0344	0.0327	0.0398	0.0712	0.0545	0.0000	0.0000	0.0000	0.0000
17	0.0338	0.0306	0.0338	0.0340	0.0324	0.0400	0.0708	0.0492	0.0000	0.0000	0.0000	0.0000
18	0.0339	0.0308	0.0309	0.0335	0.0334	0.0401	0.0708	0.0517	0.0000	0.0000	0.0000	0.0000
19	0.0341	0.0328	0.0303	0.0345	0.0337	0.0394	0.0710	0.0412	0.0000	0.0000	0.0000	0.0000
20	0.0341	0.0357	0.0308	0.0346	0.0341	0.0387	0.0714	0.0393	0.0000	0.0000	0.0000	0.0000
21	0.0341	0.0351	0.0314	0.0353	0.0343	0.0480	0.0710	e0.0390	0.0000	0.0000	0.0000	0.0000
22	0.0345	0.0333	0.0315	0.0349	0.0346	0.0513	0.0706	e0.0370	0.0000	0.0000	0.0000	0.0000
23	0.0347	0.0328	0.0317	0.0347	0.0349	0.0537	0.0709	e0.0370	0.0000	0.0000	0.0000	0.0000
24	0.0337	0.0325	0.0313	0.0351	0.0357	0.0509	0.0711	e0.0350	0.0000	0.0000	0.0000	0.0000
25	0.0327	0.0341	0.0319	0.0354	0.0376	0.0527	0.0712	e0.0330	0.0000	0.0000	0.0000	0.0000
26	0.0329	0.0349	0.0319	0.0344	0.0369	0.0523	0.0715	e0.0310	0.0000	0.0000	0.0000	0.0000
27	0.0335	0.0344	0.0322	0.0345	0.0402	0.0523	0.0735	e0.0290	0.0000	0.0000	0.0000	0.0000
28	0.0346	0.0338	0.0323	0.0338	0.0410	0.0526	0.0745	0.0291	0.0000	0.0000	0.0000	0.0000
29	0.0356	0.0332	0.0323	0.0327	0.0416	0.0536	0.0725	0.0257	0.0000	0.0000	0.0000	0.0000
30	0.0334	0.0327	0.0324	0.0312	---	0.0545	0.0724	0.0554	0.0000	0.0000	0.0000	0.0000
31	0.0302	---	0.0326	0.0320	---	0.0561	---	0.0538	---	0.0000	0.0000	---
TOTAL	1.0440	0.9390	1.0029	1.0696	0.9868	1.4439	2.0631	1.6233	0.0421	0.0000	0.0000	0.0000
MEAN	0.03	0.03	0.03	0.03	0.03	0.05	0.07	0.05	0.00	0.00	0.00	0.00
MAX	0.0375	0.0357	0.0360	0.0396	0.0416	0.0561	0.0745	0.0740	0.0221	0.0000	0.0000	0.0000
MIN	0.0249	0.0285	0.0303	0.0312	0.0304	0.0387	0.0580	0.0257	0.0000	0.0000	0.0000	0.0000
AC-FT	2.1	1.9	2.0	2.1	2.0	2.9	4.1	3.2	0.08	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 September 2003, discharge. October 2003 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.—Prior to Oct. 1, 2003, maximum daily discharge, 0.3431 ft<sup>3</sup>/s, Feb. 10, 1999; no flow on many days in each year. Since Oct. 1, 2003 (at 2400 hours), maximum gage height, 7.83 ft, June 9, 2004; minimum, 2.85 ft, Aug. 30, 2004.

EXTREMES (AT 2400 HOURS) FOR CURRENT YEAR.—Maximum gage height, 7.83 ft, June 9; minimum, 2.85 ft, Aug. 30.

## GAGE HEIGHT, FEET, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.67	7.11	5.08	5.70	5.84	6.36	7.01	6.83	6.54	4.40	7.02	3.19
2	7.40	7.09	5.08	5.73	5.91	6.38	7.01	6.81	6.68	4.64	7.13	3.30
3	7.39	7.10	5.07	5.74	5.92	6.38	7.02	6.79	6.82	4.90	7.27	3.40
4	7.38	7.10	5.08	5.74	5.93	6.40	7.07	6.76	7.01	5.10	7.37	3.54
5	7.36	7.10	5.11	5.74	5.93	6.41	7.06	6.75	7.18	5.32	7.50	3.67
6	7.37	7.10	5.20	5.73	5.95	6.43	7.06	6.73	7.33	5.50	7.20	3.80
7	7.36	7.09	5.26	5.74	5.96	6.45	7.05	6.72	7.46	5.70	6.72	3.92
8	7.33	7.10	5.25	5.75	5.96	6.49	7.06	6.70	7.64	5.88	6.25	4.01
9	7.31	7.22	5.25	5.77	5.96	6.52	7.05	6.69	7.83	6.04	5.73	4.11
10	7.30	7.22	5.30	5.77	5.96	6.54	7.04	6.67	7.37	6.21	5.19	4.24
11	7.30	7.23	5.32	5.77	5.97	6.57	7.03	6.67	7.08	6.45	4.60	4.34
12	7.28	7.23	5.32	5.78	5.97	6.59	7.02	6.66	7.28	6.55	4.84	4.42
13	7.29	7.23	5.32	5.78	5.97	6.61	7.01	6.65	7.47	6.70	4.95	4.47
14	7.28	7.23	5.38	5.78	5.97	6.65	6.98	6.63	7.63	6.85	5.11	4.57
15	7.27	7.23	5.39	5.78	5.98	6.68	6.97	6.62	7.80	7.00	5.22	4.69
16	7.26	7.24	5.38	5.79	6.02	6.71	6.96	6.60	7.62	7.18	5.34	4.78
17	7.25	7.23	5.39	5.79	6.05	6.73	6.96	6.57	6.97	7.34	5.46	4.88
18	7.23	7.24	5.40	5.80	6.11	6.78	6.95	6.56	7.14	7.47	5.58	4.93
19	7.23	6.68	5.40	5.80	6.11	6.81	6.93	6.55	7.26	7.23	5.67	5.00
20	7.21	6.19	5.41	5.83	6.13	6.83	6.92	6.54	7.46	6.71	5.80	5.09
21	7.21	5.17	5.42	5.84	6.14	6.87	6.93	6.53	7.62	6.19	5.91	5.19
22	7.22	5.07	5.41	5.84	6.15	6.95	6.93	6.49	7.41	5.66	6.01	5.29
23	7.20	5.07	5.43	5.84	6.15	6.97	6.93	6.50	6.54	5.58	6.09	4.94
24	7.19	5.07	5.53	5.85	6.16	6.97	6.92	6.49	6.59	5.78	6.22	4.24
25	7.18	5.06	5.58	5.85	6.27	6.99	6.91	6.46	4.76	5.94	6.31	3.47
26	7.17	5.06	5.60	5.83	6.32	7.00	6.89	6.44	3.86	6.08	6.38	3.17
27	7.16	5.06	5.60	5.85	6.33	7.00	6.89	6.45	3.46	6.26	5.85	3.29
28	7.15	5.08	5.60	5.85	6.34	7.00	6.86	6.50	3.69	6.43	4.88	3.40
29	7.11	5.07	5.63	5.85	6.35	7.00	6.85	6.47	3.92	6.56	3.81	3.50
30	7.10	5.08	5.65	5.84	---	6.99	6.83	6.45	4.16	6.72	2.85	3.60
31	7.11	---	5.65	5.86	---	6.99	---	6.42	---	6.88	3.06	---
MEAN	7.267	6.425	5.371	5.794	6.062	6.711	6.970	6.603	6.556	6.169	5.720	4.148
MAX	7.670	7.240	5.650	5.860	6.350	7.000	7.070	6.830	7.830	7.470	7.500	5.290
MIN	7.100	5.060	5.070	5.700	5.840	6.360	6.830	6.420	3.460	4.400	2.850	3.170
CAL YR 2003	MEAN	5.543	MAX	7.900	MIN	3.050						
WTR YR 2004	MEAN	6.152	MAX	7.830	MIN	2.850						

## 103087889 4-L CREEK NEAR MARKLEEVILLE, CA

LOCATION.—Lat 38°42'39", long 119°39'47", in SW 1/4 NE 1/4 sec.15, T.10 N., R.21 E., [Alpine County](#), Hydrologic Unit 16050201, on left bank, 3.2 mi north of State Highway 89, and 6.5 mi east of Markleeville.

DRAINAGE AREA.—1.14 mi<sup>2</sup>.

PERIOD OF RECORD.—October 2003 to September 2004.

GAGE.—Water-stage recorder. Elevation of gage is 6,733 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3.6 ft<sup>3</sup>/s, Mar. 18, 2004, gage height, 4.36 ft; no flow on many days.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.02	0.04	0.03	0.03	e0.02	0.53	0.12	0.07	0.02	0.00	0.00
2	0.00	0.02	0.04	0.02	0.03	0.03	0.36	0.11	0.07	0.02	0.00	0.00
3	0.01	0.03	0.03	0.02	0.03	0.03	0.55	0.11	0.06	0.01	0.00	0.00
4	0.01	0.03	0.03	0.04	0.03	0.02	1.0	0.11	0.06	0.01	0.00	0.00
5	0.00	0.03	0.04	0.06	0.05	0.03	1.1	0.10	0.06	0.01	0.00	0.00
6	0.01	0.03	0.05	0.03	0.07	0.02	e1.2	0.07	0.05	0.01	0.00	0.00
7	0.00	0.03	0.05	0.03	0.03	0.02	e0.99	0.07	0.05	0.01	0.00	0.00
8	0.00	0.03	0.03	0.03	0.03	0.03	e0.93	0.06	0.06	0.01	0.00	0.00
9	0.00	0.04	0.03	0.03	0.04	0.05	e0.84	0.06	0.07	0.01	0.00	0.00
10	0.01	0.04	0.03	0.03	0.04	0.07	e0.82	0.06	0.06	0.01	0.00	0.00
11	0.01	0.03	0.03	0.03	0.05	0.08	e0.88	0.07	0.05	0.01	0.00	0.00
12	0.01	0.03	0.03	0.03	0.08	0.10	e0.74	0.07	0.05	0.01	0.00	0.00
13	0.01	0.04	0.03	0.03	0.08	0.12	e0.65	0.06	0.05	0.01	0.00	0.00
14	0.01	0.03	0.03	0.03	0.05	0.54	e0.48	0.06	0.04	0.01	0.00	0.00
15	0.01	0.04	0.03	0.03	0.05	1.3	e0.44	0.07	0.04	0.00	0.00	0.00
16	0.01	0.04	0.03	0.03	0.06	1.4	e0.55	0.08	0.04	0.01	0.00	0.00
17	0.01	0.04	0.03	0.03	0.03	1.5	e0.42	0.08	0.03	0.01	0.00	0.00
18	0.01	0.03	0.03	0.03	e0.03	1.8	e0.64	0.08	0.03	0.00	0.00	0.00
19	0.01	0.04	0.03	0.03	e0.03	1.8	e0.37	0.09	0.03	0.00	0.00	0.00
20	0.01	0.04	0.03	0.03	e0.03	2.0	0.28	0.09	0.03	0.00	0.00	0.00
21	0.00	0.04	0.03	0.03	e0.03	1.9	0.37	0.09	0.03	0.00	0.00	0.00
22	0.01	0.03	0.03	0.03	e0.03	1.5	0.54	0.09	0.03	0.01	0.00	0.00
23	0.01	0.03	0.03	0.03	e0.02	1.2	0.43	0.09	0.03	0.01	0.00	0.00
24	0.01	0.04	0.04	0.02	e0.02	0.99	0.18	0.09	0.03	0.01	0.00	0.00
25	0.01	0.04	0.03	0.02	e0.02	0.66	0.16	0.09	0.03	0.00	0.00	0.00
26	0.01	0.04	0.03	0.03	e0.02	0.40	0.14	0.09	0.02	0.00	0.00	0.00
27	0.01	0.04	0.05	0.03	e0.02	0.31	0.13	0.08	0.02	0.00	0.00	0.00
28	0.01	0.04	0.03	0.03	e0.02	0.44	0.11	0.11	0.02	0.00	0.00	0.00
29	0.01	0.04	0.03	0.03	e0.02	0.62	0.14	0.09	0.02	0.00	0.00	0.00
30	0.02	0.04	0.03	0.03	---	0.84	0.17	0.08	0.02	0.00	0.00	0.00
31	0.02	---	0.03	0.03	---	0.78	---	0.08	---	0.00	0.00	---
TOTAL	0.26	1.04	1.03	0.93	1.07	20.60	16.14	2.60	1.25	0.21	0.00	0.00
MEAN	0.01	0.03	0.03	0.03	0.04	0.66	0.54	0.08	0.04	0.01	0.00	0.00
MAX	0.02	0.04	0.05	0.06	0.08	2.0	1.2	0.12	0.07	0.02	0.00	0.00
MIN	0.00	0.02	0.03	0.02	0.02	0.02	0.11	0.06	0.02	0.00	0.00	0.00
AC-FT	0.5	2.1	2.0	1.8	2.1	41	32	5.2	2.5	0.4	0.00	0.00

e Estimated.



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 left bank, 3.2 mi north of State Highway 89, and 6.5 mi east of Markleeville.

DRAINAGE AREA.—7.07 mi<sup>2</sup>.

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<sup>3</sup>/s, which are poor.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 24 ft<sup>3</sup>/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<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 21	1830	13	4.83

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.09	0.17	0.21	0.28	e0.49	0.24	1.3	e0.84	0.29	0.32	0.00	0.01
2	0.20	0.20	0.22	0.27	e0.57	0.25	0.92	e0.76	0.26	0.26	0.00	0.01
3	0.10	0.18	0.22	0.25	e0.41	0.24	1.2	e0.74	0.23	0.08	0.00	0.02
4	0.09	0.18	0.24	0.26	e0.34	0.21	2.2	e0.70	0.21	0.06	0.00	0.02
5	0.09	0.17	0.27	0.29	e0.38	0.23	2.4	e0.69	0.18	0.05	0.00	0.02
6	0.08	0.18	0.47	0.29	0.48	0.34	1.6	e0.63	0.18	0.17	0.05	0.01
7	0.09	0.18	0.40	0.27	0.38	0.35	1.4	e0.57	0.16	0.26	0.10	0.01
8	0.09	0.21	e0.20	e0.26	e0.29	0.43	1.3	e0.53	0.16	0.22	0.10	0.01
9	0.10	e0.23	e0.22	e0.27	e0.30	0.73	1.3	e0.46	0.19	0.27	0.09	0.01
10	0.12	0.36	e0.22	0.29	e0.29	0.54	1.3	e0.44	0.35	0.27	0.09	0.01
11	0.13	0.29	0.23	0.28	e0.29	0.49	1.2	e0.57	0.31	0.26	0.09	0.01
12	0.14	0.28	0.24	0.28	e0.29	0.70	1.2	e0.44	0.15	0.26	0.49	0.01
13	0.14	0.22	0.23	e0.29	e0.30	0.82	e1.3	0.35	0.14	0.25	0.04	0.01
14	0.14	e0.23	e0.30	e0.31	e0.33	1.1	e1.5	0.41	0.12	0.25	0.03	0.02
15	0.13	0.20	0.29	0.33	0.22	2.0	e1.2	0.41	0.12	0.24	0.03	0.03
16	0.15	e0.22	0.41	e0.32	0.34	1.8	e1.6	0.39	0.18	0.25	0.03	0.02
17	0.14	0.21	0.36	0.29	0.35	2.3	e1.9	0.38	0.32	0.24	0.01	0.02
18	0.14	0.23	0.31	0.27	e0.31	3.9	e1.4	0.38	0.12	0.15	0.01	0.03
19	0.17	0.47	0.28	0.28	e0.26	5.6	e1.3	0.42	0.19	e0.20	0.01	0.04
20	0.17	0.39	e0.26	0.32	e0.25	5.6	e1.2	0.41	0.24	0.24	0.03	0.04
21	0.17	0.50	e0.25	0.25	e0.24	5.8	1.3	0.41	0.36	0.21	0.02	0.04
22	0.17	0.33	e0.25	e0.25	e0.24	5.7	1.5	0.40	0.44	0.23	0.02	0.04
23	0.19	0.18	e0.29	e0.27	e0.30	4.5	1.4	0.38	0.73	0.14	0.02	0.09
24	0.18	0.22	0.53	0.28	e0.30	4.2	e1.3	0.37	0.77	0.03	0.02	0.14
25	0.16	0.18	e0.46	0.31	e0.30	3.1	e1.2	0.37	0.72	0.02	0.01	0.16
26	0.18	0.18	e0.39	0.32	e0.30	2.3	e1.1	0.36	0.61	0.01	0.01	0.09
27	0.17	0.20	0.37	e0.30	e0.30	1.9	e1.1	0.34	0.46	0.01	0.08	0.04
28	0.16	0.19	e0.36	e0.30	0.29	1.9	e1.0	0.51	0.32	0.00	0.14	0.04
29	0.16	0.19	e0.33	e0.31	0.34	2.2	e0.99	0.36	0.35	0.00	0.14	0.04
30	0.17	0.19	0.40	e0.31	---	2.9	e0.91	0.33	0.25	0.00	0.10	0.04
31	0.16	---	0.30	e0.30	---	2.2	---	0.32	---	0.00	0.02	---
TOTAL	4.37	7.16	9.51	8.90	9.48	64.57	40.52	14.67	9.11	4.95	1.78	1.08
MEAN	0.14	0.24	0.31	0.29	0.33	2.08	1.35	0.47	0.30	0.16	0.06	0.04
MAX	0.20	0.50	0.53	0.33	0.57	5.8	2.4	0.84	0.77	0.32	0.49	0.16
MIN	0.08	0.17	0.20	0.25	0.22	0.21	0.91	0.32	0.12	0.00	0.00	0.01
AC-FT	8.7	14	19	18	19	128	80	29	18	9.8	3.5	2.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2004, BY WATER YEAR (WY)

MEAN	0.16	0.25	0.25	0.32	0.48	1.31	2.38	2.27	0.60	0.21	0.15	0.17
MAX	0.34	0.36	0.39	0.47	1.10	2.08	5.38	9.69	2.18	0.56	0.31	0.46
(WY)	2000	1999	1999	1999	1999	2004	1999	1999	1999	1999	1999	1999
MIN	0.08	0.16	0.15	0.16	0.20	0.71	1.30	0.47	0.12	0.07	0.04	0.04
(WY)	2002	2001	2003	2001	2001	2001	2001	2004	2001	2001	2001	2004

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1999 - 2004	
ANNUAL TOTAL	228.37		176.10			
ANNUAL MEAN	0.63		0.48		0.48	
HIGHEST ANNUAL MEAN					0.61	2003
LOWEST ANNUAL MEAN					0.30	2001
HIGHEST DAILY MEAN	5.4	Mar 26	5.8	Mar 21	17	May 7 1999
LOWEST DAILY MEAN	0.00	Aug 20	0.00	Jul 28	0.00	Aug 5 2001
ANNUAL SEVEN-DAY MINIMUM	0.02	Jul 30	0.00	Jul 28	0.00	Jul 28 2004
MAXIMUM PEAK FLOW			13		24	
MAXIMUM PEAK STAGE			4.83		5.14	
ANNUAL RUNOFF (AC-FT)	453		349		344	
10 PERCENT EXCEEDS	2.0		1.2		1.3	
50 PERCENT EXCEEDS	0.29		0.26		0.22	
90 PERCENT EXCEEDS	0.07		0.02		0.06	

e Estimated.

## 103087891 ASPEN CREEK ABOVE LEVIATHAN MINE, NEAR MARKLEEVILLE, CA

LOCATION.—Lat 38°42'31", long 119°38'55", in SW 1/4 SW 1/4 sec.14, T.10 N., R.21 E., [Alpine County](#), Hydrologic Unit 16050201, on left bank, 2.7 mi north of State Highway 89, and 2.1 mi east of Markleeville.

PERIOD OF RECORD.—October 2003 to September 2004.

GAGE.—Water-stage recorder. Elevation of gage is 7,190 ft above NGVD of 1929, from topographic map.

REMARKS.—Records poor.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4.78 ft<sup>3</sup>/s, Aug. 12, 2004, gage height, 1.46 ft; minimum daily, 0.08 ft<sup>3</sup>/s, Sept. 8, 30, 2004.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.15	0.22	0.17	0.21	0.23	0.17	e0.19	0.21	0.17	0.15	0.18	0.16
2	0.14	0.21	0.17	0.20	e0.23	0.15	e0.10	0.21	0.16	0.16	0.18	0.13
3	0.13	0.20	0.17	0.16	e0.24	0.16	e0.13	0.22	0.17	0.15	0.18	0.12
4	0.13	0.20	0.17	0.16	0.24	0.16	e0.23	0.27	0.17	0.15	0.18	0.13
5	0.13	0.23	0.18	0.16	e0.26	0.16	e0.32	0.24	0.17	0.14	0.18	0.09
6	0.13	0.23	0.20	0.17	0.28	0.17	e0.15	0.22	0.18	0.14	0.17	0.09
7	0.13	0.20	0.18	0.17	e0.28	0.16	e0.11	0.23	0.17	0.14	0.17	0.09
8	0.13	0.20	0.17	0.17	e0.26	0.16	e0.09	0.24	0.17	0.14	0.17	0.08
9	0.14	0.22	0.17	0.17	0.24	0.18	e0.09	0.23	0.17	0.14	0.16	0.10
10	0.14	0.19	0.20	0.17	e0.26	0.18	e0.11	0.21	0.17	0.14	0.17	0.11
11	0.14	0.18	0.18	0.17	0.28	0.17	e0.15	0.26	0.16	0.13	0.17	0.11
12	0.14	0.18	0.17	0.17	0.31	0.16	e0.10	0.26	0.16	0.13	0.23	0.10
13	0.14	0.18	0.17	0.19	0.24	0.18	e0.17	0.26	0.16	0.13	0.17	0.12
14	0.14	0.18	e0.17	0.19	0.23	0.25	e0.10	0.21	0.16	0.13	0.16	0.11
15	0.14	0.18	e0.18	0.18	0.23	0.39	e0.17	0.20	0.16	0.13	0.17	0.09
16	0.14	0.18	0.19	0.19	0.27	0.50	e0.26	0.22	0.15	0.13	0.16	0.09
17	0.14	0.19	0.19	0.18	0.21	0.53	e0.39	0.24	0.15	0.13	0.17	0.09
18	0.16	0.19	0.19	0.18	0.26	0.69	e0.10	0.24	0.15	0.13	0.16	0.09
19	0.17	0.18	0.19	0.18	0.24	0.60	e0.13	0.24	0.15	e0.14	0.15	0.09
20	0.19	e0.18	0.19	0.19	0.24	0.44	e0.18	0.18	0.15	0.16	0.16	0.10
21	0.17	0.19	0.19	0.21	0.22	0.43	0.22	0.18	0.15	0.16	0.15	0.09
22	0.17	e0.19	0.19	e0.20	0.17	0.36	0.25	0.18	0.15	0.16	0.15	0.09
23	0.17	0.19	0.19	0.19	0.15	0.27	0.26	0.17	0.15	0.16	0.15	0.09
24	0.18	0.19	e0.19	0.23	0.14	e0.25	0.24	0.17	0.15	0.17	0.15	0.09
25	0.17	0.18	e0.19	0.23	e0.15	e0.24	0.24	0.15	0.15	0.17	0.17	0.09
26	0.18	0.19	e0.19	0.21	e0.15	e0.20	0.26	0.15	0.16	0.17	0.19	0.09
27	0.18	0.17	e0.18	0.25	0.16	e0.25	0.25	0.15	0.16	0.17	0.17	0.09
28	0.17	0.17	0.18	0.24	0.16	e0.24	0.25	0.17	0.16	0.17	0.18	0.09
29	0.20	0.17	0.19	0.24	0.16	e0.22	0.24	0.15	0.16	0.17	0.17	0.09
30	0.21	0.17	0.20	0.22	---	e0.21	0.23	0.16	0.15	0.17	0.14	0.08
31	0.22	---	0.20	0.22	---	e0.20	---	0.16	---	0.18	0.15	---
TOTAL	4.87	5.73	5.69	6.00	6.49	8.43	5.71	6.38	4.79	4.64	5.21	2.98
MEAN	0.16	0.19	0.18	0.19	0.22	0.27	0.19	0.21	0.16	0.15	0.17	0.10
MAX	0.22	0.23	0.20	0.25	0.31	0.69	0.39	0.27	0.18	0.18	0.23	0.16
MIN	0.13	0.17	0.17	0.16	0.14	0.15	0.09	0.15	0.15	0.13	0.14	0.08
AC-FT	9.7	11	11	12	13	17	11	13	9.5	9.2	10	5.9

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 2003 to current year.

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

REMARKS.—Records fair. Storms or snowmelt that cause peaks greater than 0.25 ft<sup>3</sup>/s can bypass this site.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.0040	0.0262	0.0189	0.0113	0.0175	0.0164	0.0411	0.0241	0.0241	0.0223	0.0175	0.0151
2	e0.0040	0.0257	0.0187	0.0113	0.0177	0.0158	0.0309	0.0245	0.0238	0.0208	0.0171	0.0153
3	e0.0040	0.0254	0.0189	0.0110	0.0172	0.0163	0.0303	0.0248	0.0235	0.0200	0.0168	0.0158
4	e0.0040	0.0247	0.0195	0.0109	0.0162	0.0168	0.0321	0.0250	0.0232	0.0181	0.0164	0.0155
5	e0.0040	0.0242	0.0212	0.0109	0.0160	0.0173	0.0315	0.0253	0.0230	0.0188	0.0160	0.0157
6	e0.0040	0.0230	0.0232	0.0109	0.0166	0.0185	0.0317	0.0252	0.0230	0.0201	0.0157	0.0157
7	e0.0040	0.0229	0.0211	0.0109	0.0162	0.0189	0.0305	0.0260	0.0229	0.0148	0.0155	0.0156
8	e0.0040	0.0223	0.0192	0.0109	0.0157	0.0193	0.0327	0.0267	0.0228	0.0126	0.0154	0.0155
9	e0.0040	0.0223	0.0192	0.0137	0.0154	0.0203	0.0336	0.0269	0.0229	0.0125	0.0154	0.0158
10	e0.0040	0.0216	0.0197	0.0163	0.0152	0.0209	0.0341	0.0276	0.0224	0.0121	0.0157	0.0167
11	0.0061	0.0210	0.0198	0.0164	0.0152	0.0207	0.0340	0.0279	0.0220	0.0119	0.0157	0.0165
12	0.0067	0.0204	0.0196	0.0165	0.0148	0.0213	0.0343	0.0270	0.0218	0.0119	0.0362	0.0173
13	0.0068	0.0200	0.0199	0.0165	0.0147	0.0216	0.0320	0.0265	0.0216	0.0120	0.0160	0.0183
14	0.0075	0.0195	0.0199	0.0167	0.0147	0.0226	0.0288	0.0253	0.0216	0.0126	0.0158	0.0159
15	0.0081	0.0193	0.0194	0.0168	0.0148	0.0231	0.0281	0.0252	0.0214	0.0156	0.0156	0.0134
16	0.0095	0.0186	0.0196	0.0169	0.0168	0.0232	0.0274	0.0252	0.0216	0.0176	0.0155	0.0144
17	0.0137	0.0183	0.0197	0.0170	0.0161	0.0232	0.0269	0.0253	0.0217	0.0180	0.0155	0.0137
18	0.0153	0.0177	0.0198	0.0172	0.0154	0.0246	0.0260	0.0254	0.0215	0.0187	0.0159	0.0141
19	0.0169	0.0180	0.0205	0.0172	0.0159	0.0257	0.0253	0.0256	0.0213	0.0192	0.0167	0.0138
20	0.0185	0.0183	0.0205	0.0171	0.0172	0.0266	0.0245	0.0255	0.0212	0.0195	0.0174	0.0134
21	0.0204	0.0178	0.0200	0.0173	0.0172	0.0283	0.0238	0.0257	0.0212	0.0197	0.0164	0.0134
22	0.0233	0.0176	0.0199	0.0174	0.0172	0.0299	0.0244	0.0256	0.0210	0.0205	0.0165	0.0132
23	0.0235	0.0175	0.0202	0.0182	0.0168	0.0304	0.0235	0.0258	0.0213	0.0196	0.0163	0.0132
24	0.0236	0.0178	0.0225	0.0182	0.0168	0.0313	0.0234	0.0258	0.0211	0.0197	0.0161	0.0130
25	0.0242	0.0178	0.0211	0.0177	0.0167	0.0333	0.0235	0.0256	0.0211	0.0194	0.0163	0.0130
26	0.0252	0.0176	0.0208	0.0172	0.0167	0.0342	0.0236	0.0255	0.0223	0.0191	0.0165	0.0130
27	0.0264	0.0175	0.0205	0.0174	0.0165	0.0341	0.0239	0.0257	0.0253	0.0188	0.0159	0.0128
28	0.0273	0.0184	0.0202	0.0174	0.0162	0.0375	0.0245	0.0286	0.0251	0.0187	0.0158	0.0129
29	0.0283	0.0191	0.0209	0.0173	0.0164	0.0410	0.0243	0.0251	0.0240	0.0184	0.0155	0.0129
30	0.0287	0.0189	0.0205	0.0177	---	0.0433	0.0240	0.0244	0.0236	0.0180	0.0155	0.0127
31	0.0264	---	0.0162	0.0177	---	0.0447	---	0.0244	---	0.0178	0.0154	---
TOTAL	0.4264	0.6094	0.6211	0.4799	0.4698	0.8011	0.8547	0.7972	0.6733	0.5388	0.5180	0.4376
MEAN	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.02	0.02	0.02	0.01
MAX	0.0287	0.0262	0.0232	0.0182	0.0177	0.0447	0.0411	0.0286	0.0253	0.0223	0.0362	0.0183
MIN	0.0040	0.0175	0.0162	0.0109	0.0147	0.0158	0.0234	0.0241	0.0210	0.0119	0.0154	0.0127
AC-FT	0.8	1.2	1.2	1.0	0.9	1.6	1.7	1.6	1.3	1.1	1.0	0.9

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<sup>2</sup>.

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<sup>3</sup>/s, Feb. 14, 2000, gage height, 8.05 ft; minimum daily, 0.02 ft<sup>3</sup>/s, Aug. 11, 2001.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 20 ft<sup>3</sup>/s and maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 14	1930	13	8.00

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.13	0.15	e0.17	0.48	0.69	0.62	e2.1	1.0	0.44	0.37	0.10	0.08
2	0.20	0.16	e0.18	0.46	0.80	0.61	e1.7	1.00	0.39	0.34	0.10	0.09
3	0.12	0.15	0.18	0.47	0.61	0.62	e1.7	0.95	0.33	0.15	0.10	0.10
4	0.12	0.17	0.22	0.46	0.53	0.66	e2.3	0.90	0.30	0.13	0.10	0.11
5	0.12	0.16	0.24	0.46	0.62	0.75	e2.8	0.88	0.27	0.12	0.10	0.11
6	0.12	0.16	0.41	0.52	0.88	1.2	e3.0	0.85	0.26	0.19	0.13	0.11
7	0.11	0.15	0.39	0.50	0.74	1.8	e2.0	0.82	0.25	0.31	0.22	0.10
8	0.11	0.13	0.13	0.42	0.54	2.4	e1.9	0.80	0.25	0.21	0.22	0.09
9	0.10	0.15	0.18	0.40	0.55	3.4	e1.9	0.80	0.33	0.29	0.21	0.04
10	0.12	0.31	0.17	0.40	0.54	3.7	e2.0	0.82	0.51	0.30	0.21	0.04
11	0.12	0.28	e0.20	0.39	0.59	3.8	e2.1	0.90	0.52	0.29	0.22	0.04
12	0.12	0.29	e0.25	0.38	0.58	4.1	e1.9	0.84	0.28	0.27	0.90	0.03
13	0.12	0.29	e0.25	0.37	0.65	4.6	e2.1	0.79	0.25	0.27	0.27	0.04
14	0.12	0.26	0.28	e0.40	0.67	6.4	e2.1	0.75	0.23	0.26	0.17	0.06
15	0.11	0.22	e0.40	e0.42	0.67	6.1	e1.8	0.73	0.22	0.26	0.16	0.08
16	0.12	0.21	e0.60	0.41	0.82	5.2	e2.5	0.71	0.25	0.28	0.16	0.08
17	0.12	0.21	e0.73	0.39	1.2	5.5	e2.7	0.69	0.46	0.29	0.13	0.07
18	0.12	0.21	e0.74	0.39	1.1	8.1	e1.7	0.68	0.20	0.21	0.12	0.08
19	0.12	0.36	0.67	0.39	0.88	7.3	1.6	0.70	0.25	0.18	0.13	0.09
20	0.12	0.31	0.59	0.44	0.81	6.0	1.6	0.69	0.27	0.26	0.45	0.11
21	0.12	0.37	0.46	0.36	0.74	6.7	1.5	0.69	0.44	0.25	0.18	0.12
22	0.12	0.20	0.34	0.52	0.71	6.8	1.7	0.67	0.47	0.30	0.13	0.12
23	0.12	0.26	0.37	0.68	0.57	6.2	1.5	0.63	0.78	0.23	0.13	0.14
24	0.12	0.27	0.72	0.61	0.59	5.4	1.4	0.63	0.83	0.11	0.12	0.22
25	0.13	0.24	0.60	0.48	0.75	4.5	1.3	0.62	0.76	0.11	0.11	0.20
26	0.13	0.18	0.55	0.57	0.94	3.8	1.3	0.60	0.64	0.10	0.11	0.15
27	0.13	0.16	e0.55	0.54	0.86	3.2	1.2	0.58	0.52	0.10	0.19	0.09
28	0.13	e0.16	e0.53	0.49	0.73	3.1	1.2	1.0	0.36	0.11	0.34	0.09
29	0.12	e0.16	e0.53	0.51	0.76	e3.3	1.2	0.62	0.40	0.10	0.27	0.10
30	0.12	e0.17	0.67	0.46	---	e3.7	1.1	0.56	0.30	0.10	0.21	0.11
31	0.12	---	0.52	0.50	---	e3.0	---	0.53	---	0.10	0.12	---
TOTAL	3.80	6.50	12.82	14.27	21.12	122.56	54.9	23.43	11.76	6.59	6.11	2.89
MEAN	0.12	0.22	0.41	0.46	0.73	3.95	1.83	0.76	0.39	0.21	0.20	0.10
MAX	0.20	0.37	0.74	0.68	1.2	8.1	3.0	1.0	0.83	0.37	0.90	0.22
MIN	0.10	0.13	0.13	0.36	0.53	0.61	1.1	0.53	0.20	0.10	0.10	0.03
AC-FT	7.5	13	25	28	42	243	109	46	23	13	12	5.7

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2004, BY WATER YEAR (WY)

MEAN	0.23	0.48	0.49	0.83	0.95	2.45	2.84	1.14	0.41	0.24	0.26	0.23
MAX	0.34	0.66	0.65	1.70	1.40	3.95	3.83	2.30	0.70	0.39	0.46	0.29
(WY)	2001	2002	2003	2003	2000	2004	2002	2003	2003	2000	2000	2000
MIN	0.12	0.22	0.41	0.43	0.62	1.56	1.83	0.76	0.21	0.13	0.11	0.10
(WY)	2004	2004	2004	2002	2002	2001	2004	2004	2001	2001	2001	2004

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 2000 - 2004

ANNUAL TOTAL	403.30	286.75	
ANNUAL MEAN	1.10	0.78	0.85
HIGHEST ANNUAL MEAN			1.15 2003
LOWEST ANNUAL MEAN			0.65 2001
HIGHEST DAILY MEAN	6.1 Mar 26	8.1 Mar 18	8.1 Mar 18 2004
LOWEST DAILY MEAN	0.10 Oct 9	0.03 Sep 12	0.02 Aug 11 2001
ANNUAL SEVEN-DAY MINIMUM	0.11 Oct 3	0.05 Sep 9	0.05 Sep 9 2004
MAXIMUM PEAK FLOW		13 Mar 14	16 Feb 14 2000
MAXIMUM PEAK STAGE		8.00 Mar 14	8.05 Feb 14 2000
ANNUAL RUNOFF (AC-FT)	800	569	619
10 PERCENT EXCEEDS	3.0	1.9	2.3
50 PERCENT EXCEEDS	0.65	0.37	0.46
90 PERCENT EXCEEDS	0.13	0.11	0.12

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<sup>2</sup>.

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<sup>3</sup>/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<sup>3</sup>/s, Aug. 18, 2003.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 19	1545	42	5.33

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.63	1.6	1.0	1.4	2.1	2.4	e3.0	2.6	1.5	1.1	0.73	0.75
2	0.76	1.5	1.1	1.5	2.3	2.3	e2.2	2.4	1.5	1.1	0.73	0.80
3	0.69	1.5	1.2	1.6	2.5	2.3	e2.2	2.3	1.4	0.96	0.75	0.90
4	0.68	1.2	1.0	e1.6	1.9	2.4	e3.6	2.2	1.3	0.88	0.78	0.89
5	0.66	1.3	0.98	e1.5	2.0	2.6	e4.2	2.3	1.2	0.81	0.77	0.88
6	0.72	1.1	1.3	e1.5	2.2	3.7	e4.4	2.3	1.3	0.89	0.77	0.90
7	0.74	1.1	1.6	e1.6	2.0	4.9	e3.1	2.1	1.2	0.97	0.89	0.90
8	0.73	1.1	e1.6	1.8	2.0	6.1	e2.8	2.1	1.2	0.87	0.86	0.88
9	0.70	1.3	e1.6	1.8	2.0	7.4	e2.7	2.2	1.3	0.97	0.81	0.83
10	0.82	1.8	1.5	1.7	1.9	8.0	e2.7	2.2	1.3	0.98	0.84	0.81
11	0.89	1.8	e1.5	1.8	2.0	7.4	e2.8	2.4	1.3	1.00	0.81	0.74
12	0.88	1.9	e1.5	1.8	2.0	7.8	e2.5	2.1	1.0	0.95	2.1	0.73
13	0.88	1.8	e1.7	1.9	2.2	8.4	e2.5	2.1	0.98	0.97	1.3	0.74
14	0.85	1.4	2.1	2.1	2.1	11	e2.7	1.9	0.97	0.93	0.94	0.77
15	0.87	1.4	e2.0	2.1	2.0	12	e2.3	1.9	0.91	0.93	0.95	0.83
16	0.87	1.4	e2.0	e2.1	2.3	11	3.5	1.9	0.92	0.95	1.0	0.82
17	0.88	1.8	e2.0	e2.1	2.5	11	3.7	1.9	1.2	1.0	0.86	0.79
18	0.97	1.6	e2.0	e2.1	2.5	17	3.7	1.8	0.86	0.94	0.86	0.85
19	1.1	1.8	1.9	e2.1	2.2	21	3.3	1.9	0.96	1.00	0.87	0.96
20	1.0	1.7	1.4	e2.1	2.1	22	3.1	1.8	0.98	1.0	1.7	0.98
21	0.98	e1.5	1.4	1.9	2.1	18	3.2	1.9	1.1	1.00	1.1	0.97
22	1.0	1.1	1.4	e1.8	2.1	16	3.6	1.9	1.1	1.1	1.00	0.97
23	1.0	e1.1	0.94	e1.9	2.0	13	3.3	1.8	1.5	0.98	0.92	1.00
24	1.2	e1.1	1.2	1.9	2.0	10	3.1	1.8	1.6	0.83	0.89	1.1
25	1.3	e1.1	1.0	1.8	2.3	9.6	3.2	1.8	1.5	0.87	0.91	1.1
26	1.3	1.1	1.1	1.9	2.8	7.7	3.1	1.7	1.2	0.78	0.99	1.0
27	1.4	1.2	e1.1	1.8	2.7	5.7	3.0	1.8	1.2	0.76	1.0	0.91
28	1.5	1.2	e1.1	1.8	2.3	4.8	2.7	2.8	1.1	0.79	1.1	0.91
29	1.5	1.1	e1.1	1.8	2.9	4.6	3.0	1.9	1.2	0.73	1.1	0.96
30	1.6	1.0	1.4	1.8	---	e4.9	2.8	1.7	0.98	0.75	1.0	1.0
31	1.6	---	1.3	1.8	---	e4.0	---	1.6	---	0.76	0.83	---
TOTAL	30.70	41.6	44.02	56.4	64.0	269.0	92.0	63.1	35.76	28.55	30.16	26.67
MEAN	0.99	1.39	1.42	1.82	2.21	8.68	3.07	2.04	1.19	0.92	0.97	0.89
MAX	1.6	1.9	2.1	2.1	2.9	22	4.4	2.8	1.6	1.1	2.1	1.1
MIN	0.63	1.0	0.94	1.4	1.9	2.3	2.2	1.6	0.86	0.73	0.73	0.73
AC-FT	61	83	87	112	127	534	182	125	71	57	60	53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2004, BY WATER YEAR (WY)

	1999	2000	2001	2002	2003	2004
MEAN	1.50	1.83	1.89	2.54	2.88	5.38
MAX	2.47	2.59	2.48	3.26	4.78	8.68
(WY)	2000	2000	2000	1999	1999	2004
MIN	0.99	1.39	1.28	1.77	2.06	3.53
(WY)	2004	2004	2003	2001	2001	2001

SUMMARY STATISTICS FOR 2003 CALENDAR YEAR FOR 2004 WATER YEAR WATER YEARS 1999 - 2004

ANNUAL TOTAL	902.43	781.96	
ANNUAL MEAN	2.47	2.14	2.29
HIGHEST ANNUAL MEAN			2.79
LOWEST ANNUAL MEAN			1.89
HIGHEST DAILY MEAN	11	Mar 26	29
LOWEST DAILY MEAN	0.54	Aug 18	0.54
ANNUAL SEVEN-DAY MINIMUM	0.70	Sep 30	0.69
MAXIMUM PEAK FLOW			44
MAXIMUM PEAK STAGE			7.39
ANNUAL RUNOFF (AC-FT)	1790	1550	1660
10 PERCENT EXCEEDS	5.9	3.2	4.4
50 PERCENT EXCEEDS	1.6	1.5	1.8
90 PERCENT EXCEEDS	0.81	0.83	0.90

e Estimated.

## 10310000 WEST FORK CARSON RIVER AT WOODFORDS, CA

LOCATION.—Lat 38°46'11", long 119°49'58" referenced to North American Datum of 1927, in NW ¼ SE ¼ 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.—65.40 mi<sup>2</sup>.

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 National Geodetic Vertical Datum of 1929. Prior to October 1, 1938, nonrecording gage at about the same site at different datum. October 1, 1938, to November 11, 1958, water-stage recorder at same site at datum 1.02 ft lower. November 13, 1958, to January 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<sup>3</sup>/s, January 1, 1997, gage height, 15.36 ft (present location); minimum daily, 5.3 ft<sup>3</sup>/s, September 2, 1997.

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

PEAK DISCHARGES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 5	0030	*462	*12.16				

DISCHARGE, CUBIC FEET PER SECOND,  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	20	22	23	21	25	220	248	156	51	19	15
2	18	19	22	20	22	25	171	289	156	48	19	15
3	18	21	22	e22	21	25	188	333	158	47	22	15
4	18	21	22	e24	23	25	237	358	155	44	30	15
5	18	22	28	26	e23	25	291	374	143	41	26	15
6	18	20	e28	25	e21	26	291	334	139	40	22	15
7	26	21	e29	25	21	29	260	278	138	39	19	15
8	29	20	29	25	e21	32	280	256	118	37	18	15
9	28	21	28	25	21	37	284	246	105	35	17	15
10	20	21	27	25	22	45	281	236	96	33	17	15
11	19	21	25	25	e22	54	268	211	92	31	17	15
12	19	21	28	25	e23	57	283	176	90	30	17	15
13	18	22	29	25	23	60	296	165	91	28	17	15
14	20	21	25	25	20	69	255	177	96	27	17	15
15	21	22	e26	24	20	87	218	182	95	26	17	22
16	21	21	27	24	24	96	183	183	92	26	17	22
17	21	22	27	24	26	99	162	189	90	25	17	16
18	21	21	27	24	25	111	142	176	88	25	22	14
19	21	22	27	23	26	143	132	157	86	24	27	14
20	22	23	27	23	27	162	133	154	80	24	25	15
21	22	21	26	23	27	196	143	148	75	29	17	15
22	21	20	25	e23	27	222	140	145	71	32	16	15
23	21	21	26	e23	27	242	126	141	71	30	17	15
24	21	22	29	23	26	239	156	137	70	24	17	15
25	21	22	26	22	23	207	184	133	66	23	16	14
26	22	21	28	e22	20	154	218	127	60	22	16	14
27	22	21	e28	22	25	134	268	142	57	21	16	14
28	21	22	e27	22	24	138	301	290	55	20	16	14
29	20	23	26	21	25	164	272	205	54	20	16	14
30	19	23	24	21	---	212	233	168	53	19	15	14
31	20	---	25	21	---	232	---	162	---	19	15	---
TOTAL	644	638	815	725	676	3,372	6,616	6,520	2,896	940	579	457
MEAN	20.8	21.3	26.3	23.4	23.3	109	221	210	96.5	30.3	18.7	15.2
MAX	29	23	29	26	27	242	301	374	158	51	30	22
MIN	18	19	22	20	20	25	126	127	53	19	15	14
AC-FT	1,280	1,270	1,620	1,440	1,340	6,690	13,120	12,930	5,740	1,860	1,150	906

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1901 - 2004, BY WATER YEAR (WY)

MEAN	26.9	39.4	46.1	52.7	56.1	78.3	207	374	256	104	47.5	30.4
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)

## 10310000 WEST FORK CARSON RIVER AT WOODFORDS, CA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1901 - 2004	
ANNUAL TOTAL	32,497		24,878			
ANNUAL MEAN	89.0		68.0		110	
HIGHEST ANNUAL MEAN					290	
LOWEST ANNUAL MEAN					26.1	
HIGHEST DAILY MEAN	735	May 30	374	May 5	5,500	Jan 2,1997
LOWEST DAILY MEAN	18	Sep 16	14	Sep 18	5.3	Sep 2,1977
ANNUAL SEVEN-DAY MINIMUM	18	Sep 22	14	Sep 24	5.4	Sep 5,1977
MAXIMUM PEAK FLOW			462	May 5	8,100	Jan 1,1997
MAXIMUM PEAK STAGE			12.16	May 5	15.36	Jan 1,1997
ANNUAL RUNOFF (AC-FT)	64,460		49,350		79,680	
10 PERCENT EXCEEDS	213		206		293	
50 PERCENT EXCEEDS	30		25		45	
90 PERCENT EXCEEDS	20		17		17	

e Estimated





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

LOCATION.—Lat 38°47'47", long 120°01'05" referenced to North American Datum of 1927, in NW ¼ SW ¼ 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, California.

DRAINAGE AREA.—14.09 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—May 1990 to current year.

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

REMARKS.—Records fair except for estimated discharges which are poor. 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, 2,010 ft<sup>3</sup>/s, January 2, 1997, gage height, 11.31 ft; minimum daily, 0.76 ft<sup>3</sup>/s, September 1, 1990.

PEAK DISCHARGES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 150 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 4	2015	226	7.31	May 28	0445	*277	*7.62

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	2.5	3.4	e5.9	e5.1	6.5	51	117	99	18	3.8	1.2
2	1.6	2.4	3.4	e6.0	e5.1	6.5	42	148	100	18	3.5	1.2
3	1.6	2.6	e2.9	e6.0	e5.1	6.2	48	165	98	18	3.4	1.2
4	1.6	2.5	e3.3	e6.0	e5.1	6.1	71	177	89	16	3.3	1.2
5	1.6	2.6	e5.0	e6.1	e5.0	6.0	86	181	85	15	3.2	1.2
6	1.7	2.5	e6.0	e6.1	e5.0	6.2	78	149	84	14	3.0	1.3
7	1.7	2.6	e6.0	e6.2	e5.0	7.1	67	127	75	13	3.0	1.4
8	1.6	2.7	e5.9	e6.1	e5.0	9.7	75	130	61	12	2.8	1.3
9	1.7	e3.1	e5.9	e6.1	e5.0	14	80	131	52	11	2.7	1.3
10	1.8	e3.2	e5.8	e6.0	e5.0	18	81	119	47	10	2.5	1.4
11	1.9	3.2	e5.8	e5.9	e5.0	20	81	92	47	9.4	2.3	1.4
12	1.8	3.1	e5.7	e5.9	e5.0	21	92	76	47	8.9	2.3	1.4
13	1.9	3.1	e5.7	e5.8	e5.0	23	89	83	49	8.4	2.3	1.5
14	2.0	3.0	e5.6	e5.8	e5.0	28	70	102	50	7.8	2.2	1.6
15	1.9	3.2	e5.6	e5.7	e5.0	38	59	108	48	7.2	2.2	1.8
16	1.9	3.1	e5.4	e5.6	e5.0	39	50	109	47	6.9	2.3	1.8
17	1.8	3.2	e5.4	e5.6	e5.0	40	45	111	44	6.8	2.1	1.8
18	1.8	3.1	e5.4	e5.5	e5.0	48	41	96	41	6.5	2.1	1.5
19	1.6	3.2	e5.5	e5.5	e7.5	60	38	83	39	6.3	2.1	1.5
20	1.7	e3.1	e5.5	e5.4	9.7	63	38	82	35	6.0	2.0	1.5
21	1.7	3.1	e5.5	e5.4	9.0	77	39	76	33	5.6	2.0	1.3
22	1.8	2.8	e5.6	e5.3	8.4	79	38	76	31	5.3	2.0	1.3
23	1.7	2.8	e5.6	e5.3	7.9	79	39	79	30	5.0	2.0	1.3
24	1.8	2.9	e5.7	e5.3	7.3	68	54	78	27	4.9	2.1	1.3
25	1.8	2.8	e5.7	e5.2	8.0	53	75	77	24	4.6	2.0	1.4
26	1.8	2.7	e5.7	e5.2	10	40	99	78	22	4.4	1.9	1.4
27	1.8	2.6	e5.8	e5.2	8.8	32	126	97	21	4.1	1.5	1.4
28	2.0	2.8	e5.8	e5.2	7.2	32	137	192	19	4.2	1.4	1.6
29	2.0	3.2	e5.9	e5.1	6.6	42	112	112	19	3.7	1.3	1.7
30	2.1	3.2	e5.9	e5.1	---	54	99	100	19	3.7	1.3	1.8
31	2.4	---	e5.9	e5.1	---	56	---	98	---	3.7	1.2	---
TOTAL	55.8	86.9	166.3	174.6	180.8	1,078.3	2,100	3,449	1,482	268.4	71.8	43.0
MEAN	1.80	2.90	5.36	5.63	6.23	34.8	70.0	111	49.4	8.66	2.32	1.43
MAX	2.4	3.2	6.0	6.2	10	79	137	192	100	18	3.8	1.8
MIN	1.6	2.4	2.9	5.1	5.0	6.0	38	76	19	3.7	1.2	1.2
AC-FT	111	172	330	346	359	2,140	4,170	6,840	2,940	532	142	85

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2004, BY WATER YEAR (WY)

MEAN	2.98	5.79	8.22	15.7	11.2	21.3	52.5	133	115	40.8	8.43	3.34
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)

## PYRAMID AND WINNEMUCCA LAKES BASIN

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

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1990 - 2004	
ANNUAL TOTAL	11,351.3		9,156.9			
ANNUAL MEAN	31.1		25.0		35.6	
HIGHEST ANNUAL MEAN					72.3	
LOWEST ANNUAL MEAN					14.1	
HIGHEST DAILY MEAN	350	May 29	192	May 28	1,130	Jan 2,1997
LOWEST DAILY MEAN	1.6	Aug 30	1.2	Aug 31	0.76	Sep 1,1990
ANNUAL SEVEN-DAY MINIMUM	1.6	Sep 28	1.2	Aug 30	0.97	Aug29,1990
MAXIMUM PEAK FLOW			277	May 28	2,010	Jan 2,1997
MAXIMUM PEAK STAGE			7.62	May 28	11.31	Jan 2,1997
ANNUAL RUNOFF (AC-FT)	22,520		18,160		25,820	
10 PERCENT EXCEEDS	108		83		111	
50 PERCENT EXCEEDS	7.1		5.7		7.8	
90 PERCENT EXCEEDS	1.9		1.7		2.0	

e Estimated

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 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 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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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, std units (00400)	Specific conductance, wat unfltrd, 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)	<sup>1</sup> Nitrite + nitrate water, fltrd, mg/L as N (00631)
OCT 09...	1410	1.7	--	--	--	--	56	19.5	8.6	--	.11	.003	.002
NOV 04...	1405	3.1	--	--	--	--	54	1.5	1.5	--	.10	<.003	.003
DEC 05...	1435	E5.0	598	11.1	101	7.7	40	3.5	1.5	.10	.18	.003	.010
JAN 08...	1450	E6.1	--	--	--	--	39	1.5	1.0	--	.12	.003	.025
FEB 04...	1330	E5.1	--	--	--	--	37	.5	.0	--	.09	.004	.023
MAR 03...	1425	6.3	596	10.9	99	7.5	37	3.0	1.4	.10	.11	.005	.020
MAR 18...	1250	38	--	--	--	--	24	14.5	2.5	.11	.15	<.003	.018
APR 08...	1235	66	--	--	--	--	18	11.5	3.5	--	.09	.004	.009
APR 13...	1105	83	--	--	--	--	18	10.0	3.0	.12	.12	.005	.012
APR 22...	1345	38	--	--	--	--	26	6.0	4.0	.11	.23	<.003	.013
APR 26...	1445	80	--	--	--	--	21	19.0	6.5	.07	.16	.005	.015
MAY 03...	1625	158	--	--	--	--	18	19.0	7.5	.11	.34	.005	.010
MAY 17...	1315	94	--	--	--	--	20	14.0	7.0	.10	.10	.004	.007
JUN 02...	1010	89	601	9.1	96	7.4	21	21.0	7.4	.12	.09	.005	.005
JUN 14...	1400	42	--	--	--	--	24	20.5	12.0	.09	.10	.003	.005
JUL 07...	1420	12	--	--	--	--	34	23.0	15.0	--	.11	.003	.005
AUG 03...	1610	3.4	--	--	--	--	50	21.5	13.5	--	.11	.004	.022
SEP 07...	1030	1.4	605	8.4	92	7.5	54	15.0	9.3	.09	.14	.007	.019

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

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT 09...	.019	.029	.035	1	<.01
NOV 04...	.015	.021	.025	2	.02
DEC 05...	.018	.023	.039	6	E.08
JAN 08...	.009	.013	.017	<1	E.02
FEB 04...	.009	.017	.017	<1	E.01
MAR 03...	.007	.018	.019	1	.02
18...	.003	.009	.013	3	.31
APR 08...	.004	.010	.018	3	.53
13...	.003	.009	.013	9	2.0
22...	.007	.012	.015	4	.41
26...	.004	.008	.015	3	.65
MAY 03...	.006	.011	.030	13	5.5
17...	.006	.015	.019	2	.51
JUN 02...	.007	.013	.019	3	.72
14...	.009	.014	.021	1	.11
JUL 07...	.013	.021	.034	3	.10
AUG 03...	.021	.040	.049	1	.01
SEP 07...	.022	.031	.044	3	.01

Remark codes used in this table:

< -- Less than  
E -- Estimated value

<sup>1</sup> -- 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.

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<sup>2</sup>.

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. 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.

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 2003 TO SEPTEMBER 2004  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1190	230	---	---	---	---	---	---	1740	1930	1820	1630
2	1170	221	---	---	---	---	---	---	1780	1940	1810	1610
3	1140	233	---	---	---	---	---	---	1800	1940	1810	1600
4	1100	233	---	---	---	---	---	---	1810	1940	1790	1590
5	1080	205	---	---	---	---	---	---	1800	1930	1780	1580
6	1060	152	---	---	---	---	---	495	1790	1930	1780	1570
7	1030	117	---	---	---	---	---	657	1810	1930	1770	1540
8	1000	---	---	---	---	---	---	696	1820	1940	1760	1490
9	981	---	---	---	---	---	---	757	1840	1930	1760	1440
10	929	---	---	---	---	---	---	806	1820	1920	1750	1390
11	890	---	---	---	---	---	---	893	1830	1930	1750	1350
12	867	---	---	---	---	---	---	936	1850	1920	1740	1290
13	838	---	---	---	---	---	---	974	1870	1920	1740	1220
14	803	---	---	---	---	---	---	1010	1890	1910	1730	1170
15	764	---	---	---	---	---	---	1060	1900	1900	1730	1120
16	731	---	---	---	---	---	---	1120	1920	1900	1730	1080
17	702	---	---	---	---	---	---	1110	1930	1900	1720	1010
18	673	---	---	---	---	---	---	1210	1930	1890	1720	1020
19	634	---	---	---	---	---	---	1240	1940	1890	1710	1000
20	593	---	---	---	---	---	---	1280	1930	1890	1710	974
21	558	---	---	---	---	---	---	1330	1930	1880	1700	958
22	524	---	---	---	---	---	---	1370	1930	1880	1700	942
23	476	---	---	---	---	---	---	1380	1920	1880	1680	929
24	438	---	---	---	---	---	---	1410	1920	1880	1690	916
25	403	---	---	---	---	---	---	1450	1920	1870	1670	903
26	372	---	---	---	---	---	---	1490	1920	1870	1640	897
27	347	---	---	---	---	---	---	1570	1920	1860	1640	880
28	302	---	---	---	---	---	---	1720	1930	1860	1640	861
29	274	---	---	---	---	---	---	1730	1930	1850	1640	835
30	252	---	---	---	---	---	---	1730	1940	1840	1620	793
31	249	---	---	---	---	---	---	1730	---	1830	1620	---
MAX	1190	--	---	---	---	---	---	--	1940	1940	1820	1630
MIN	249	--	---	---	---	---	---	--	1740	1830	1620	793
a	0.79							5.35	5.98	5.66	5.03	2.50
b	-961								+210	-110	-210	-827
c	865	37	0	0	0	0	0	0	0	0	0	663

CAL YR 2003                   c 1260  
WTR YR 2004   b -417   c 1570

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

LOCATION.—Lat 38°50'55", long 120°01'34" referenced to North American Datum of 1927, in NE ¼ NE ¼ 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.—34.28 mi<sup>2</sup>. Datum of gage is 6,310 ft., NVGD, from topographic map.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—June 1990 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 6,310 ft above National Geodetic Vertical Datum of 1929, from topographic map. June 1990 to September 5, 1997 at present site, datum 3.00 ft higher.

REMARKS.—Records good 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, 5,120 ft<sup>3</sup>/s, January 2, 1997, gage height, 8.95 ft; minimum daily, 1.2 ft<sup>3</sup>/s, December 22, 1990.

PEAK DISCHARGES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s and maximum (\*):

	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
March 22	2100	235	5.59	0715	444	6.30
May 4	2245	*447	*6.31			

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	5.4	7.3	e27	17	29	141	201	165	34	7.4	4.8
2	4.9	5.2	7.3	e26	e18	e27	121	247	157	33	7.1	4.8
3	4.9	5.6	7.1	e25	e18	e27	126	289	159	34	7.1	4.7
4	4.9	5.0	7.1	25	e19	28	153	326	155	31	6.9	4.8
5	5.0	16	12	22	20	27	177	351	147	30	6.8	4.8
6	4.9	23	28	21	20	26	177	267	140	e28	6.7	4.7
7	4.9	17	e27	22	20	28	162	190	129	e26	6.7	4.7
8	4.9	13	e25	22	19	32	170	200	107	e23	6.6	4.6
9	4.8	16	22	24	18	39	175	215	98	e21	6.4	4.4
10	4.8	14	e22	27	18	49	178	201	88	e18	6.3	4.2
11	4.9	12	e21	26	17	54	173	153	83	e17	6.1	4.1
12	4.8	10	21	25	17	58	185	131	79	e16	6.0	4.1
13	4.8	9.3	e21	23	17	61	187	135	78	e15	6.1	4.1
14	4.8	8.4	e21	22	17	71	161	154	80	e14	6.0	4.2
15	4.7	8.8	22	21	17	89	141	166	79	14	6.2	4.3
16	4.5	8.6	19	20	32	96	126	169	78	13	6.3	4.4
17	4.6	8.9	17	19	57	100	116	181	76	13	6.0	4.3
18	4.9	8.3	15	19	49	115	104	159	71	12	6.0	4.3
19	4.7	8.7	14	18	42	137	96	141	68	12	6.0	4.5
20	4.6	8.7	16	19	37	147	99	137	66	12	6.0	4.9
21	4.6	8.1	17	18	33	169	103	131	60	11	5.5	4.9
22	4.5	6.9	15	18	31	185	97	131	57	11	5.5	4.8
23	4.7	6.6	15	18	28	192	93	135	55	10	5.5	5.0
24	4.7	7.0	e17	18	27	184	108	132	49	9.9	5.6	4.5
25	4.6	6.9	e18	18	e27	164	133	129	43	e9.5	5.5	4.4
26	4.7	6.6	e20	17	e27	139	162	126	39	e9.1	5.4	4.6
27	4.6	6.4	e21	19	e27	117	199	144	37	e8.8	5.4	5.2
28	4.7	6.6	22	19	e27	111	230	301	33	8.6	5.3	4.8
29	4.6	7.3	e24	19	28	119	209	201	33	8.3	5.3	6.6
30	4.8	7.6	e25	19	---	139	183	177	34	7.8	5.1	6.0
31	5.0	---	27	18	---	146	---	172	---	7.7	4.8	---
TOTAL	147.6	281.9	572.8	654	744	2,905	4,485	5,792	2,543	517.7	187.6	140.5
MEAN	4.76	9.40	18.5	21.1	25.7	93.7	150	187	84.8	16.7	6.05	4.68
MAX	5.0	23	28	27	57	192	230	351	165	34	7.4	6.6
MIN	4.5	5.0	7.1	17	17	26	93	126	33	7.7	4.8	4.1
AC-FT	293	559	1,140	1,300	1,480	5,760	8,900	11,490	5,040	1,030	372	279

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2004, BY WATER YEAR (WY)

MEAN	9.11	17.0	21.6	46.3	37.1	64.0	120	270	223	77.3	16.7	10.4
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)

103366092 UPPER TRUCKEE RIVER AT HIGHWAY 50, ABOVE MEYERS, CA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1990 - 2004	
ANNUAL TOTAL	23,213.0		18,971.1			
ANNUAL MEAN	63.6		51.8		77.5	
HIGHEST ANNUAL MEAN					169	1995
LOWEST ANNUAL MEAN					26.1	1994
HIGHEST DAILY MEAN	617	May 29	351	May 5	2,000	Jan 2,1997
LOWEST DAILY MEAN	4.5	Oct 16	4.1	Sep 11	1.2	Dec22,1990
ANNUAL SEVEN-DAY MINIMUM	4.6	Oct 16	4.2	Sep 9	1.8	Dec20,1990
MAXIMUM PEAK FLOW			447	May 4	5,120	Jan 2,1997
MAXIMUM PEAK STAGE			6.31	May 4	8.95	Jan 2,1997
ANNUAL RUNOFF (AC-FT)	46,040		37,630		56,120	
10 PERCENT EXCEEDS	140		162		210	
50 PERCENT EXCEEDS	26		19		24	
90 PERCENT EXCEEDS	5.4		4.8		5.0	

e Estimated

## 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 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; minimum, freezing point on many days.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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)	Specific conductance, wat unfltrd 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)	<sup>1</sup> Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
09...	1230	4.8	--	--	--	--	105	20.0	12.0	--	.11	.005	.007
NOV													
04...	1220	5.1	--	--	--	--	100	4.5	2.5	--	.08	<.003	.013
DEC													
05...	1235	11	602	11.1	109	7.7	86	7.0	4.5	.07	.10	<.003	.008
JAN													
09...	1450	25	--	--	--	--	54	8.0	.5	--	.09	.003	.019
FEB													
04...	1125	E19	--	--	--	--	56	.5	.0	--	.09	.003	.011
17...	1440	59	--	--	--	--	43	5.5	1.0	.11	.24	<.003	.019
MAR													
03...	1200	E27	604	11.4	102	7.5	58	4.5	1.2	.09	.12	.006	.014
18...	1025	102	--	--	--	--	42	14.5	2.0	.08	.15	<.003	.018
APR													
08...	1415	162	--	--	--	--	32	18.0	6.0	--	.11	.004	.013
13...	1245	177	--	--	--	--	29	9.5	4.5	.11	.14	.003	.013
22...	1155	95	--	--	--	--	40	4.5	4.5	.10	.16	<.003	.018
26...	1300	147	--	--	--	--	30	21.0	7.0	.06	.16	.005	.015
MAY													
03...	1455	243	--	--	--	--	22	23.0	8.5	.10	.18	<.003	.011
17...	1150	168	--	--	--	--	24	16.5	7.0	.09	.10	.004	.009
JUN													
02...	1200	140	605	8.2	93	7.4	26	22.0	10.6	.06	.23	.006	.005
14...	1220	76	--	--	--	--	32	19.0	12.5	.10	.14	.003	.008
JUL													
07...	1305	E26	--	--	--	--	54	25.0	17.5	--	.12	.003	.006
AUG													
03...	1350	7.1	--	--	--	--	91	22.5	18.5	--	.12	.004	.007
SEP													
07...	1300	4.7	609	8.4	104	7.6	105	20.5	14.6	.09	.17	.009	.015



103366092 UPPER TRUCKEE RIVER AT HIGHWAY 50, ABOVE MEYERS, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT 09...	.004	.012	.014	1	.01
NOV 04...	.004	.011	.013	2	.03
DEC 05...	.005	.009	.013	1	.03
JAN 09...	.003	.008	.009	1	.07
FEB 04...	.003	.009	.013	<1	E.05
FEB 17...	.002	.011	.023	5	.80
MAR 03...	.002	.008	.012	1	E.07
MAR 18...	.002	.009	.015	4	1.1
APR 08...	.002	.010	.018	3	1.3
APR 13...	.002	.010	.018	6	2.9
APR 22...	.003	.008	.012	2	.51
APR 26...	.003	.007	.014	6	2.4
MAY 03...	.003	.008	.025	13	8.5
MAY 17...	.004	.012	.018	4	1.8
JUN 02...	.004	.012	.018	5	1.9
JUN 14...	.005	.012	.018	10	2.0
JUL 07...	.005	.015	.020	1	E.07
AUG 03...	.004	.024	.027	3	.06
SEP 07...	.003	.013	.032	5	.06

Remark codes used in this table:

- < -- Less than
- E -- Estimated value

<sup>1</sup> -- 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.

## 10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA

LOCATION.—Lat 38°55'21", long 119°59'26" referenced to North American Datum of 1927, in NW ¼ SE ¼ sec. 04, 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.—54.90 mi<sup>2</sup>.

## 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 National Geodetic Vertical Datum of 1929. Prior to April 26, 1984, at datum 2.00 ft higher. Prior to October 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<sup>3</sup>/s, January 2, 1997, gage height, 9.95 ft; minimum daily, 0.01 ft<sup>3</sup>/s, September, 6, 2001.

PEAK DISCHARGES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s and maximum (\*):

	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 5	0245	386	3.61	1145	*390	*3.63

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	7.4	7.5	e23	19	47	171	217	e165	38	5.7	1.5
2	6.4	7.3	7.8	e23	19	48	149	251	e159	35	5.4	1.5
3	6.6	9.0	7.3	e23	40	46	148	289	157	36	5.2	1.3
4	6.4	7.9	6.9	e22	39	44	170	314	156	34	4.9	1.3
5	5.2	12	13	e23	e40	44	194	340	149	31	4.7	1.4
6	5.3	e15	e15	e23	e39	46	199	303	143	30	4.6	1.8
7	5.2	e18	e18	e24	e38	50	180	221	136	27	4.2	1.8
8	5.0	e20	e20	e24	e38	57	190	223	116	25	4.3	1.5
9	5.3	e20	e20	e25	e36	66	192	235	107	24	4.3	1.3
10	4.2	e20	e20	e25	e34	78	195	233	99	22	3.8	1.3
11	4.9	22	e20	e26	e32	87	187	191	92	21	3.5	1.3
12	5.2	19	e20	e27	e30	92	195	173	89	20	3.4	1.4
13	5.2	17	e20	e28	e29	98	200	168	86	20	3.3	1.3
14	5.6	16	e20	e31	e28	108	179	182	88	19	3.5	1.3
15	5.8	17	e20	33	26	129	162	195	87	18	3.1	1.4
16	5.5	16	e20	30	40	141	146	196	86	18	3.7	1.4
17	5.6	14	e21	28	93	147	138	207	84	18	3.2	1.5
18	5.6	14	25	25	80	160	129	194	79	17	3.0	1.4
19	5.3	14	19	24	72	190	122	174	76	16	3.0	1.2
20	4.7	17	21	22	62	192	125	172	74	15	3.1	2.0
21	4.9	16	22	21	55	212	128	164	69	14	2.5	2.7
22	5.4	12	20	e20	51	229	124	162	64	13	2.5	2.6
23	5.3	14	18	e20	47	235	117	168	64	11	3.5	2.5
24	5.9	14	e18	20	45	225	126	165	e58	11	2.2	2.6
25	5.6	11	e20	21	42	200	145	161	e53	10	2.3	2.5
26	5.6	8.5	e22	e20	e42	179	172	157	47	9.2	2.1	2.6
27	5.3	11	e22	20	e43	156	203	169	44	8.0	2.0	2.5
28	5.4	5.7	e22	e20	e44	145	238	289	40	7.8	2.2	3.4
29	5.3	6.7	e22	20	e44	148	231	224	38	6.8	2.1	4.2
30	4.6	7.7	e22	21	---	166	204	182	39	6.4	e2.0	4.8
31	6.0	---	e22	20	---	172	---	e175	---	6.0	1.6	---
TOTAL	169.2	409.2	571.5	732	1,247	3,937	5,059	6,494	2,744	587.2	104.9	59.3
MEAN	5.46	13.6	18.4	23.6	43.0	127	169	209	91.5	18.9	3.38	1.98
MAX	6.9	22	25	33	93	235	238	340	165	38	5.7	4.8
MIN	4.2	5.7	6.9	20	19	44	117	157	38	6.0	1.6	1.2
AC-FT	336	812	1,130	1,450	2,470	7,810	10,030	12,880	5,440	1,160	208	118

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2004, BY WATER YEAR (WY)

MEAN	14.6	38.2	47.5	63.9	66.6	106	165	301	250	83.2	19.4	12.3
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)

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1972 - 2004	
ANNUAL TOTAL	30,027.0		22,114.3			
ANNUAL MEAN	82.3		60.4		98.9	
HIGHEST ANNUAL MEAN					203	1983
LOWEST ANNUAL MEAN					29.2	1988
HIGHEST DAILY MEAN	676	May 30	340	May 5	3,150	Jan 2,1997
LOWEST DAILY MEAN	4.0	Aug 29	1.2	Sep 19	0.01	Sep 6,2001
ANNUAL SEVEN-DAY MINIMUM	4.2	Aug 25	1.3	Sep 9	0.11	Sep 5,2001
MAXIMUM PEAK FLOW			390	May 28	5,480	Jan 2,1997
MAXIMUM PEAK STAGE			3.63	May 28	9.95	Jan 2,1997
ANNUAL RUNOFF (AC-FT)	59,560		43,860		71,680	
10 PERCENT EXCEEDS	195		184		264	
50 PERCENT EXCEEDS	36		22		37	
90 PERCENT EXCEEDS	5.5		2.7		6.5	

e Estimated

## 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. 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 and August 10, 2001; minimum, freezing point on many days.

SEDIMENT CONCENTRATION: Maximum daily mean, 416 mg/L, March 4, 1991; minimum daily mean, 0 mg/L, several days during most years.

SEDIMENT LOAD: Maximum daily, 781 tons, March 8, 1986; minimum daily, 0 tons, several days during most years.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd 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)	<sup>1</sup> Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ortho-phosphate, water, fltrd, mg/L as P (00671)
OCT													
09...	1045	5.3	--	--	--	113	18.0	11.6	--	.20	.004	.022	.004
NOV													
04...	1015	7.3	--	--	--	106	2.0	1.5	--	.12	<.003	.030	.006
DEC													
05...	1020	11	604	10.2	7.6	115	8.0	4.0	.11	.18	.003	.013	.007
JAN													
07...	1600	E24	--	--	--	74	3.0	.0	--	.17	.004	.026	.004
FEB													
04...	0935	34	--	--	--	70	-2.0	.0	--	.10	<.003	.028	.004
17...	1150	95	--	--	--	62	2.5	1.0	--	.36	.003	.036	.006
MAR													
03...	0945	38	605	11.2	7.3	71	1.0	.1	.13	.15	.008	.025	.004
08...	1150	56	--	--	--	83	9.0	4.0	.15	.19	.003	.029	.004
15...	1050	126	--	--	--	61	8.5	3.5	.17	.27	<.003	.033	.004
22...	1135	215	--	--	--	44	10.5	3.5	.16	.32	<.003	.038	.003
30...	1525	159	--	--	--	51	13.5	8.5	.17	.16	<.003	.023	.003
APR													
08...	1610	183	--	--	--	38	19.5	8.5	--	.15	.003	.015	.003
13...	1610	191	--	--	--	34	9.5	8.0	.13	.19	.003	.013	.002
22...	1010	126	--	--	--	47	2.5	4.0	.14	.14	<.003	.015	.004
26...	1120	175	--	--	--	33	14.0	6.0	.09	.18	.005	.015	.003
MAY													
03...	1315	280	--	--	--	23	19.5	8.0	.10	.23	<.003	.013	.003
06...	1200	324	--	--	--	20	19.0	6.0	.11	.25	<.003	.012	.003
17...	1010	217	--	--	--	26	12.5	7.0	.13	.16	.005	.010	.005
21...	1210	168	--	--	--	32	10.0	8.0	.09	.12	.003	.011	.004
JUN													
02...	1425	E159	608	7.6	7.4	27	22.5	14.2	.13	.17	.010	.009	.004
14...	1045	95	--	--	--	35	16.0	11.5	.09	.11	.003	.007	.004
30...	1520	40	--	--	--	54	12.0	14.0	--	.23	.003	.024	.007
JUL													
07...	1110	29	--	--	--	59	23.0	17.5	--	.13	.004	.009	.005
AUG													
03...	1120	6.7	--	--	--	99	17.0	16.0	--	.13	.003	.022	.004
SEP													
07...	1450	2.3	610	10.1	8.7	111	29.5	20.0	.17	.24	.006	.014	.005

10336610 UPPER TRUCKEE RIVER AT SOUTH LAKE TAHOE, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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 dis- charge, tons/d (80155)
OCT				
09...	.012	.017	1	.01
NOV				
04...	.013	.017	1	.02
DEC				
05...	.014	.026	7	.21
JAN				
07...	.026	.026	3	E.19
FEB				
04...	.011	.018	<1	<.09
17...	.018	.054	20	5.1
MAR				
03...	.009	.019	5	.51
08...	.010	.021	2	.30
15...	.013	.034	13	4.4
22...	.010	.038	23	13
30...	.011	.019	7	3.0
APR				
08...	.009	.021	9	4.5
13...	.009	.018	11	5.7
22...	.009	.014	3	1.0
26...	.007	.018	10	4.7
MAY				
03...	.008	.035	25	19
06...	.009	.035	32	28
17...	.011	.021	10	5.9
21...	.013	.023	3	1.4
JUN				
02...	.011	.019	9	E3.9
14...	.010	.017	3	.77
30...	.017	.036	15	1.6
JUL				
07...	.014	.020	2	.16
AUG				
03...	.025	.031	3	.05
SEP				
07...	.015	.030	5	.03

Remark codes used in this table:

- < -- Less than
- E -- Estimated value

<sup>1</sup> -- 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.

## 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<sup>2</sup>.

## 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<sup>3</sup>/s, Jan. 2, 1997, gage height, 7.86 ft (backwater from plugged culvert), from rating curve extended above 180 ft<sup>3</sup>/s, on basis of computation of flow through culvert; minimum daily, 0.29 ft<sup>3</sup>/s, July 28, Aug. 15, 1994.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 13	0200	102	2.15	May 4	2230	167	2.40

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.99	1.7	1.5	e2.2	e2.9	5.9	40	59	17	2.1	0.95	0.87
2	0.98	1.6	1.6	e2.2	e3.0	6.0	34	78	15	2.0	0.94	0.88
3	0.90	1.6	1.4	e2.0	e2.8	5.9	34	91	14	1.9	0.95	0.91
4	0.88	1.3	1.4	e2.0	e2.6	5.8	46	100	12	1.6	0.95	0.92
5	0.87	1.3	1.7	e2.2	e2.6	6.2	61	101	11	1.5	0.94	0.90
6	0.86	1.3	3.3	e2.0	e2.8	6.4	62	74	9.3	1.5	0.94	0.89
7	0.86	1.4	3.2	e2.2	e2.8	7.0	57	56	8.6	1.4	0.91	0.88
8	0.81	1.5	1.9	3.3	e2.8	7.9	67	59	7.8	1.4	0.90	0.88
9	0.83	1.7	1.6	3.8	e2.9	9.2	65	54	7.9	1.3	0.90	0.87
10	0.89	1.4	1.7	3.6	e2.7	11	63	47	7.6	1.3	0.88	0.87
11	0.98	1.3	1.9	3.4	e2.6	13	58	32	6.7	1.3	0.86	0.87
12	0.98	1.4	1.4	3.3	e2.9	14	66	27	6.1	1.2	0.87	0.86
13	0.99	1.4	e1.4	3.2	e2.8	15	69	32	5.5	1.2	0.88	0.86
14	0.93	1.3	e1.9	3.2	e2.6	17	51	40	5.1	1.2	0.87	0.84
15	0.83	1.4	1.9	3.2	3.2	20	42	41	4.8	1.1	0.87	0.85
16	0.86	1.3	1.7	3.2	5.9	23	35	39	4.5	1.1	0.89	0.84
17	0.88	1.4	1.7	3.2	13	24	30	41	4.1	1.1	0.89	0.85
18	0.89	1.4	1.7	3.2	11	28	26	36	3.9	1.1	0.88	0.87
19	0.90	1.4	1.8	3.2	9.1	37	26	30	3.6	1.1	0.87	0.93
20	0.92	1.4	2.1	3.2	7.2	42	26	29	3.3	1.1	0.89	0.98
21	0.95	1.3	2.4	3.0	6.8	48	26	28	3.1	1.0	0.89	0.90
22	0.98	1.2	2.1	e3.0	6.6	54	24	30	2.8	1.0	0.92	0.88
23	1.0	1.2	2.1	e3.2	e6.1	62	24	28	2.4	0.99	0.94	0.87
24	1.0	1.2	e3.8	3.1	e6.5	57	31	25	2.2	0.98	0.92	0.86
25	1.0	1.3	e3.1	2.9	e7.0	46	44	23	2.0	0.99	0.90	0.85
26	0.94	1.3	e2.7	e3.0	e8.0	36	62	22	2.0	0.99	0.90	0.85
27	0.97	1.3	e2.5	2.9	e9.4	28	83	24	1.9	0.98	0.89	0.84
28	0.98	1.3	e2.2	2.9	10	27	86	41	1.8	0.98	0.89	0.79
29	0.99	1.5	e2.4	2.9	6.7	29	62	28	1.8	0.97	0.90	0.82
30	1.1	1.4	e2.2	e3.0	---	36	49	21	2.0	0.97	0.89	0.85
31	1.4	---	e2.2	e2.8	---	42	---	19	---	0.96	0.88	---
TOTAL	29.34	41.5	64.5	90.5	155.3	769.3	1449	1355	179.8	38.31	27.95	26.13
MEAN	0.95	1.38	2.08	2.92	5.36	24.8	48.3	43.7	5.99	1.24	0.90	0.87
MAX	1.4	1.7	3.8	3.8	13	62	86	101	17	2.1	0.95	0.98
MIN	0.81	1.2	1.4	2.0	2.6	5.8	24	19	1.8	0.96	0.86	0.79
AC-FT	58	82	128	180	308	1530	2870	2690	357	76	55	52

e Estimated.

10336645 GENERAL CREEK NEAR MEEKS BAY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.99	6.15	8.18	9.34	12.0	18.3	38.1	62.6	34.0	6.17	1.31	1.30
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1980 - 2004	
ANNUAL TOTAL	5501.59		4226.63			
ANNUAL MEAN	15.1		11.5		16.6	
HIGHEST ANNUAL MEAN					34.7	
LOWEST ANNUAL MEAN					4.96	
HIGHEST DAILY MEAN	168	May 28	101	May 5	600	Jan 1 1997
LOWEST DAILY MEAN	0.81	Oct 8	0.79	Sep 28	0.29	Jul 28 1994
ANNUAL SEVEN-DAY MINIMUM	0.86	Oct 4	0.84	Sep 24	0.31	Aug 15 1994
MAXIMUM PEAK FLOW			167	May 4	797	Jan 2 1997
MAXIMUM PEAK STAGE			2.40	May 4	7.86	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	10910		8380		12040	
10 PERCENT EXCEEDS	29		41		50	
50 PERCENT EXCEEDS	3.7		2.2		3.2	
90 PERCENT EXCEEDS	0.94		0.88		0.84	

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 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Specific conductance, 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 + org-N, water, fltrd, mg/L as N (00608)	<sup>1</sup> Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT													
22...	1515	1.0	610	8.6	90	63	21.0	7.5	--	.08	.003	.004	.012
NOV													
28...	1545	1.3	608	10.5	95	61	6.5	2.0	--	.09	.003	.002	.009
DEC													
06...	1535	3.2	--	--	--	57	2.8	3.0	.16	.24	.003	.006	.010
18...	1150	1.8	610	11.0	94	55	3.0	.1	.12	.09	.005	.003	.006
JAN													
22...	1600	E3.0	610	11.4	98	46	-.5	.0	--	.11	.005	.004	.006
FEB													
17...	1740	15	--	--	--	29	4.5	.5	.18	.21	.004	.029	.006
MAR													
11...	1750	13	605	10.8	99	30	2.0	2.0	.13	.19	.004	.003	.001
18...	1750	28	--	--	--	25	.5	1.5	.18	.19	.003	.008	.001
22...	2030	59	--	--	--	20	1.0	1.0	.16	.27	.004	.006	.002
APR													
06...	2230	58	--	--	--	17	-.5	2.0	.12	.14	.003	.005	.002
12...	2055	72	605	10.4	100	17	5.0	4.0	.09	.13	<.003	.004	.001
21...	1450	26	--	--	--	22	6.0	5.5	--	.10	<.003	.005	.003
27...	2105	133	--	--	--	13	6.5	3.5	.10	.27	.005	.007	.003
28...	1450	59	--	--	--	14	13.0	5.8	.08	.17	.004	.005	.002
MAY													
04...	0850	76	--	--	--	12	11.5	2.5	.12	.11	.004	.002	.001
05...	2015	135	605	9.8	99	11	--	6.0	.07	.19	.005	.002	.002
13...	1800	28	608	9.4	100	16	16.5	8.0	.09	.09	.005	.003	.003
20...	1025	29	--	--	--	15	11.0	6.5	.10	.09	.003	.003	.002
31...	1345	19	--	--	--	18	22.5	11.2	.10	.08	.004	.002	.002
JUN													
11...	1035	7.0	607	9.0	99	27	--	9.5	.10	.12	.007	.002	.005
JUL													
15...	1535	1.1	610	7.0	95	50	24.0	19.0	--	.10	<.003	.003	.016
AUG													
16...	1815	.84	609	6.8	88	57	20.8	16.5	--	.11	.003	.008	.022
SEP													
17...	1720	.84	602	--	--	63	16.0	14.0	.08	.11	.005	.006	.018



10336645 GENERAL CREEK NEAR MEEKS BAY, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT 22...	.024	.022	<1	<.01
NOV 28...	.012	.018	1	<.01
DEC 06...	.022	.032	3	.03
18...	.013	.017	1	<.01
JAN 22...	.013	.019	1	E.01
FEB 17...	.011	.025	8	.32
MAR 11...	.007	.010	2	.07
18...	.007	.021	11	.83
22...	.007	.024	8	1.3
APR 06...	.006	.008	4	.63
12...	.005	.009	3	.58
21...	.006	.008	2	.14
27...	.007	.071	94	34
28...	.005	.012	11	1.8
MAY 04...	.005	.011	10	2.0
05...	.005	.014	22	8.0
13...	.006	.010	5	.38
20...	.005	.009	4	.31
31...	.007	.014	3	.15
JUN 11...	.010	.011	3	.06
JUL 15...	.025	.027	1	<.01
AUG 16...	.025	.032	2	<.01
SEP 17...	.026	.032	5	.01

Remark codes used in this table:

- < -- Less than
- E -- Estimated value

<sup>1</sup> -- 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.

## 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<sup>2</sup>.

## 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<sup>3</sup>/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<sup>3</sup>/s, Sept. 24, 1968.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 4	2015	242	2.62

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	e2.2	3.6	4.0	4.8	12	59	116	88	18	3.5	1.8
2	2.1	2.7	4.1	e4.2	e5.0	11	54	137	88	17	3.4	1.7
3	2.1	2.8	3.9	e4.4	e5.0	11	59	158	85	17	3.3	1.8
4	2.1	2.7	3.8	e4.6	e4.8	11	76	180	77	16	3.1	1.8
5	2.1	2.6	5.0	e4.8	e4.6	12	97	180	70	15	3.0	1.8
6	2.1	2.6	e9.9	e5.0	e4.4	12	98	159	69	14	2.9	1.8
7	2.2	2.8	9.9	e5.2	e4.2	12	90	141	64	13	2.7	1.8
8	2.1	2.7	5.2	e5.4	e4.0	13	99	141	54	13	2.6	1.7
9	2.1	2.8	4.2	5.5	4.1	16	100	133	49	12	2.4	1.7
10	2.2	2.2	e3.2	5.4	e4.1	19	99	117	45	11	2.3	1.7
11	2.2	2.1	e3.5	5.3	e4.0	21	96	90	43	10	2.3	1.7
12	2.3	2.0	3.7	5.2	e4.0	22	102	75	43	9.8	2.3	1.7
13	2.2	2.1	4.3	5.1	e4.0	25	103	78	43	9.0	2.2	1.6
14	2.2	2.3	e4.4	5.1	4.0	29	87	89	44	8.7	2.2	1.6
15	2.1	2.5	e4.4	5.2	4.3	33	76	98	44	8.1	2.4	1.6
16	2.0	2.2	4.4	5.2	7.7	31	64	103	43	7.8	2.3	1.6
17	2.0	2.6	3.7	5.1	e14	33	57	108	41	7.4	2.2	1.5
18	1.9	2.6	3.8	5.1	e11	41	52	96	39	7.0	2.2	1.5
19	1.9	2.7	3.9	5.2	e10	52	49	86	37	6.8	2.1	1.6
20	1.8	3.0	4.6	5.2	e8.1	56	50	83	34	6.5	2.1	1.7
21	1.7	3.0	5.0	5.3	e7.5	77	50	76	31	6.3	2.1	1.6
22	1.6	2.7	4.7	e5.2	e7.1	88	48	78	30	5.8	2.2	1.6
23	1.7	e2.7	4.7	e5.1	e7.0	103	48	81	29	5.6	2.2	1.6
24	1.6	2.6	6.5	5.1	e7.3	93	54	77	27	5.2	2.2	1.5
25	1.6	2.6	e5.0	5.1	e7.9	72	65	76	25	4.9	2.1	1.4
26	1.6	2.7	e4.7	e5.1	e9.1	55	85	77	23	4.7	2.1	1.4
27	1.5	e2.8	e4.5	5.1	e10	49	115	94	22	4.5	2.0	1.4
28	1.5	2.9	e4.3	e5.0	10	47	134	138	20	4.4	1.9	1.4
29	1.6	3.2	e4.1	4.8	11	50	119	99	19	4.0	1.9	1.4
30	1.8	3.4	e4.1	4.9	---	59	106	91	19	3.8	1.8	1.4
31	e1.9	---	e4.0	e4.8	---	62	---	89	---	3.6	1.8	---
TOTAL	59.8	78.8	145.1	155.7	193.0	1227	2391	3344	1345	279.9	73.8	48.4
MEAN	1.93	2.63	4.68	5.02	6.66	39.6	79.7	108	44.8	9.03	2.38	1.61
MAX	2.3	3.4	9.9	5.5	14	103	134	180	88	18	3.5	1.8
MIN	1.5	2.0	3.2	4.0	4.0	11	48	75	19	3.6	1.8	1.4
AC-FT	119	156	288	309	383	2430	4740	6630	2670	555	146	96

e Estimated.

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.60	11.9	18.8	24.3	20.7	30.5	61.2	127	98.9	27.9	5.54	2.79
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 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1961 - 2004
ANNUAL TOTAL	11408.0	9341.5	
ANNUAL MEAN	31.3	25.5	36.2
HIGHEST ANNUAL MEAN			73.4 1982
LOWEST ANNUAL MEAN			8.71 1977
HIGHEST DAILY MEAN	274 May 28	180 May 4	2000 Jan 1 1997
LOWEST DAILY MEAN	1.5 Oct 27	1.4 Sep 25	0.50 Sep 24 1968
ANNUAL SEVEN-DAY MINIMUM	1.6 Oct 22	1.4 Sep 24	0.54 Sep 23 1968
MAXIMUM PEAK FLOW		242 May 4	2940 Jan 1 1997
MAXIMUM PEAK STAGE		2.62 May 4	9.90 Dec 22 1964
ANNUAL RUNOFF (AC-FT)	22630	18530	26250
10 PERCENT EXCEEDS	87	88	105
50 PERCENT EXCEEDS	10	5.1	9.9
90 PERCENT EXCEEDS	2.2	1.8	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 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Specific conductance, $\mu\text{S}/\text{cm}$ at 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)	<sup>1</sup> Nitrite + nitrate water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT													
22...	1415	1.7	611	8.9	99	80	21.5	10.0	--	.06	.004	.003	.008
NOV													
28...	1445	2.8	608	10.3	99	76	7.5	4.0	--	.05	.003	.002	.006
DEC													
06...	1430	E9.9	--	--	--	54	2.5	2.5	.11	.28	<.003	.036	.005
19...	1605	3.9	605	10.6	98	68	.5	2.5	.07	.05	.006	.004	.003
JAN													
22...	1445	E5.2	610	11.4	98	64	1.0	.0	--	.07	.003	.002	.006
FEB													
17...	1325	E14	--	--	--	47	3.0	1.0	.13	.15	.007	.071	.005
MAR													
11...	1630	21	606	9.9	101	54	4.5	6.2	.10	.12	.005	.004	.004
18...	1850	55	--	--	--	44	2.0	2.5	.08	.27	<.003	.017	.001
22...	1930	117	--	--	--	41	2.0	2.0	.21	.24	.005	.037	.001
APR													
06...	2130	98	--	--	--	42	.5	2.5	.05	.12	<.003	.026	.001
12...	1945	119	606	10.4	100	40	6.0	4.0	.07	.14	<.003	.029	.001
21...	1355	50	--	--	--	49	2.5	7.0	--	.06	<.003	.012	.003
27...	2000	154	--	--	--	35	6.5	3.5	.09	.16	.007	.043	.002
28...	1400	114	--	--	--	39	13.5	8.3	.06	.39	.004	.042	.002
MAY													
04...	0720	155	--	--	--	34	2.0	2.5	.08	.14	.004	.038	.002
05...	1935	217	605	10.4	103	30	11.2	5.0	.07	.28	.004	.026	.002
13...	1710	79	608	9.0	101	39	15.5	10.2	.09	.08	.004	.014	.002
20...	0940	79	--	--	--	36	8.0	4.5	.10	.08	.004	.012	.001
31...	1255	75	--	--	--	33	18.5	9.0	.07	.07	.003	.004	.002
JUN													
10...	1610	43	609	8.4	100	38	16.5	13.0	.04	.11	.005	.002	.004
JUL													
15...	1430	8.1	612	7.2	99	57	24.0	20.0	--	.08	<.003	.003	.007
AUG													
16...	1715	2.1	609	7.8	104	69	21.8	18.0	--	.10	.004	.005	.010
SEP													
17...	1625	1.6	603	8.1	100	79	17.0	14.0	.08	.10	.005	.002	.007

10336660 BLACKWOOD CREEK NEAR TAHOE CITY, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT 22...	.018	.017	2	.01
NOV 28...	.009	.016	1	.01
DEC 06...	.017	.049	24	E.64
19...	.010	.013	1	.01
JAN 22...	.016	.013	2	E.03
FEB 17...	.011	.029	11	E.42
MAR 11...	.013	.018	4	.23
18...	.009	.059	52	7.7
22...	.007	.047	37	12
APR 06...	.008	.020	8	2.1
12...	.009	.023	15	4.8
21...	.008	.011	3	.41
27...	.007	.112	111	46
28...	.008	.017	11	3.4
MAY 04...	.007	.030	22	9.2
05...	.008	.055	63	37
13...	.015	.015	7	1.5
20...	.013	.013	3	.64
31...	.008	.013	4	.81
JUN 10...	.010	.016	4	.46
JUL 15...	.020	.021	2	.04
AUG 16...	.015	.018	1	.01
SEP 17...	.015	.018	4	.02

Remark codes used in this table:

- < -- Less than
- E -- Estimated value

<sup>1</sup> -- 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.

## 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<sup>2</sup>.

## 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<sup>3</sup>/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<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 5	1845	52	4.39	May 28	0530	90	4.69
May 4	1645	130	4.93				

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.24	0.31	0.52	e1.5	1.3	2.6	22	48	45	15	0.94	0.21
2	0.25	0.52	0.66	e1.3	1.4	2.4	19	61	44	13	0.90	0.20
3	0.26	0.49	0.64	e1.2	1.3	2.4	22	72	43	11	0.84	0.23
4	0.26	0.50	0.56	1.2	1.2	2.4	29	87	41	10	0.81	0.24
5	0.27	0.54	e0.96	1.2	1.2	2.4	37	87	38	9.3	0.83	0.23
6	0.27	0.59	e2.9	1.2	1.2	2.6	34	73	38	8.5	0.77	0.21
7	0.26	0.61	e2.4	1.2	1.2	3.1	33	64	35	7.9	0.73	0.20
8	0.25	0.61	e1.5	1.6	1.2	4.0	36	63	31	7.1	0.67	0.18
9	0.24	0.69	e1.1	1.7	1.2	4.9	37	57	28	6.4	0.62	0.17
10	0.26	0.64	e1.3	1.5	1.2	6.3	36	45	26	6.0	0.58	0.16
11	0.29	0.71	1.5	1.4	1.2	7.2	35	35	24	5.4	0.55	0.14
12	0.28	0.67	1.3	1.4	1.2	8.3	38	32	24	4.8	0.54	0.13
13	0.28	0.58	e1.2	1.4	1.2	9.7	36	36	24	4.2	0.51	0.15
14	0.27	0.58	e1.2	1.4	1.2	12	31	41	26	3.8	0.49	0.17
15	0.26	0.61	1.3	1.4	1.2	15	28	43	26	3.5	0.51	0.17
16	0.27	0.58	1.2	1.4	6.5	16	24	45	25	3.2	0.44	0.17
17	0.27	0.72	1.2	1.3	12	16	22	48	25	2.9	0.40	0.18
18	0.26	0.92	1.1	1.4	5.5	18	19	43	24	2.7	0.38	0.20
19	0.26	0.99	1.2	1.3	4.3	22	18	41	23	2.5	0.36	0.29
20	0.25	0.75	1.9	1.4	3.8	23	17	40	21	2.3	0.35	0.37
21	0.25	0.60	1.7	1.4	3.5	27	16	37	19	2.1	0.33	0.35
22	0.25	0.58	1.5	1.3	3.2	29	15	39	19	1.9	0.36	0.33
23	0.25	0.54	1.4	1.3	3.1	32	17	39	18	1.8	0.38	0.30
24	0.27	0.47	2.1	1.3	2.9	31	21	38	17	1.6	0.38	0.27
25	0.27	0.42	1.9	1.3	e2.8	25	27	37	16	1.5	0.35	0.24
26	0.27	0.41	1.6	1.3	e2.7	19	36	38	14	1.4	0.35	0.23
27	0.27	0.44	1.4	1.3	2.6	17	51	48	13	1.4	0.37	0.23
28	0.27	0.40	1.4	1.2	2.6	17	55	64	13	1.3	0.32	0.22
29	0.27	0.67	e1.3	1.2	2.6	19	43	46	12	1.2	0.26	0.24
30	0.34	0.53	e1.3	1.4	---	23	42	45	12	1.1	0.24	0.27
31	0.29	---	e1.5	1.3	---	24	---	45	---	1.0	0.23	---
TOTAL	8.25	17.67	42.74	41.7	76.5	443.3	896	1537	764	145.8	15.79	6.68
MEAN	0.27	0.59	1.38	1.35	2.64	14.3	29.9	49.6	25.5	4.70	0.51	0.22
MAX	0.34	0.99	2.9	1.7	12	32	55	87	45	15	0.94	0.37
MIN	0.24	0.31	0.52	1.2	1.2	2.4	15	32	12	1.0	0.23	0.13
AC-FT	16	35	85	83	152	879	1780	3050	1520	289	31	13

e Estimated.

10336674 WARD CREEK BELOW CONFLUENCE, NEAR TAHOE CITY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.61	1.69	4.33	9.46	6.71	11.8	26.0	59.8	50.7	17.5	2.48	0.58
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	0.02	0.01
(WY)	1993	1996	1995	1992	1994	1994	2003	1992	1992	1994	1992	1992

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1992 - 2004	
ANNUAL TOTAL	5347.17		3995.43			
ANNUAL MEAN	14.6		10.9		16.0	
HIGHEST ANNUAL MEAN					29.0 1995	
LOWEST ANNUAL MEAN					5.56 1992	
HIGHEST DAILY MEAN	146	May 29	87	May 4	720	Jan 2 1997
LOWEST DAILY MEAN	0.19	Sep 27	0.13	Sep 12	0.00	Aug 21 1992
ANNUAL SEVEN-DAY MINIMUM	0.20	Sep 23	0.16	Sep 9	0.00	Sep 9 1992
MAXIMUM PEAK FLOW			130	May 4	1220	Jan 1 1997
MAXIMUM PEAK STAGE			4.93	May 4	8.85	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	10610		7920		11590	
10 PERCENT EXCEEDS	45		38		48	
50 PERCENT EXCEEDS	4.1		1.4		3.2	
90 PERCENT EXCEEDS	0.27		0.26		0.36	

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 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, 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 + org-N, water, fltrd, mg/L as N (00608)	<sup>1</sup> Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd, mg/L (00665)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT														
22...	1150	.27	49	21.1	7.0	--	.06	.004	.002	.003	.012	.012	<1	<.01
NOV														
28...	1130	.40	48	8.5	1.5	--	.07	.003	<.002	.003	.006	.008	1	<.01
DEC														
19...	1240	1.2	47	3.5	1.9	.05	.16	.003	.018	.001	.007	.008	1	<.01
JAN														
22...	1130	1.3	46	.0	1.0	--	.09	.003	.020	.004	.012	.017	1	<.01
FEB														
17...	1535	8.9	39	4.5	.5	.13	.18	.004	.059	.004	.010	.018	6	.14
MAR														
11...	1150	6.5	43	11.0	2.0	.07	.08	.005	.014	.001	.009	.010	1	.02
18...	1615	21	36	11.0	1.0	.07	.18	.003	.023	.001	.007	.043	31	1.8
APR														
06...	1905	35	32	3.5	1.5	.06	.11	<.003	.021	.002	.008	.013	5	.47
12...	1650	40	30	11.0	2.5	.04	.08	<.003	.019	.002	.008	.014	5	.54
27...	1720	81	26	15.0	1.5	.08	.20	.006	.033	.004	.008	.090	125	27
28...	1155	40	30	12.5	3.5	.07	.15	.004	.033	.002	.006	.011	2	.22
MAY														
04...	1030	56	28	15.5	3.0	.06	.13	.004	.019	.001	.009	.014	4	.60
05...	1705	114	24	13.5	3.0	.09	.15	.005	.019	.002	.011	.042	34	10
13...	1450	35	29	15.0	6.0	.05	.13	.005	.015	.002	.009	.022	5	.47
31...	1035	38	28	18.0	5.5	.09	.06	.005	.008	.003	.008	.015	2	.21
JUN														
10...	1155	24	30	11.0	7.0	.06	.18	.007	.002	.004	.012	.013	2	.13
JUL														
15...	1150	3.6	37	22.0	12.0	--	.06	<.003	.003	.004	.014	.015	1	.01
AUG														
16...	1400	.46	43	--	16.0	--	.07	.003	.006	.004	.010	.010	1	<.01
SEP														
17...	1320	.17	72	19.5	14.0	.08	.10	.007	.002	.004	.011	.015	2	<.01

Remark codes used in this table:

&lt; -- Less than

<sup>1</sup> -- 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.



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<sup>2</sup>.

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<sup>3</sup>/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<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 27	1915	137	5.37	May 4	1830	198	5.58

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.43	e0.95	1.4	e2.1	2.7	e4.1	40	84	62	15	1.5	0.74
2	0.45	1.1	1.7	e2.1	3.3	e4.1	35	102	62	14	1.5	0.71
3	0.48	1.1	1.6	e2.1	3.4	e4.2	40	121	61	12	1.5	0.82
4	0.49	1.0	1.6	e3.1	2.8	5.0	53	139	57	10	1.4	0.88
5	0.50	1.1	3.2	e2.8	3.0	4.9	67	138	54	9.3	1.4	0.89
6	0.46	1.1	e4.7	e3.8	2.9	5.2	65	119	53	8.6	1.3	0.85
7	0.45	1.2	e5.7	e4.5	3.3	5.9	62	103	50	8.0	1.3	0.82
8	0.43	1.3	e4.4	e4.5	3.6	6.9	68	100	44	7.2	1.2	0.80
9	0.43	1.5	3.5	e4.2	3.4	8.5	70	91	40	6.6	1.1	0.83
10	0.52	1.3	e4.1	e4.5	3.4	10	68	76	35	6.1	1.1	0.79
11	0.58	1.2	e3.7	e3.8	3.8	12	67	63	33	5.6	1.0	0.74
12	0.59	1.3	e3.4	e3.5	4.0	13	72	55	31	5.0	1.0	0.74
13	0.59	1.3	e3.4	3.1	4.2	15	73	57	32	4.5	1.0	0.77
14	0.61	1.2	e3.4	2.9	3.4	18	61	62	33	4.2	0.97	0.89
15	0.60	1.4	e3.1	2.8	2.8	25	53	65	33	4.0	0.99	0.98
16	0.60	1.3	e3.7	2.8	e6.3	27	46	67	33	3.7	1.0	0.97
17	0.62	1.3	e3.1	2.9	e11	28	41	70	32	3.4	0.97	0.97
18	0.62	1.4	e3.1	2.8	e9.3	34	35	64	30	3.2	0.91	1.0
19	0.66	1.6	2.8	2.8	e7.4	42	32	60	28	3.0	0.87	1.2
20	0.65	1.7	3.5	2.8	e6.5	44	34	58	26	2.8	0.85	1.4
21	0.64	1.5	3.1	2.8	6.4	53	33	55	24	2.6	0.83	1.5
22	0.64	1.4	2.7	2.8	5.9	56	31	56	23	2.5	0.90	1.5
23	0.66	1.4	2.5	2.8	5.6	62	33	56	21	2.3	0.94	1.4
24	0.69	1.3	5.4	2.8	5.5	57	41	54	19	2.2	0.93	1.4
25	0.70	1.2	e5.6	2.8	e5.4	46	51	53	18	2.1	0.88	1.4
26	0.70	1.3	4.8	2.7	e5.2	35	66	54	16	2.0	0.87	1.4
27	0.72	1.6	e4.5	2.7	e4.8	30	89	66	15	1.9	0.84	1.3
28	0.76	1.4	e3.8	2.6	e4.3	29	100	95	13	1.8	0.82	1.3
29	0.75	1.4	e2.8	2.6	e4.2	33	81	68	13	1.7	0.77	1.3
30	0.83	1.4	e3.1	2.7	---	42	75	63	12	1.7	0.74	1.3
31	e0.85	---	e3.5	2.6	---	44	---	63	---	1.6	0.79	---
TOTAL	18.70	39.25	106.9	93.8	137.8	803.8	1682	2377	1003	158.6	32.17	31.59
MEAN	0.60	1.31	3.45	3.03	4.75	25.9	56.1	76.7	33.4	5.12	1.04	1.05
MAX	0.85	1.7	5.7	4.5	11	62	100	139	62	15	1.5	1.5
MIN	0.43	0.95	1.4	2.1	2.7	4.1	31	53	12	1.6	0.74	0.71
AC-FT	37	78	212	186	273	1590	3340	4710	1990	315	64	63

e Estimated.

## PYRAMID AND WINNEMUCCA LAKES BASIN

## 10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.88	9.80	11.5	16.3	14.3	21.3	42.9	91.4	72.9	20.9	3.64	1.67
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	0.00	0.00
(WY)	1978	1978	1977	1991	1991	1977	1975	1977	1992	2001	1977	1977

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1973 - 2004	
ANNUAL TOTAL	8690.76		6484.61			
ANNUAL MEAN	23.8		17.7		25.8	
HIGHEST ANNUAL MEAN					59.0 1983	
LOWEST ANNUAL MEAN					5.29 1977	
HIGHEST DAILY MEAN	248	May 29	139	May 4	1390	Jan 1 1997
LOWEST DAILY MEAN	0.37	Sep 28	0.43	Oct 1	0.00	Aug 4 1977
ANNUAL SEVEN-DAY MINIMUM	0.40	Sep 24	0.46	Oct 3	0.00	Aug 4 1977
MAXIMUM PEAK FLOW			198	May 4	2530	Jan 1 1997
MAXIMUM PEAK STAGE			5.58	May 4	9.36	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	17240		12860		18700	
10 PERCENT EXCEEDS	59		62		74	
50 PERCENT EXCEEDS	8.0		3.4		6.5	
90 PERCENT EXCEEDS	0.64		0.78		0.84	

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 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Specific 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)	<sup>1</sup> Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT													
22...	1315	.59	610	9.4	102	82	22.0	9.0	--	.09	.003	.002	.009
NOV													
28...	1335	1.4	609	11.6	99	73	9.0	.0	--	.12	.003	.002	.010
DEC													
06...	1330	E4.7	--	--	--	47	2.5	1.2	.13	.34	.003	.048	.014
19...	1510	2.8	605	11.4	98	64	4.0	.0	.08	.08	.004	.002	.008
JAN													
22...	1340	2.9	611	11.6	99	64	2.0	.0	--	.06	.003	.005	.010
FEB													
17...	1130	E11	--	--	--	45	4.5	.0	.17	.19	.004	.050	.012
MAR													
11...	1435	11	606	10.6	100	54	10.0	3.2	.09	.08	.005	.002	.004
18...	1755	40	--	--	--	46	4.5	1.8	.06	.21	.003	.002	.002
22...	1820	61	--	--	--	44	5.0	2.5	.13	.18	.003	.015	.002
APR													
06...	2035	68	--	--	--	41	--	2.5	.09	.11	.004	.007	.001
12...	1840	85	606	10.1	100	39	10.0	5.0	.08	.14	<.003	.006	.002
21...	1300	33	--	--	--	45	5.5	6.5	--	.08	.003	.003	.003
27...	1915	137	--	--	--	33	10.0	4.0	.13	.23	.004	.019	.003
28...	1315	78	--	--	--	38	15.0	7.5	.06	.16	.004	.009	.002
MAY													
04...	0620	113	607	11.0	100	34	--	2.0	.15	.22	.005	.024	.003
05...	1835	179	605	10.2	101	30	12.5	5.0	.06	.25	.004	.015	.002
13...	1615	57	608	9.0	101	38	16.5	10.2	.10	.07	.005	.004	.003
20...	0845	54	--	--	--	35	8.5	3.5	.07	.08	.004	.006	.002
31...	1210	54	--	--	--	34	16.5	8.5	.06	.07	.005	.002	.002
JUN													
10...	1520	34	608	8.6	101	37	17.0	12.5	.08	.12	.006	.002	.004
JUL													
15...	1345	3.9	612	7.9	107	50	24.0	19.0	--	.08	<.003	.003	.005
AUG													
16...	1600	1.0	610	8.2	111	69	23.0	19.0	--	.11	.005	.006	.008
SEP													
17...	1520	.97	604	8.2	106	79	20.0	16.5	.08	.09	.006	.002	.008

10336676 WARD CREEK AT STATE HIGHWAY 89, NEAR TAHOE PINES, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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 dis- charge, tons/d (80155)
OCT				
22...	.028	.019	1	<.01
NOV				
28...	.018	.022	1	<.01
DEC				
06...	.018	.029	15	E.19
19...	.015	.018	2	.02
JAN				
22...	.018	.018	2	.02
FEB				
17...	.020	.029	8	E.24
MAR				
11...	.012	.018	2	.06
18...	.012	.033	16	1.7
22...	.010	.019	13	2.1
APR				
06...	.008	.016	5	.92
12...	.009	.017	10	2.3
21...	.007	.011	4	.36
27...	.010	.080	77	28
28...	.009	.014	6	1.3
MAY				
04...	.009	.022	14	4.3
05...	.009	.064	57	28
13...	.009	.024	4	.62
20...	.008	.015	4	.58
31...	.009	.011	4	.58
JUN				
10...	.011	.013	4	.37
JUL				
15...	.018	.019	1	.01
AUG				
16...	.013	.016	1	<.01
SEP				
17...	.014	.019	2	.01

Remark codes used in this table:

&lt;-- Less than

E-- Estimated value

<sup>1</sup> -- 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.

10336770 TROUT CREEK AT U.S. FOREST SERVICE ROAD 12N01, NEAR MEYERS, CA

LOCATION.—Lat 38°51'48", long 119°57'26" referenced to North American Datum of 1927, in NE ¼ NW ¼ 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.—7.40 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—May 1990 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 6,850 ft above National Geodetic Vertical Datum 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<sup>3</sup>/s, June 27, 1995, gage height, 6.19 ft; minimum daily, 1.9 ft<sup>3</sup>/s, December 21, 1990.

PEAK DISCHARGES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 4	2145	*28	*4.82	May 28	0545	28	4.82

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	4.7	4.7	4.4	3.9	4.0	9.7	17	17	10	4.7	4.1
2	4.6	e4.7	4.7	4.6	4.0	4.0	9.4	19	17	9.8	4.6	4.1
3	4.6	4.6	4.6	4.5	4.0	4.0	10	22	17	9.4	4.7	4.2
4	4.6	e4.6	4.6	e4.5	3.9	3.9	11	23	16	8.8	4.6	4.2
5	4.6	4.7	6.2	4.4	e3.9	3.9	11	23	16	8.6	4.6	4.1
6	4.5	4.7	5.8	4.3	3.9	4.1	11	22	16	8.5	4.5	4.1
7	4.5	4.7	5.1	4.3	3.9	4.3	11	20	15	8.3	4.5	4.1
8	4.4	4.7	5.0	4.2	e4.0	4.9	12	19	15	8.0	4.5	4.1
9	4.5	4.8	5.3	4.3	4.0	5.2	12	19	14	7.7	4.4	4.0
10	4.5	4.8	4.5	4.3	4.0	5.4	12	19	14	7.5	4.4	4.0
11	4.6	5.2	4.7	4.3	3.8	5.4	13	19	14	7.3	4.4	4.0
12	4.6	4.7	e4.6	4.3	3.8	5.7	14	17	13	7.0	4.4	4.0
13	4.7	4.7	4.5	4.2	3.8	5.8	14	17	13	6.4	4.5	4.0
14	4.5	4.7	e4.4	4.2	3.8	6.2	14	17	13	6.4	4.5	4.1
15	4.3	4.7	e4.3	4.2	3.8	6.7	13	17	13	6.5	4.6	4.1
16	4.4	4.7	e4.3	4.2	6.1	7.0	13	18	12	6.6	4.5	4.1
17	4.3	4.7	4.3	4.1	5.4	7.2	12	18	12	6.4	4.4	4.1
18	4.3	4.7	4.3	4.1	4.6	7.8	11	18	12	6.3	4.3	4.1
19	4.3	4.8	4.4	4.1	4.3	8.5	11	18	11	6.2	4.4	4.3
20	4.3	4.9	4.5	4.1	4.2	9.2	12	17	12	6.1	4.4	4.6
21	4.3	4.7	4.3	4.1	4.2	10	12	17	12	5.9	4.3	4.4
22	4.3	e4.7	4.3	e4.1	4.1	10	12	16	12	5.7	4.4	4.2
23	4.3	e4.6	4.3	4.0	4.0	11	12	16	12	5.7	4.4	4.1
24	4.3	e4.6	4.9	4.0	4.0	11	13	16	11	5.6	4.4	3.9
25	4.3	4.5	4.7	4.0	e4.0	10	13	16	11	5.5	4.3	3.8
26	4.3	e4.5	4.7	4.1	e4.0	9.3	14	16	11	5.2	4.3	3.8
27	4.3	e4.6	e4.7	4.0	e4.0	8.7	15	17	11	5.0	4.3	3.8
28	4.3	4.6	e4.7	4.0	4.0	8.9	17	23	11	4.9	4.2	3.8
29	4.3	4.9	e4.6	4.0	4.0	9.4	16	19	11	4.9	4.2	3.8
30	4.4	4.8	4.8	4.0	---	10	17	17	10	4.8	4.1	3.7
31	4.5	---	4.6	4.0	---	10	---	17	---	4.7	4.1	---
TOTAL	137.2	141.3	145.4	129.9	119.4	221.5	377.1	569	394	209.7	136.9	121.7
MEAN	4.43	4.71	4.69	4.19	4.12	7.15	12.6	18.4	13.1	6.76	4.42	4.06
MAX	4.7	5.2	6.2	4.6	6.1	11	17	23	17	10	4.7	4.6
MIN	4.3	4.5	4.3	4.0	3.8	3.9	9.4	16	10	4.7	4.1	3.7
AC-FT	272	280	288	258	237	439	748	1,130	781	416	272	241

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2004, BY WATER YEAR (WY)

MEAN	4.90	5.21	5.48	6.25	5.16	6.48	10.3	24.1	29.1	14.3	6.96	5.36
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)

## 10336770 TROUT CREEK AT U.S. FOREST SERVICE ROAD 12N01, NEAR MEYERS, CA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1990 - 2004	
ANNUAL TOTAL	3,313.1		2,703.1			
ANNUAL MEAN	9.08		7.39		10.5	
HIGHEST ANNUAL MEAN					19.8	1995
LOWEST ANNUAL MEAN					4.48	1992
HIGHEST DAILY MEAN	58	Jun 4	23	May 4	130	Jun28,1995
LOWEST DAILY MEAN	4.1	Sep 9	3.7	Sep 30	1.9	Dec21,1990
ANNUAL SEVEN-DAY MINIMUM	4.2	Mar 1	3.8	Sep 24	2.4	Dec17,1990
MAXIMUM PEAK FLOW			28	May 4	166	Jun27,1995
MAXIMUM PEAK STAGE			4.82	May 4	6.19	Jun27,1995
ANNUAL RUNOFF (AC-FT)	6,570		5,360		7,630	
10 PERCENT EXCEEDS	19		16		22	
50 PERCENT EXCEEDS	4.9		4.7		5.8	
90 PERCENT EXCEEDS	4.3		4.0		3.3	

e Estimated

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 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 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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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, std units (00400)	Specific conductance, wat unfltrd, 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)	<sup>1</sup> Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT 08...	1445	4.5	--	--	--	--	55	18.5	6.6	--	.07	.003	.002
NOV 06...	1310	4.7	--	--	--	--	53	.5	1.0	--	.10	<.003	.002
DEC 01...	1140	4.7	--	--	--	--	54	6.5	1.5	.04	.07	<.003	.005
FEB 09...	1140	3.8	--	--	--	--	52	-.5	.0	--	.10	.003	.014
APR 07...	1020	10	--	--	--	--	36	7.0	2.0	--	.20	<.003	.011
MAY 04...	1115	20	--	--	--	--	25	18.0	4.0	.11	.22	.005	.007
MAY 17...	1450	17	--	--	--	--	26	12.5	8.0	.09	.12	.004	.004
JUN 03...	1015	17	596	8.9	96	7.7	28	20.5	7.8	.09	.10	.005	.004
JUN 14...	1525	12	--	--	--	--	33	22.0	11.5	.12	.16	.006	.009
JUL 07...	1550	8.2	--	--	--	--	44	19.5	12.0	--	.09	.004	.006
AUG 04...	1440	4.7	--	--	--	--	51	17.5	9.0	--	.08	.003	.006
SEP 08...	1040	4.2	598	9.7	101	7.8	56	18.5	6.5	.06	.11	.005	.002

10336770 TROUT CREEK AT U.S. FOREST SERVICE ROAD 12N01, NEAR MEYERS, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT 08...	.009	.016	.018	1	.01
NOV 06...	.009	.014	.021	1	.01
DEC 01...	.010	.013	.018	7	.09
FEB 09...	.010	.019	.024	1	.01
APR 07...	.008	.015	.022	2	.05
MAY 04...	.006	.011	.023	7	.38
17...	.007	.012	.020	5	.23
JUN 03...	.009	.013	.018	4	.18
14...	.008	.015	.022	3	.10
JUL 07...	.010	.018	.022	3	.07
AUG 04...	.010	.025	.026	3	.04
SEP 08...	.008	.017	.020	1	.01

Remark codes used in this table:

&lt; -- Less than

<sup>1</sup> -- 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.



10336775 TROUT CREEK AT PIONEER TRAIL, NEAR SOUTH LAKE TAHOE, CA

LOCATION.—Lat 38°54'12.22", long 119°58'08.01" referenced to North American Datum of 1983, in SE ¼ NE ¼ 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.—23.7 mi<sup>2</sup>.

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<sup>3</sup>/s, January 2, 1997, gage height, 7.59 ft; minimum daily, 2.0 ft<sup>3</sup>/s, December 22, 1990.

PEAK DISCHARGES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and maximum (\*):

	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 5	0145	*43	*2.13			

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	8.1	8.4	e9.0	e9.0	9.2	27	29	27	11	7.2	6.0
2	8.2	e8.2	8.1	e9.0	8.9	9.1	25	31	27	11	7.2	6.0
3	8.6	8.3	8.1	e9.0	e9.0	9.1	26	35	26	11	7.0	6.1
4	8.2	e8.3	9.1	e9.0	e9.0	e9.0	28	37	26	10	6.6	6.4
5	7.9	8.3	11	e9.0	e9.0	9.7	28	39	25	10	6.4	6.3
6	7.7	e8.2	13	e9.0	e9.0	9.4	29	38	25	9.6	6.3	6.3
7	7.1	8.2	14	e9.0	e9.0	10	28	35	25	9.5	6.3	6.1
8	7.1	8.1	11	e9.0	e9.0	11	29	35	24	9.2	6.3	6.0
9	7.0	8.3	e11	e9.0	e9.0	12	30	35	24	9.0	6.3	6.0
10	7.0	e8.3	10	e9.0	e9.0	14	29	36	23	8.7	6.2	6.0
11	7.2	e8.3	9.5	e9.0	e9.0	14	29	34	22	8.6	6.1	6.0
12	7.2	e8.3	e9.0	e9.0	e9.0	15	29	31	21	8.4	6.1	6.1
13	7.1	8.4	e9.0	e9.0	e9.0	15	30	30	20	8.1	6.2	6.2
14	7.2	e8.3	e9.0	e9.0	e9.0	17	28	30	20	7.9	6.4	6.2
15	7.1	8.2	e9.0	e9.0	e9.0	19	26	30	19	7.8	6.3	6.4
16	7.1	8.2	e9.0	e9.0	e9.0	20	25	30	19	7.8	6.5	6.3
17	7.1	8.2	e9.0	e9.0	e9.0	21	24	31	19	7.7	6.3	6.3
18	7.1	8.3	e9.0	e9.0	e9.0	23	23	30	18	7.7	6.3	6.3
19	7.1	8.3	e9.0	e9.0	e9.0	26	23	29	17	7.6	6.3	6.5
20	7.1	8.6	e9.0	e9.0	e9.0	27	23	29	16	7.8	6.3	7.1
21	7.1	8.3	9.4	e9.0	9.3	29	24	28	16	7.7	6.2	7.3
22	7.1	e8.2	9.3	e9.0	9.0	32	23	28	15	7.5	6.2	7.0
23	7.1	e8.4	9.2	e9.0	8.8	33	22	27	14	7.4	6.4	6.9
24	7.1	e8.5	e9.0	e9.0	8.8	31	23	27	13	7.7	6.3	6.7
25	7.2	8.6	e9.0	e9.0	8.6	29	25	27	13	7.6	6.2	6.6
26	7.2	e8.6	e9.0	e9.0	e9.0	26	26	26	12	7.5	6.3	6.5
27	7.2	e8.6	e9.0	e9.0	e9.0	25	28	26	12	7.5	6.3	6.5
28	7.2	8.6	e9.0	e9.0	e9.0	24	30	34	11	7.5	6.3	6.5
29	7.2	8.7	e9.0	e9.0	e9.0	26	29	29	11	7.4	6.2	6.6
30	7.2	8.8	e9.0	e9.0	---	28	28	27	12	7.3	6.1	6.7
31	7.5	---	e9.0	e9.0	---	28	---	27	---	7.2	6.1	---
TOTAL	227.1	250.7	294.1	279.0	260.4	610.5	797	960	572	260.7	197.2	191.9
MEAN	7.33	8.36	9.49	9.00	8.98	19.7	26.6	31.0	19.1	8.41	6.36	6.40
MAX	8.6	8.8	14	9.0	9.3	33	30	39	27	11	7.2	7.3
MIN	7.0	8.1	8.1	9.0	8.6	9.0	22	26	11	7.2	6.1	6.0
AC-FT	450	497	583	553	517	1,210	1,580	1,900	1,130	517	391	381

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2004, BY WATER YEAR (WY)

MEAN	8.78	9.93	11.3	16.4	14.1	20.3	29.1	52.9	56.5	29.2	12.3	8.98
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)

## 10336775 TROUT CREEK AT PIONEER TRAIL, NEAR SOUTH LAKE TAHOE, CA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1990 - 2004	
ANNUAL TOTAL	6,639.3		4,900.6			
ANNUAL MEAN	18.2		13.4		22.9	
HIGHEST ANNUAL MEAN					46.9	
LOWEST ANNUAL MEAN					7.71	
HIGHEST DAILY MEAN	111	May 30	39	May 5	457	Jan 2,1997
LOWEST DAILY MEAN	6.5	Jan 21	6.0	Sep 1	2.0	Dec22,1990
ANNUAL SEVEN-DAY MINIMUM	6.6	Jan 15	6.1	Sep 7	2.8	Dec21,1990
MAXIMUM PEAK FLOW			43		525	
MAXIMUM PEAK STAGE			2.13		7.59	
ANNUAL RUNOFF (AC-FT)	13,170		9,720		16,620	
10 PERCENT EXCEEDS	37		28		53	
50 PERCENT EXCEEDS	9.4		9.0		12	
90 PERCENT EXCEEDS	7.2		6.3		5.4	

e Estimated

## 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 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, 22.0°C, July 2, 2001; minimum, freezing point on many days.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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)	Specific conductance, wat unfltrd, 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)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
08...	1300	7.3	--	--	--	--	57	21.5	9.5	--	.09	.003	.003
NOV													
06...	1100	E8.2	--	--	--	--	56	5.5	.5	--	.13	<.003	.002
DEC													
03...	1320	8.1	606	10.7	99	7.8	57	9.5	2.5	.09	.11	<.003	.005
JAN													
08...	1315	E9.0	--	--	--	--	54	5.5	.0	--	.10	.003	.017
FEB													
06...	1025	E9.0	--	--	--	--	57	-1.0	.0	--	.12	.005	.017
MAR													
04...	1020	E9.0	604	11.4	99	7.5	56	2.0	.1	.12	.13	.006	.016
18...	1505	22	--	--	--	--	59	15.0	5.5	.29	.31	.003	.027
APR													
08...	0935	29	--	--	--	--	44	9.5	3.0	--	.26	.005	.020
13...	0925	30	--	--	--	--	41	9.0	3.5	.17	.27	.003	.017
22...	1605	23	--	--	--	--	45	7.0	6.5	.14	.18	<.003	.010
27...	1230	27	--	--	--	--	40	18.0	7.0	.16	.19	.006	.017
MAY													
04...	1250	35	--	--	--	--	31	17.5	8.0	.12	.14	.003	.015
17...	1610	30	--	--	--	--	32	12.5	10.5	.13	.13	.004	.006
JUN													
03...	1210	27	608	9.0	104	7.6	31	22.0	11.6	.09	.19	.004	.005
14...	1635	20	--	--	--	--	35	20.5	15.0	.09	.09	<.003	.005
JUL													
07...	1740	9.4	--	--	--	--	47	23.5	19.0	--	.13	.013	.009
AUG													
04...	1240	6.7	--	--	--	--	54	21.5	14.0	--	.08	.006	.003
SEP													
08...	1230	6.4	610	9.8	113	7.7	59	24.5	11.5	.10	.12	.005	.003

10336775 TROUT CREEK AT PIONEER TRAIL, NEAR SOUTH LAKE TAHOE, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT 08...	.009	.019	.017	1	.02
NOV 06...	.008	.014	.022	5	E.11
DEC 03...	.008	.012	.017	1	.02
JAN 08...	.007	.011	.016	3	E.07
FEB 06...	.006	.014	.025	1	E.02
MAR 04...	.007	.015	.028	6	E.15
18...	.011	.019	.030	8	.48
APR 08...	.007	.018	.035	9	.70
13...	.007	.017	.025	6	.49
22...	.007	.013	.018	3	.19
27...	.006	.013	.022	5	.36
MAY 04...	.007	.015	.031	10	.95
17...	.007	.013	.030	5	.41
JUN 03...	.008	.015	.030	8	.58
14...	.009	.015	.024	5	.27
JUL 07...	.009	.019	.026	1	.03
AUG 04...	.009	.023	.028	2	.04
SEP 08...	.007	.015	.024	1	.02

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA

LOCATION.—Lat 38°55'12", long 119°58'17" referenced to North American Datum of 1927, in NW ¼ SE ¼ sec. 03, 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.—36.70 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1960 to current year.

GAGE.—Water-stage recorder. Datum of gage is 6,241.57 ft above National Geodetic Vertical Datum 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. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 535 ft<sup>3</sup>/s, February 1, 1963, gage height, 11.14 ft, and January 2, 1997, gage height, 9.33 ft, from rating curve extended above 250 ft<sup>3</sup>/s on basis of computation of peak flow (weir formula); minimum daily, 2.5 ft<sup>3</sup>/s, September 7, 1988.

PEAK DISCHARGES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 6	0215	*58	*5.71				

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	17	16	e17	e17	17	37	41	40	25	12	9.7
2	13	e15	16	e17	e17	16	33	43	40	23	12	9.6
3	13	e16	15	e17	e17	16	37	47	41	22	13	9.7
4	13	e16	15	e17	e17	17	41	49	41	21	12	10
5	13	18	e17	e17	e17	16	42	52	41	20	12	10
6	15	e16	e17	e17	e17	17	43	52	42	19	12	9.8
7	14	17	e17	e17	e17	17	41	48	42	18	11	9.6
8	13	16	17	e18	e17	19	42	48	41	17	11	9.4
9	13	e16	e17	e18	e17	20	42	47	40	17	11	9.4
10	14	e17	e17	e18	e17	22	42	48	39	17	11	9.3
11	14	e17	e17	18	e17	22	41	49	37	16	11	9.2
12	14	e17	e17	18	e17	23	43	46	36	15	11	9.3
13	14	17	e17	e18	e16	25	44	44	34	15	11	9.4
14	14	19	e17	e17	15	29	41	44	33	14	12	9.4
15	15	17	e17	e17	14	32	39	43	32	14	11	9.7
16	14	16	e17	e17	e18	34	36	42	32	14	12	9.6
17	14	16	e17	e17	e18	36	36	42	32	14	11	9.5
18	13	15	e17	e17	18	37	34	42	31	e15	11	9.5
19	13	16	e18	e17	17	41	33	41	30	15	11	10
20	13	16	18	18	19	41	34	40	29	e14	11	11
21	13	15	17	e17	19	44	35	40	28	e14	11	11
22	14	15	e17	e17	18	47	34	39	27	e13	11	11
23	14	e16	e17	e17	18	47	33	39	26	13	11	11
24	13	e17	e17	e17	17	44	34	38	25	13	11	10
25	13	19	e17	e17	e17	42	36	38	25	13	11	10
26	13	e17	e17	e17	e17	39	38	37	25	13	10	10
27	13	e16	e17	e17	e17	35	40	38	24	13	10	9.9
28	14	15	e17	e17	e17	35	43	50	25	13	10	10
29	14	16	e17	e17	e17	38	42	44	23	12	10	10
30	14	16	e17	18	---	40	40	41	24	12	10	10
31	14	---	e17	e18	---	39	---	41	---	12	9.8	---
TOTAL	421	492	523	536	496	947	1,156	1,353	985	486	343.8	296.0
MEAN	13.6	16.4	16.9	17.3	17.1	30.5	38.5	43.6	32.8	15.7	11.1	9.87
MAX	15	19	18	18	19	47	44	52	42	25	13	11
MIN	13	15	15	17	14	16	33	37	23	12	9.8	9.2
AC-FT	835	976	1,040	1,060	984	1,880	2,290	2,680	1,950	964	682	587

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004, BY WATER YEAR (WY)

MEAN	17.0	19.4	20.7	24.0	24.5	29.7	43.2	76.6	90.1	48.0	23.6	17.0
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)

## PYRAMID AND WINNEMUCCA LAKES BASIN

10336780 TROUT CREEK NEAR TAHOE VALLEY, CA—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004	
ANNUAL TOTAL	10,697		8,034.8			
ANNUAL MEAN	29.3		22.0		36.2	
HIGHEST ANNUAL MEAN					85.3 1983	
LOWEST ANNUAL MEAN					10.2 1977	
HIGHEST DAILY MEAN	130	May 30	52	May 5	501	Jan 2,1997
LOWEST DAILY MEAN	13	Jan 9	9.2	Sep 11	2.5	Sep 7,1988
ANNUAL SEVEN-DAY MINIMUM	13	Jan 9	9.3	Sep 8	3.0	Sep 9,1977
MAXIMUM PEAK FLOW			58	May 6	535	Feb 1,1963
MAXIMUM PEAK STAGE			5.71	May 6	11.14	Feb 1,1963
ANNUAL RUNOFF (AC-FT)	21,220		15,940		26,200	
10 PERCENT EXCEEDS	67		41		80	
50 PERCENT EXCEEDS	18		17		22	
90 PERCENT EXCEEDS	13		11		9.1	

e Estimated

10336790 TROUT CREEK AT SOUTH LAKE TAHOE, CA

LOCATION.—Lat 38°55'56", long 119°58'40" referenced to North American Datum of 1927, in SE ¼ NW ¼ sec. 03, 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.—40.40 mi<sup>2</sup>.

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 September 2003, discontinued.

SUSPENDED-SEDIMENT DISCHARGE: October 1971 to June 1974, October 1988 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. 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, August 2, 2001; minimum, freezing point on many days during winter months.

SEDIMENT CONCENTRATION: Maximum daily mean, 300 mg/L, January 15, 1974; minimum daily mean, 0 mg/L, at times in most years.

SEDIMENT LOAD: Maximum daily, 52 tons, January 15, 1974; minimum daily, 0 ton, at times in most years.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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)	Specific conductance, wat unfltrd 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)	<sup>1</sup> Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
08...	1100	15	--	--	--	--	54	19.0	8.4	--	.13	.003	.003
NOV													
06...	1500	E17	--	--	--	--	52	6.0	1.5	--	.10	<.003	.003
DEC													
03...	1120	16	607	11.2	100	7.6	56	9.0	1.5	.07	.11	<.003	.007
JAN													
08...	1040	E19	--	--	--	--	54	7.5	.0	--	.11	.004	.021
FEB													
06...	1150	E18	--	--	--	--	58	2.0	.0	--	.12	.007	.022
17...	1150	E19	--	--	--	--	50	6.5	.5	.19	.34	.007	.027
MAR													
04...	1120	20	605	11.2	100	7.4	58	2.5	1.1	.12	.16	.006	.019
08...	1005	19	--	--	--	--	60	7.0	1.5	.08	.17	.004	.012
15...	0915	33	--	--	--	--	61	4.5	2.5	.18	.28	.003	.024
22...	1000	46	--	--	--	--	52	9.5	3.0	.26	.35	<.003	.029
30...	1405	38	--	--	--	--	51	15.0	8.0			<.003	.019
APR													
08...	1055	44	--	--	--	--	45	11.5	4.5	--	.16	.005	.021
13...	1445	44	--	--	--	--	43	9.0	7.5	.14	.26	.003	.017
22...	1725	36	--	--	--	--	47	10.0	8.5	.16	.22	<.003	.015
27...	1105	41	--	--	--	--	43	15.5	6.5	.15	.21	.007	.017
MAY													
03...	1130	50	--	--	--	--	35	16.0	7.5	.17	.40	.004	.021
06...	1050	55	--	--	--	--	32	14.0	6.5	.13	.29	.003	.016
17...	1715	44	--	--	--	--	34	13.0	12.0	.11	.21	.006	.008
21...	1050	44	--	--	--	--	37	10.5	6.0	.11	.20	.004	.009
JUN													
03...	1335	44	610	8.2	98	7.5	34	21.5	13.0	.14	.26	.003	.008
14...	0905	37	--	--	--	--	36	12.5	8.5	.08	.17	.004	.008
JUL													
07...	1005	21	--	--	--	--	44	21.5	13.5	--	.18	.009	.005
AUG													
04...	1100	14	--	--	--	--	50	20.5	12.5	--	.20	.003	.004
SEP													
08...	1355	11	612	8.3	106	7.9	54	25.0	16.4	.08	.13	.006	.003

## 10336790 TROUT CREEK AT SOUTH LAKE TAHOE, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT					
08...	.009	.017	.020	1	.04
NOV					
06...	.008	.013	.019	2	E.09
DEC					
03...	.007	.013	.018	2	.09
JAN					
08...	.006	.014	.018	3	E.15
FEB					
06...	.007	.018	.025	5	E.24
17...	.005	.022	.047	13	E.67
MAR					
04...	.007	.013	.026	9	.49
08...	.005	.014	.027	5	.26
15...	.006	.015	.040	10	.89
22...	.008	.017	.038	13	1.6
30...	.009	.025	.032	8	.82
APR					
08...	.007	.022	.032	7	.83
13...	.008	.017	.027	7	.83
22...	.009	.018	.025	6	.58
27...	.008	.013	.025	7	.77
MAY					
03...	.007	.014	.036	19	2.6
06...	.007	.014	.036	13	1.9
17...	.009	.016	.049	21	2.5
21...	.007	.019	.029	9	1.1
JUN					
03...	.009	.018	.044	19	2.3
14...	.009	.015	.031	13	1.3
JUL					
07...	.009	.019	.034	12	.68
AUG					
04...	.011	.021	.038	10	.38
SEP					
08...	.008	.021	.028	4	.12

Remark codes used in this table:

< -- Less than  
E -- Estimated value

<sup>1</sup> -- 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.



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<sup>2</sup>, 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, 6,224.30 ft, June 4, 5, 13, 14; minimum, 6,222.84 ft, Sept. 30.

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 2003 TO SEPTEMBER 2004

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.63	3.19	2.87	3.38	3.34	3.74	3.91	4.03	4.29	4.19	3.80	3.29
2	3.61	3.14	2.87	3.42	3.39	3.75	3.90	4.04	4.29	4.18	3.77	3.27
3	3.61	3.16	2.86	3.42	3.39	3.72	3.91	4.06	4.29	4.17	3.75	3.24
4	3.59	3.11	2.86	3.41	3.39	3.73	3.91	4.07	4.30	4.16	3.74	3.21
5	3.58	3.13	2.86	3.40	3.38	3.72	3.92	4.09	4.30	4.15	3.70	3.20
6	3.58	3.11	2.98	3.38	3.37	3.73	3.92	4.09	4.29	4.15	3.68	3.19
7	3.56	3.10	3.00	3.39	3.39	3.72	3.93	4.10	4.26	4.12	3.68	3.19
8	3.55	3.08	2.98	3.40	3.39	3.73	3.95	4.13	4.28	4.12	3.67	3.18
9	3.49	3.12	2.95	3.38	3.36	3.74	3.96	4.13	4.28	4.08	3.65	3.16
10	3.47	3.11	3.04	3.39	3.36	3.73	3.96	4.13	4.29	4.08	3.64	3.15
11	3.48	3.13	3.06	3.39	3.36	3.74	3.98	4.17	4.29	4.07	3.63	3.14
12	3.44	3.10	3.04	3.40	3.36	3.74	3.98	4.18	4.28	4.05	3.64	3.12
13	3.44	3.07	3.02	3.39	3.35	3.74	3.97	4.18	4.30	4.03	3.62	3.09
14	3.41	3.07	3.11	3.40	3.34	3.75	3.96	4.20	4.30	4.03	3.60	3.07
15	3.38	3.07	3.10	3.39	3.34	3.76	3.96	4.19	4.29	4.01	3.60	3.06
16	3.37	3.03	3.10	3.39	3.43	3.76	3.97	4.20	4.29	4.01	3.58	3.04
17	3.38	3.05	3.09	3.40	3.41	3.77	3.97	4.20	4.28	4.00	3.56	2.99
18	3.36	3.04	3.09	3.39	3.46	3.76	3.96	4.20	4.28	3.99	3.56	2.99
19	3.35	3.01	3.09	3.39	3.46	3.78	3.96	4.20	4.28	3.97	3.55	2.93
20	3.35	2.97	3.11	3.39	3.46	3.79	3.96	4.20	4.27	3.96	3.53	2.94
21	3.34	2.99	3.10	3.38	3.47	3.80	3.98	4.20	4.27	3.96	3.51	2.93
22	3.34	2.96	3.10	3.38	3.48	3.82	3.99	4.19	4.26	3.95	3.48	2.90
23	3.32	2.93	3.09	3.37	3.46	3.82	3.98	4.21	4.26	3.95	3.45	2.89
24	3.31	2.92	3.22	3.37	3.47	3.83	3.98	4.22	4.25	3.93	3.43	2.90
25	3.28	2.91	3.26	3.36	3.58	3.89	3.99	4.21	4.23	3.92	3.40	2.88
26	3.27	2.90	3.24	3.36	3.73	3.87	4.00	4.21	4.22	3.91	3.40	2.87
27	3.25	2.90	3.24	3.37	3.72	3.88	4.00	4.24	4.22	3.90	3.36	2.86
28	3.27	2.88	3.21	3.37	3.72	3.89	4.03	4.25	4.23	3.88	3.34	2.85
29	3.17	2.89	3.32	3.38	3.72	3.90	4.02	4.27	4.20	3.85	3.34	2.86
30	3.18	2.86	3.31	3.36	---	3.90	4.02	4.27	4.20	3.84	3.33	2.84
31	3.19	---	3.31	3.35	---	3.90	---	4.28	---	3.82	3.31	---
MEAN	3.40	3.03	3.08	3.39	3.45	3.79	3.96	4.17	4.27	4.01	3.56	3.04
MAX	3.63	3.19	3.32	3.42	3.73	3.90	4.03	4.28	4.30	4.19	3.80	3.29
MIN	3.17	2.86	2.86	3.35	3.34	3.72	3.90	4.03	4.20	3.82	3.31	2.84
a	23,100	0	37,600	42,500	83,300	106,400	123,500	153,300	143,600	95,600	37,600	0
b	-50,300	-23,100	+37,600	+4,900	+40,800	+23,100	+17,100	+29,800	-9,700	-48,000	-58,000	-37,600

CAL YR 2003 MEAN 3.88 MAX 4.89 MIN 2.86 b -34,700  
WTR YR 2004 MEAN 3.60 MAX 4.30 MIN 2.84 b -73,400

a Usable contents, in acre-feet, at end of month.  
b Change in contents, in acre-feet.

PYRAMID AND WINNEMUCCA LAKES BASIN  
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<sup>2</sup>.

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<sup>3</sup>/s, Jan. 2, 1997, gage height, 9.59 ft; no flow for parts of many years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	11	0.00	e1.0	28	60	58	91	64	323	146	20
2	80	8.5	0.00	e1.1	30	60	71	92	65	316	134	17
3	77	7.0	0.00	e2.3	34	58	78	93	65	312	129	16
4	74	4.8	0.00	e2.9	35	57	76	95	66	305	124	9.2
5	73	4.5	0.00	e2.6	35	55	77	82	66	300	112	8.2
6	70	5.9	e2.0	e9.7	33	52	76	73	67	295	105	7.0
7	68	5.2	e1.5	e14	36	51	75	70	67	289	100	7.8
8	64	5.9	1.2	e15	35	50	75	70	67	282	98	9.1
9	55	8.4	0.44	e20	40	50	76	70	68	270	94	9.8
10	52	8.2	0.19	e21	33	50	75	70	68	262	93	8.3
11	44	6.9	0.14	e22	31	51	76	70	69	256	92	6.2
12	44	11	e0.30	e20	29	52	77	71	70	253	90	4.0
13	40	3.1	e0.30	e20	29	52	78	70	79	249	89	1.9
14	36	3.0	e0.35	e21	29	51	79	70	138	242	86	1.2
15	32	3.7	e0.35	e23	27	50	80	70	169	237	84	3.0
16	29	3.1	e0.35	e27	34	51	79	70	169	231	80	6.1
17	28	2.7	e0.35	e29	42	51	80	69	169	227	77	6.1
18	27	2.6	e0.40	e32	45	51	81	69	170	219	74	4.5
19	26	2.1	e0.40	35	47	52	82	68	188	213	72	1.7
20	24	0.17	e0.40	41	46	50	84	68	230	210	69	0.00
21	23	0.00	e0.40	37	45	50	85	68	247	204	65	0.00
22	22	0.00	e0.45	31	47	50	86	68	248	203	59	0.00
23	21	0.00	e0.45	31	48	48	85	67	250	199	55	0.00
24	17	0.00	e0.45	30	46	47	86	66	262	193	49	0.00
25	18	0.00	e0.45	30	e47	45	87	66	286	190	40	0.00
26	17	0.00	e0.50	29	e55	43	88	66	301	182	40	0.00
27	17	0.00	e0.50	29	60	43	89	67	313	178	34	0.00
28	17	0.00	e0.60	30	60	44	90	67	340	172	28	0.00
29	14	0.00	e0.70	31	59	45	90	66	336	165	28	0.00
30	13	0.00	e0.80	29	---	46	90	66	329	158	26	0.00
31	11	---	e0.90	28	---	45	---	64	---	151	24	---
TOTAL	1216	107.77	14.87	694.6	1165	1560	2409	2232	5026	7286	2396	147.10
MEAN	39.2	3.59	0.48	22.4	40.2	50.3	80.3	72.0	168	235	77.3	4.90
MAX	83	11	2.0	41	60	60	90	95	340	323	146	20
MIN	11	0.00	0.00	1.0	27	43	58	64	64	151	24	0.00
AC-FT	2410	214	29	1380	2310	3090	4780	4430	9970	14450	4750	292

e Estimated.

10337500 TRUCKEE RIVER AT TAHOE CITY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	179	192	228	236	290	256	176	165	235	276	311	262
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1932	1927	1925	1925	1925	1925	1919	1919	1921	1931	1931	1931

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1909 - 2004	
ANNUAL TOTAL	38221.64		24254.34			
ANNUAL MEAN	105		66.3		232	
HIGHEST ANNUAL MEAN					1150	
LOWEST ANNUAL MEAN					0.15	
HIGHEST DAILY MEAN	369	Aug 9	340	Jun 28	2630	Jan 3 1997
LOWEST DAILY MEAN	0.00	Nov 21	0.00	Nov 21	0.00	Jan 4 1914
ANNUAL SEVEN-DAY MINIMUM	0.00	Nov 21	0.00	Nov 21	0.00	Jan 23 1914
MAXIMUM PEAK FLOW			357	Jun 28	2690	Jan 2 1997
MAXIMUM PEAK STAGE			4.21	Jun 28	9.59	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	75810		48110		167700	
10 PERCENT EXCEEDS	317		189		467	
50 PERCENT EXCEEDS	69		48		135	
90 PERCENT EXCEEDS	0.66		0.40		0.00	



10337500 TRUCKEE RIVER AT TAHOE CITY, CA—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1978–81, 1993–94, 2002 to current year.

CHEMICAL DATA.—Water years 1978–81, 2003 to current year.

SPECIFIC CONDUCTANCE.—Water years 1978–81, 2003 to current year.

AIR TEMPERATURE.—Water year 2002 to current year.

WATER TEMPERATURE.—Water years 1978–81, 1993–94, 2003 to current year.

PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE.—October 2003 to September 2004.

AIR TEMPERATURE.—July 2002 to current year.

WATER TEMPERATURE.—June 1993 to June 1994, October 2003 to September 2004.

INSTRUMENTATION.—Air temperature, water temperature, and specific conductance sensors and digital recorder.

REMARKS.—Air temperature record fair, water temperature and specific conductance records good. No flow Nov. 20 to Dec. 6, and Sept. 20–30.

Water-quality data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: Maximum recorded, 168 microsiemens, Dec. 12, 2003; minimum recorded, 86 microsiemens, Feb. 26, 2004.

AIR TEMPERATURE: Maximum recorded, 35.7°C, Aug. 11, 2004; minimum recorded, –19°C, Dec. 27, 2003.

WATER TEMPERATURE: Maximum recorded, 24°C, Aug. 20, 29, 30, 2004; minimum recorded, 0.0°C, on a few days in most years.

EXTREMES FOR CURRENT YEAR.—

SPECIFIC CONDUCTANCE: Maximum recorded, 168 microsiemens, Dec. 12; minimum recorded, 86 microsiemens, Feb. 26.

AIR TEMPERATURE: Maximum recorded, 35.7°C, Aug. 11; minimum recorded, –19°C, Dec. 27.

WATER TEMPERATURE: Maximum recorded, 24.0°C, Aug. 20, 29, 30; minimum recorded, 0.0°C, Dec. 29, Jan. 1–3, Feb. 26.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	Specific conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Ammonia + org-N, water, filtered, mg/L as N (00623)	Ammonia + org-N, water, unfiltered, mg/L as N (00625)	Ammonia water, filtered, mg/L as N (00608)	<sup>1</sup> Nitrite + nitrate water, filtered, mg/L as N (00631)	Orthophosphate, water, filtered, mg/L as P (00671)	
DEC	18...	1005	E.40	612	10.5	100	93	4.0	4.0	.06	.14	.004	.003	.001
MAR	12...	1105	50	608	10.2	106	93	6.5	7.2	.07	.13	.006	.006	.001
JUN	11...	0930	69	608	9.2	104	92	14.0	10.8	.06	.11	.005	.002	.001
SEP	17...	1200	7.5	606	8.3	114	119	20.5	19.5	.09	.12	.007	.002	.002

Date	Phosphorus, water, filtered, mg/L (00666)	Phosphorus, water, unfiltered, mg/L (00665)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)	
DEC					
DEC	18...	.004	.007	1	E.01
MAR	12...	.004	.008	1	.14
JUN	11...	.004	.008	2	.37
SEP	17...	.005	.008	2	.04

Remark codes used in this table:

E -- Estimated value

<sup>1</sup> -- 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.

## PYRAMID AND WINNEMUCCA LAKES BASIN

10337500 TRUCKEE RIVER AT TAHOE CITY, CA—Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	92	91	105	92	---	---	101	88	92	90	90	89
2	93	91	97	92	---	---	112	100	92	88	93	90
3	92	91	108	94	---	---	116	90	91	89	93	90
4	93	91	112	95	---	---	121	91	92	89	91	90
5	93	92	110	95	---	---	120	112	91	90	92	90
6	93	92	119	94	---	---	114	91	92	90	91	89
7	95	92	119	98	136	110	91	90	92	89	91	90
8	95	92	101	97	147	136	93	90	91	89	92	89
9	96	93	111	95	148	134	91	90	92	90	92	90
10	95	92	110	95	138	131	91	90	94	90	92	90
11	98	92	120	95	163	135	91	90	93	89	93	90
12	95	92	104	92	168	115	91	90	93	89	92	90
13	96	92	107	95	131	124	91	90	92	91	94	90
14	96	92	104	96	130	115	91	90	92	89	93	90
15	97	92	120	102	128	107	91	90	93	91	93	90
16	97	92	121	99	127	110	92	90	100	88	93	90
17	97	93	117	99	125	105	91	90	91	87	93	90
18	97	93	121	103	126	116	91	90	91	87	93	90
19	98	93	126	101	124	113	91	90	91	89	94	90
20	99	94	117	103	118	110	92	91	91	89	93	90
21	122	94	---	---	111	104	95	92	91	89	92	90
22	108	94	---	---	109	98	93	90	92	90	92	90
23	118	94	---	---	102	98	92	90	92	89	93	90
24	127	96	---	---	111	93	92	90	94	91	93	90
25	116	95	---	---	99	89	91	90	92	87	96	92
26	129	95	---	---	103	91	91	90	88	86	95	91
27	128	95	---	---	110	94	100	90	89	87	95	90
28	122	95	---	---	108	97	98	90	90	89	95	90
29	114	91	---	---	108	93	92	90	91	89	94	90
30	100	91	---	---	118	99	92	90	---	---	94	90
31	103	92	---	---	101	95	92	90	---	---	96	90
MONTH	129	91	---	---	---	---	121	88	100	86	96	89
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	99	91	105	96	96	92	110	108	129	118	134	120
2	99	92	108	100	95	93	111	108	---	---	132	118
3	101	92	108	99	110	93	111	109	137	127	128	114
4	105	92	110	102	112	98	112	109	139	129	125	116
5	97	90	111	104	114	98	111	107	134	120	128	117
6	100	90	107	100	117	98	112	109	129	125	128	117
7	100	91	107	100	110	99	112	109	129	119	130	119
8	95	91	109	102	103	99	112	108	126	122	132	118
9	94	90	109	104	103	99	115	111	127	120	132	117
10	95	91	109	104	103	101	116	112	126	120	133	117
11	94	91	106	102	103	100	117	113	124	116	129	117
12	98	92	108	103	110	102	119	115	123	116	133	120
13	96	92	109	105	111	103	120	114	123	117	131	117
14	96	91	108	104	106	99	121	116	119	114	140	115
15	96	93	113	104	106	100	125	116	120	113	143	118
16	96	92	108	102	104	101	126	118	119	115	140	118
17	95	91	109	102	104	102	127	117	119	110	133	117
18	95	91	111	105	105	102	126	120	118	110	130	120
19	97	92	109	101	105	103	129	123	122	116	136	123
20	96	92	107	103	106	103	129	121	123	116	---	---
21	96	92	107	104	107	101	125	120	122	112	---	---
22	96	92	106	102	104	102	130	122	123	122	---	---
23	94	93	102	98	106	102	129	119	122	119	---	---
24	96	93	103	98	106	102	125	119	123	117	---	---
25	97	93	106	100	106	103	126	122	121	113	---	---
26	99	92	106	100	106	103	128	123	119	113	---	---
27	102	95	102	98	106	103	123	119	124	117	---	---
28	103	97	100	98	113	106	126	118	128	119	---	---
29	107	96	101	97	112	106	125	123	125	116	---	---
30	104	95	101	96	111	106	124	119	128	117	---	---
31	---	---	98	92	---	---	124	121	132	117	---	---
MONTH	107	90	113	92	117	92	130	107	---	---	---	---

10337500 TRUCKEE RIVER AT TAHOE CITY, CA—Continued

TEMPERATURE, AIR, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	23.9	7.2	1.0	-1.6	11.2	1.7	-1.4	-6.5	4.5	-7.0	1.3	-0.8
2	22.2	3.9	1.4	-1.7	9.8	-0.6	-3.8	-9.3	3.1	-5.3	2.2	-0.1
3	21.6	4.1	2.2	-4.3	10.6	-2.4	-5.7	-14.2	1.4	-9.0	2.1	-1.5
4	22.7	6.8	0.7	-1.2	13.2	-4.1	-5.0	-18.3	0.8	-10.4	2.4	-2.9
5	20.4	4.1	1.0	-0.6	12.5	5.4	-0.6	-16.0	4.1	-13.3	6.8	-4.6
6	23.5	4.1	5.1	-0.8	7.7	1.8	1.7	-8.5	6.1	-11.0	11.7	-1.6
7	22.7	4.3	7.0	0.2	4.5	-4.7	5.1	-1.4	2.4	-10.5	15.6	-3.4
8	23.4	4.3	9.4	1.4	1.9	-10.7	9.8	-1.4	3.0	-14.4	17.6	-2.3
9	21.4	4.7	5.1	-1.5	8.1	-8.4	12.6	-2.2	3.0	-8.6	14.6	-2.3
10	11.3	2.1	7.3	-4.9	2.6	-1.6	12.2	-2.3	7.4	-14.0	14.6	-1.4
11	19.8	0.3	10.4	-6.4	1.5	-9.8	9.7	-3.1	9.2	-11.0	15.7	-3.2
12	19.8	2.9	8.3	-3.8	2.9	-10.3	12.4	-4.0	8.9	-12.5	15.4	-3.0
13	16.2	0.6	6.9	-1.6	6.0	0.9	9.3	-5.8	7.5	-10.2	14.3	-3.1
14	20.7	2.2	9.2	-2.5	3.2	-12.2	8.0	-6.7	7.0	-4.6	15.9	-1.5
15	18.0	0.9	2.7	-3.2	1.2	-13.6	9.8	-3.6	6.4	-2.7	17.3	-0.3
16	20.2	2.3	6.0	-5.9	4.2	-10.6	7.2	-7.3	8.1	0.9	17.8	-2.0
17	22.4	2.8	10.9	-1.2	7.0	-8.0	8.3	-7.1	9.8	1.6	15.0	-2.1
18	22.0	2.9	11.8	-2.9	6.9	-6.7	9.6	-3.0	5.2	-2.3	19.8	-1.0
19	22.3	3.9	15.4	-1.2	14.7	-2.4	6.0	-6.2	6.8	-6.6	20.8	0.5
20	24.2	3.7	11.9	3.9	6.1	1.1	3.6	-1.9	4.2	-5.4	16.8	-1.2
21	22.3	3.1	3.9	-10.9	8.0	-3.7	3.9	-8.2	6.6	-1.0	21.5	0.6
22	22.4	3.1	0.3	-13.8	5.8	-6.0	4.6	-12.3	4.4	-1.4	21.3	2.3
23	17.7	3.4	6.0	-12.6	6.1	-4.0	7.2	-9.6	7.3	-2.7	19.1	0.3
24	16.4	0.5	7.6	-6.0	3.4	-1.4	4.4	-3.8	4.8	-1.9	14.7	-0.2
25	16.0	1.5	5.6	-6.5	-1.3	-8.0	2.4	-10.0	4.8	-2.6	8.7	-0.5
26	18.1	2.0	5.7	-7.4	-4.5	-16.3	1.1	-12.2	1.7	-3.0	5.4	-7.7
27	19.4	1.2	7.2	-9.3	-2.8	-19.0	3.1	-4.7	1.3	-1.5	11.6	-2.5
28	21.6	3.0	13.7	-0.5	-1.7	-18.0	4.7	-7.5	2.1	-1.6	17.4	-2.9
29	16.4	4.1	14.4	2.8	-0.6	-3.1	6.4	-4.8	1.5	-2.6	21.2	-1.1
30	4.3	-0.1	11.9	1.3	1.4	-3.1	5.1	-4.2	---	---	16.8	2.6
31	0.5	-2.5	---	---	0.8	-2.9	2.2	-9.1	---	---	14.9	1.6
MONTH	24.2	-2.5	15.4	-13.8	14.7	-19.0	12.6	-18.3	9.8	-14.4	21.5	-7.7
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.6	-1.1	25.9	0.2	28.3	4.1	25.3	7.1	29.8	6.8	29.9	11.9
2	12.3	-1.6	28.1	2.8	30.8	5.0	26.3	6.4	25.7	8.1	23.9	8.1
3	19.8	0.2	29.0	3.1	28.9	6.1	28.5	7.5	27.2	3.6	17.2	3.4
4	18.8	1.2	27.6	4.6	31.1	4.6	30.3	6.1	26.7	6.7	21.2	0.1
5	17.1	1.1	24.6	11.4	29.1	4.6	33.4	7.0	26.4	5.3	27.3	2.8
6	15.6	-1.1	22.8	7.7	27.4	5.6	34.4	9.8	25.7	8.6	28.9	5.5
7	19.1	0.3	20.9	8.4	22.4	3.8	32.6	10.8	31.8	5.0	29.3	4.7
8	18.9	1.7	20.3	4.4	15.8	0.1	27.2	7.1	33.6	8.6	28.6	3.6
9	20.8	0.6	22.5	-0.4	12.8	-0.3	26.0	9.4	33.1	10.3	28.2	4.0
10	17.9	-0.9	10.8	0.0	19.6	1.9	27.1	10.2	33.5	9.1	28.8	4.4
11	21.0	-1.1	8.5	-1.6	22.0	-0.3	29.8	4.9	35.7	10.5	28.5	5.4
12	19.8	2.0	18.4	-3.3	26.4	2.0	30.5	7.5	30.9	12.0	24.5	8.9
13	14.0	2.7	21.8	-0.3	29.6	4.1	31.3	10.5	31.2	13.6	22.1	3.6
14	13.5	-2.5	23.1	-0.1	32.1	7.4	31.2	7.2	31.4	12.7	22.1	3.7
15	10.3	1.2	21.4	2.6	31.5	9.2	31.1	8.0	27.8	14.2	25.0	2.0
16	10.3	1.5	23.1	0.3	31.0	7.1	31.7	9.4	27.4	12.1	24.8	3.3
17	5.8	-0.4	18.3	2.9	29.5	9.4	31.4	13.0	29.8	6.1	23.6	4.0
18	4.8	-1.9	16.2	2.0	28.7	6.7	30.1	12.2	30.2	9.2	12.6	2.6
19	5.4	-1.2	20.0	-0.8	29.0	5.9	29.6	11.4	31.5	10.7	3.6	-3.9
20	10.1	1.0	18.0	-0.1	30.5	3.8	30.5	10.4	31.2	11.1	7.6	-4.7
21	7.4	0.1	15.7	-0.7	30.7	8.0	32.2	10.5	29.3	9.6	14.2	-5.7
22	13.3	-3.8	16.7	-0.9	32.7	8.1	34.2	11.9	20.9	9.8	21.8	-2.9
23	18.5	-1.3	18.2	-0.5	32.2	8.7	35.2	11.8	20.9	5.8	22.8	0.1
24	21.1	-0.7	21.1	0.7	30.2	9.2	33.2	13.2	23.0	4.2	24.8	-0.1
25	23.7	0.7	20.8	1.4	30.4	6.8	33.0	11.8	23.0	7.5	25.2	1.4
26	26.1	1.2	25.6	2.3	29.5	5.4	31.4	11.4	21.9	3.6	23.7	-0.4
27	26.4	3.3	23.9	7.7	28.7	7.5	32.7	7.7	23.0	8.9	23.0	-1.4
28	19.4	3.4	13.2	5.2	28.6	10.0	33.5	10.9	27.6	4.5	21.9	3.2
29	16.4	1.6	22.1	1.0	26.7	8.8	29.7	10.1	30.6	6.7	18.2	0.0
30	24.2	-1.7	26.2	2.0	24.8	8.0	30.3	5.9	30.5	7.4	18.3	0.3
31	---	---	27.6	2.9	---	---	29.8	8.1	30.7	6.3	---	---
MONTH	26.4	-3.8	29.0	-3.3	32.7	-0.3	35.2	4.9	35.7	3.6	29.9	-5.7

## PYRAMID AND WINNEMUCCA LAKES BASIN

10337500 TRUCKEE RIVER AT TAHOE CITY, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.5	16.0	5.5	3.5	---	---	2.0	0.0	5.5	3.0	4.5	3.5
2	19.5	14.5	6.5	4.0	---	---	0.5	0.0	4.0	1.0	5.5	3.0
3	19.0	15.0	9.0	4.5	---	---	0.5	0.0	4.5	1.5	6.0	3.0
4	19.5	15.0	7.5	4.0	---	---	2.0	0.5	5.0	1.5	7.0	3.0
5	18.5	15.0	9.0	6.0	---	---	3.0	1.0	5.5	1.5	7.0	3.5
6	19.0	15.0	8.5	4.5	4.5	3.5	3.0	2.5	5.0	1.5	8.5	4.5
7	18.5	14.5	8.5	7.0	3.5	2.5	4.0	2.5	6.0	1.5	9.5	5.0
8	18.5	14.5	8.0	6.5	3.5	2.5	5.5	3.5	6.5	1.5	10.0	5.0
9	17.5	13.5	6.5	3.5	3.5	2.5	6.0	3.5	6.0	1.5	10.0	5.5
10	16.0	11.5	7.5	4.0	3.0	1.5	5.5	3.5	6.0	1.0	10.0	5.5
11	18.0	11.5	8.0	4.5	3.0	1.5	6.5	3.5	6.5	2.0	11.0	5.5
12	17.5	12.0	8.0	4.5	2.0	1.0	6.5	3.5	7.0	2.0	10.5	5.5
13	16.5	11.5	7.0	4.5	3.5	2.0	6.5	3.5	5.0	3.0	10.5	5.5
14	17.0	11.5	7.0	4.5	3.0	1.5	6.5	3.5	6.5	3.0	11.0	6.0
15	15.5	11.5	6.0	4.5	3.0	1.5	6.5	4.0	5.5	3.5	12.0	6.5
16	16.0	11.0	6.0	4.0	3.5	2.0	6.0	3.5	4.5	3.0	11.5	6.0
17	17.0	11.5	7.0	4.0	4.0	2.5	6.0	3.5	4.5	3.5	11.5	6.0
18	16.0	12.0	7.5	4.5	4.0	3.5	6.5	4.0	5.5	1.5	11.5	6.5
19	17.0	12.0	7.0	4.5	4.5	4.0	6.5	3.5	6.5	2.5	11.5	6.5
20	17.5	12.0	---	---	4.5	4.0	5.5	3.0	6.5	3.5	11.5	6.0
21	17.5	12.0	---	---	5.0	4.0	5.0	1.5	7.0	4.0	12.5	6.5
22	17.0	12.0	---	---	5.0	3.5	5.5	2.0	6.0	4.5	12.0	6.5
23	16.5	11.5	---	---	4.5	3.0	6.0	2.0	7.5	4.0	12.0	6.0
24	15.5	10.0	---	---	3.5	1.0	6.5	4.0	6.0	3.5	11.0	6.5
25	15.5	10.0	---	---	2.0	0.5	6.0	2.5	4.0	1.0	8.0	3.5
26	15.0	9.5	---	---	2.5	1.5	4.5	2.5	2.5	0.0	7.5	3.0
27	15.5	10.0	---	---	2.5	1.0	3.5	2.5	4.5	1.0	10.5	4.5
28	16.0	10.5	---	---	3.0	1.5	5.0	2.0	6.0	2.5	11.0	5.5
29	14.0	9.5	---	---	2.5	0.0	6.5	3.0	6.0	3.5	11.5	6.0
30	10.5	6.5	---	---	1.0	0.5	6.0	2.5	---	---	12.0	6.5
31	7.5	3.0	---	---	2.5	1.0	6.0	2.5	---	---	11.0	6.0
MONTH	19.5	3.0	---	---	---	---	6.5	0.0	7.5	0.0	12.5	3.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.0	5.5	13.5	7.5	17.5	10.0	18.0	14.5	22.0	17.0	22.5	16.0
2	9.5	4.5	15.0	7.5	18.5	10.5	18.5	15.0	21.5	17.5	21.5	15.5
3	10.5	6.0	15.0	8.0	16.5	11.0	19.0	15.0	21.5	16.5	19.5	12.5
4	11.0	7.0	14.5	8.0	18.0	10.5	20.0	15.5	21.5	17.5	21.5	11.0
5	11.5	7.0	14.0	7.5	16.5	10.5	20.5	15.5	21.0	17.0	23.5	13.0
6	10.0	6.0	12.5	7.0	17.0	11.0	20.5	15.5	20.5	16.5	23.5	14.0
7	10.5	6.0	13.5	6.5	16.0	9.0	19.5	16.0	21.5	15.5	23.0	14.0
8	11.0	6.5	14.0	7.0	12.0	8.0	19.0	15.5	23.0	17.0	22.5	13.5
9	12.5	6.5	13.5	7.0	12.5	8.5	19.0	15.0	22.5	17.5	22.0	13.5
10	12.0	6.5	10.5	7.0	15.0	9.5	18.5	14.5	23.0	17.0	22.0	13.5
11	13.0	7.0	9.5	6.5	16.5	9.5	19.0	13.5	23.5	17.5	22.5	13.5
12	13.0	7.5	13.0	6.5	17.5	11.0	20.0	15.5	22.5	18.0	20.5	14.0
13	11.0	6.5	13.5	7.5	18.0	11.5	21.0	16.5	23.0	18.5	18.5	12.0
14	10.5	5.5	14.0	7.5	17.0	11.5	21.0	16.0	23.5	18.5	21.0	10.5
15	9.0	5.0	13.5	9.0	17.5	12.0	21.0	16.5	22.0	18.5	20.0	11.5
16	10.0	4.5	14.5	8.0	17.5	13.0	20.5	16.5	21.5	18.0	20.0	12.5
17	9.0	5.5	14.5	8.5	18.5	13.0	21.0	17.0	23.5	17.5	19.5	12.5
18	8.0	5.5	12.5	7.0	18.0	13.0	21.0	16.5	23.5	17.5	16.0	11.0
19	8.0	6.0	14.0	6.0	18.5	12.5	21.5	17.0	23.5	18.0	---	---
20	10.0	5.5	14.5	8.5	18.0	12.0	21.5	16.5	24.0	18.0	---	---
21	8.5	5.0	12.0	8.0	17.5	13.0	22.0	17.5	23.5	18.0	---	---
22	10.0	4.5	13.5	8.0	19.5	13.5	22.5	18.0	19.5	17.0	---	---
23	12.0	6.0	12.5	7.5	18.5	14.0	22.5	18.0	21.0	16.0	---	---
24	12.5	7.0	15.0	8.0	18.0	14.0	22.5	18.0	21.5	15.5	---	---
25	13.0	7.0	15.0	8.5	18.0	13.5	23.0	18.0	21.0	16.0	---	---
26	14.0	7.5	16.0	9.5	18.0	13.5	23.0	18.0	20.5	15.0	---	---
27	15.0	8.0	15.5	10.5	17.5	14.0	22.5	17.5	22.0	13.0	---	---
28	13.5	7.5	12.0	9.5	17.5	14.5	23.0	18.5	23.5	14.5	---	---
29	12.5	6.5	16.0	9.0	18.0	15.0	21.5	17.5	24.0	15.5	---	---
30	13.0	7.0	16.0	9.5	17.5	15.0	22.0	17.0	24.0	16.0	---	---
31	---	---	16.0	9.5	---	---	22.5	17.5	23.5	15.5	---	---
MONTH	15.0	4.5	16.0	6.0	19.5	8.0	23.0	13.5	24.0	13.0	---	---



10337500 TRUCKEE RIVER AT TAHOE CITY, CA—Continued

CROSS-SECTIONAL ANALYSES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Depth at sample location, feet (81903)	Sampling depth, feet (00003)	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)
OCT						
02...*	1039	.93	.46	84	17.1	2.00
02...*	1040	1.36	.68	93	17.3	7.00
02...*	1041	1.91	.96	94	17.3	12.0
02...*	1042	2.46	1.23	93	17.3	17.0
02...*	1044	2.50	1.25	94	17.3	22.0
02...*	1045	2.50	1.25	94	17.3	27.0
02...*	1046	2.44	1.22	93	17.3	32.0
02...*	1048	2.17	1.08	94	17.3	37.0
02...*	1049	1.92	.96	94	17.3	42.0
02...*	1051	1.39	.70	94	17.3	47.0
02...*	1052	1.35	.68	95	17.4	52.0
02...*	1053	.69	.34	94	17.5	57.0
02...*	1054	.30	.15	95	17.8	62.0

\* Instantaneous discharge at time of cross-sectional measurement: Oct. 2, 82 ft<sup>3</sup>/s.

## 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<sup>2</sup>.

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<sup>3</sup>/s, Jan. 2, 1997, gage height, 9.97 ft, from rating curve extended above 3,100 ft<sup>3</sup>/s, on basis of slope-area measurements at gage heights 7.62 ft and 7.92 ft; minimum daily, 3.4 ft<sup>3</sup>/s, several days in August 1994.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	20	12	e36	46	100	232	313	227	336	157	27
2	92	19	13	e36	52	97	233	351	225	332	147	25
3	86	17	12	e36	56	94	252	393	221	329	140	22
4	85	17	11	35	52	92	284	436	208	317	134	21
5	81	15	15	e51	52	92	324	434	196	310	124	17
6	80	15	114	e55	52	93	322	383	195	305	112	16
7	78	15	137	53	52	98	297	339	187	299	105	15
8	71	15	48	55	53	111	313	325	163	291	104	15
9	67	17	34	66	53	133	319	309	154	283	101	14
10	58	16	32	68	59	155	311	283	141	271	98	14
11	52	15	29	67	48	162	300	245	139	265	97	13
12	51	15	27	65	49	167	309	219	139	260	93	12
13	48	17	31	64	46	177	315	219	144	255	92	11
14	45	14	36	63	42	191	283	234	190	247	90	10
15	41	15	29	63	42	217	261	246	235	242	87	10
16	37	13	27	62	106	227	238	252	232	237	84	9.1
17	34	13	25	61	209	230	225	256	229	234	81	8.8
18	33	13	24	61	140	249	210	239	226	227	78	8.8
19	31	13	24	61	115	276	197	224	230	223	77	8.8
20	31	13	30	63	103	285	207	224	257	219	74	8.8
21	30	13	34	68	95	317	205	219	279	212	70	8.8
22	30	10	30	58	92	334	200	218	277	210	66	8.4
23	28	11	28	58	92	343	197	222	274	204	57	7.4
24	29	11	e29	53	87	316	210	216	278	201	52	7.4
25	27	10	e30	51	110	267	234	210	295	197	47	7.4
26	25	10	e31	50	123	218	269	211	309	192	41	7.4
27	23	9.7	e32	50	135	190	327	255	313	187	44	7.4
28	23	10	e32	50	112	184	362	337	343	182	35	7.4
29	23	11	33	50	100	196	324	246	341	176	33	7.4
30	17	11	36	49	---	227	295	236	337	167	31	7.4
31	19	---	35	46	---	235	---	234	---	163	30	---
TOTAL	1467	413.7	1060	1704	2373	6073	8055	8528	6984	7573	2581	362.7
MEAN	47.3	13.8	34.2	55.0	81.8	196	268	275	233	244	83.3	12.1
MAX	92	20	137	68	209	343	362	436	343	336	157	27
MIN	17	9.7	11	35	42	92	197	210	139	163	30	7.4
AC-FT	2910	821	2100	3380	4710	12050	15980	16920	13850	15020	5120	719

e Estimated.

10338000 TRUCKEE RIVER NEAR TRUCKEE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	190	195	273	323	350	335	396	549	473	307	284	249
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1945 - 2004	
ANNUAL TOTAL	68240.7		47174.4			
ANNUAL MEAN	187		129		331	
HIGHEST ANNUAL MEAN					941	
LOWEST ANNUAL MEAN					32.4	
HIGHEST DAILY MEAN	664	May 29	436	May 4	8900	Jan 1 1997
LOWEST DAILY MEAN	9.7	Nov 27	7.4	Sep 23	3.4	Aug 18 1994
ANNUAL SEVEN-DAY MINIMUM	10	Nov 22	7.4	Sep 23	3.4	Aug 22 1994
MAXIMUM PEAK FLOW			564	May 4	11900	Jan 2 1997
MAXIMUM PEAK STAGE			2.40	May 4	9.97	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	135400		93570		239800	
10 PERCENT EXCEEDS	368		299		534	
50 PERCENT EXCEEDS	172		91		240	
90 PERCENT EXCEEDS	20		13		46	

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<sup>2</sup>.

## 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, 9,640 acre-ft, May 28, elevation, 5,935.97 ft; minimum, 3,260 acre-ft, Dec. 4, 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 2003 TO SEPTEMBER 2004  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6480	5660	3290	3760	3420	3820	4420	6930	9470	9470	8960	8270
2	6400	5560	3290	3750	3480	3780	4380	7150	9470	9470	8930	8220
3	6300	5430	3280	3710	3470	3740	4400	7390	9500	9470	8910	8120
4	6210	5150	3260	3650	3460	3700	4460	7640	9520	9460	8880	8020
5	6100	4880	3290	3620	3450	3690	4530	7880	9540	9450	8850	7920
6	6030	4660	3630	3590	3450	3670	4560	8080	9540	9430	8830	7810
7	5990	4490	3650	3570	3450	3680	4560	8240	9540	9410	8800	7660
8	5960	4350	3630	3550	3440	3710	4610	8420	9550	9400	8780	7410
9	5940	4260	3600	3540	3410	3760	4640	8550	9560	9390	8770	7120
10	5930	4130	3650	3520	3410	3820	4660	8720	9570	9370	8740	6830
11	5910	4030	3630	3510	3400	3860	4680	8840	9580	9350	8710	6560
12	5910	3940	3590	3500	3390	3910	4710	8940	9590	9340	8690	6280
13	5900	3870	3590	3490	3380	3940	4730	9040	9600	9320	8670	6040
14	5880	3810	3630	3480	3390	4000	4690	9160	9590	9300	8650	5850
15	5860	3760	3600	3480	3380	4070	4700	9270	9580	9280	8640	5690
16	5860	3690	3570	3480	3620	4130	4740	9380	9570	9270	8610	5460
17	5850	3650	3550	3470	3780	4190	4800	9440	9550	9250	8590	5170
18	5830	3600	3510	3460	3860	4250	4880	9530	9540	9230	8570	4910
19	5820	3520	3500	3460	3850	4340	4960	9570	9540	9210	8550	4680
20	5820	3490	3520	3460	3830	4400	5090	9600	9540	9210	8530	4470
21	5820	3470	3510	3450	3810	4500	5220	9580	9540	9190	8500	4300
22	5800	3430	3500	3450	3790	4580	5310	9540	9540	9180	8480	4160
23	5790	3410	3510	3440	3770	4650	5410	9500	9530	9160	8440	4030
24	5780	3380	3650	3450	3740	4650	5540	9490	9530	9150	8420	3930
25	5770	3360	3670	3430	3910	4680	5700	9500	9520	9130	8390	3830
26	5760	3340	3630	3410	3970	4610	5910	9500	9510	9100	8380	3760
27	5760	3330	3600	3460	3920	4520	6170	9530	9500	9090	8360	3690
28	5750	3300	3550	3450	3880	4460	6400	9640	9490	9070	8350	3630
29	5720	3290	3710	3450	3830	4430	6570	9620	9490	9040	8340	3570
30	5690	3290	3670	3450	---	4430	6730	9550	9480	9010	8320	3530
31	5700	---	3650	3430	---	4440	---	9500	---	8990	8310	---
MAX	6480	5660	3710	3760	3970	4680	6730	9640	9600	9470	8960	8270
MIN	5690	3290	3260	3410	3380	3670	4380	6930	9470	8990	8310	3530
a	5931.27	5928.24	5928.70	5928.42	5928.92	5929.70	5932.52	5935.81	5935.79	5935.21	5934.41	5928.55
b	-880	-2410	+360	-220	+400	+610	+2290	+2770	-20	-490	-680	-4780
CAL YR 2003	MAX 9750	MIN 3260	b -410									
WTR YR 2004	MAX 9640	MIN 3260	b -3050									

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.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily precipitation, 3.36 in., Dec. 6, 2003; no precipitation for many days.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.08	0.40	1.40	0.00	0.16	0.00	0.00	0.00	0.04	0.00	0.00
2	e0.00	0.03	0.03	0.36	0.82	0.04	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.16	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	3.36	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.08	0.23	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.39	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.51	0.16	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00
10	0.00	0.00	0.85	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.00	0.00
11	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00
12	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
13	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.31	0.94	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00
15	0.00	0.04	0.00	0.00	0.07	0.00	0.08	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.04	0.00	0.00	0.20	0.00	0.04	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.58	0.00	0.04	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.08	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.04
20	0.00	0.00	0.43	0.04	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.04	0.00	0.35	0.00	0.04	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	1.87	0.12	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.35	0.00	1.68	0.70	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	1.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.43	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.00	0.00	0.00	0.00
29	0.00	0.00	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.03	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.43	---	0.12	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.43	1.67	11.86	2.54	7.09	0.90	0.98	1.26	0.12	0.04	0.00	0.04

e Estimated.

## 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<sup>2</sup>.

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<sup>3</sup>/s, Jan. 2, 1997, gage height, 6.69 ft; no flow at times in many years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	20	7.3	e29	14	38	95	4.2	43	2.9	2.5	5.0
2	49	46	7.5	28	16	36	89	4.3	21	3.5	2.9	16
3	47	82	7.1	28	17	33	86	4.4	11	3.4	3.3	35
4	46	145	6.8	25	16	31	90	2.9	11	2.5	3.1	43
5	46	148	7.6	23	15	30	97	1.9	9.6	2.4	2.8	43
6	36	125	13	21	14	28	102	1.8	9.3	2.4	2.7	43
7	19	109	24	20	16	28	103	1.8	8.5	2.6	2.9	72
8	8.4	92	23	19	15	29	106	1.7	8.0	2.4	2.9	120
9	2.9	82	22	18	14	31	99	1.6	7.6	2.3	2.6	142
10	2.3	69	23	17	14	34	95	1.5	6.8	2.5	3.0	143
11	1.9	58	23	17	13	39	97	1.4	6.3	4.3	3.7	141
12	1.5	49	22	16	13	42	100	1.3	5.9	3.5	4.1	134
13	1.1	42	22	16	13	46	103	1.9	5.7	2.3	3.8	120
14	2.4	36	24	15	12	51	103	2.1	8.8	2.1	3.0	100
15	3.6	33	23	15	12	56	79	2.1	12	2.2	2.8	87
16	3.2	29	21	15	17	63	38	2.2	12	2.2	2.7	121
17	2.8	26	19	15	36	68	18	7.4	12	2.2	2.5	132
18	2.8	23	18	14	41	81	7.6	12	8.0	1.8	2.4	130
19	2.6	21	17	14	42	86	3.8	18	4.9	1.8	3.1	125
20	2.5	19	18	14	41	92	2.4	25	4.9	1.8	3.6	111
21	2.3	17	18	e14	39	104	1.7	43	3.5	2.0	3.0	92
22	2.7	15	17	e13	38	110	2.5	54	2.0	2.0	2.8	76
23	2.9	14	17	e14	35	117	4.1	54	1.6	2.0	2.5	64
24	2.7	12	21	e14	34	122	4.9	39	2.2	1.8	2.5	54
25	2.4	11	26	e14	39	119	6.3	27	2.7	1.7	2.5	45
26	2.2	10	25	e14	50	118	4.8	27	2.7	2.7	2.2	38
27	2.2	9.5	22	14	49	112	4.0	27	2.8	3.6	2.2	32
28	2.1	9.0	21	15	44	104	4.2	36	3.1	3.2	2.4	28
29	3.8	8.5	25	15	41	96	4.2	54	3.1	3.2	2.5	24
30	9.9	8.1	28	15	---	95	4.3	59	2.8	3.0	2.4	20
31	14	---	27	14	---	97	---	59	---	2.9	2.3	---
TOTAL	380.2	1368.1	595.3	535	760	2136	1554.8	578.5	242.8	79.2	87.7	2336.0
MEAN	12.3	45.6	19.2	17.3	26.2	68.9	51.8	18.7	8.09	2.55	2.83	77.9
MAX	52	148	28	29	50	122	106	59	43	4.3	4.1	143
MIN	1.1	8.1	6.8	13	12	28	1.7	1.3	1.6	1.7	2.2	5.0
AC-FT	754	2710	1180	1060	1510	4240	3080	1150	482	157	174	4630

e Estimated.

10338500 DONNER CREEK AT DONNER LAKE, NEAR TRUCKEE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	29.2	27.5	30.2	32.9	32.7	38.0	53.2	83.9	45.8	11.9	7.65	26.3
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1930	1930	1930	1929	1929	1929	1929	1929	1929	1937	1936	1930

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1929 - 2004	
ANNUAL TOTAL	13115.3		10653.6			
ANNUAL MEAN	35.9		29.1		35.8	
HIGHEST ANNUAL MEAN					83.3 1982	
LOWEST ANNUAL MEAN					7.71 1977	
HIGHEST DAILY MEAN	347	May 25	148	Nov 5	820	Jan 2 1997
LOWEST DAILY MEAN	1.1	Apr 27	1.1	Oct 13	0.00	Jan 1 1929
ANNUAL SEVEN-DAY MINIMUM	1.7	Jul 16	1.6	May 6	0.00	Jan 1 1929
MAXIMUM PEAK FLOW			181	Nov 4	863	Jan 2 1997
MAXIMUM PEAK STAGE			4.18	Nov 4	6.69	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	26010		21130		25900	
10 PERCENT EXCEEDS	83		95		98	
50 PERCENT EXCEEDS	24		15		15	
90 PERCENT EXCEEDS	2.3		2.3		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<sup>2</sup>.

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<sup>3</sup>/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<sup>3</sup>/s, Aug. 21, 22, 1994.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	20	7.6	37	19	58	173	101	129	14	4.2	6.0
2	49	46	8.1	38	21	54	162	120	103	13	4.3	17
3	48	87	7.6	36	22	50	167	139	83	12	4.6	34
4	47	154	7.4	33	21	47	188	162	76	11	4.6	43
5	47	156	7.9	30	20	46	206	168	70	11	4.3	43
6	37	125	46	28	19	46	201	148	71	10	4.2	43
7	20	103	52	27	e20	47	191	131	66	9.8	4.4	73
8	9.7	86	30	27	20	51	202	133	53	9.2	4.4	131
9	4.3	77	26	27	19	58	197	121	45	8.4	4.2	148
10	3.8	65	28	25	18	67	189	103	40	7.8	4.1	145
11	3.6	55	27	25	18	77	188	82	39	7.4	4.6	137
12	3.3	47	25	24	18	84	195	69	38	7.2	5.3	130
13	3.1	40	26	23	17	94	198	73	39	6.7	5.1	115
14	3.6	35	28	23	17	107	184	83	45	6.2	4.4	95
15	4.5	32	26	22	17	127	152	86	47	6.0	4.3	80
16	4.4	28	24	22	32	143	100	90	46	5.7	4.3	114
17	4.1	25	22	22	87	152	72	102	45	5.5	4.0	129
18	4.0	23	21	22	75	166	54	93	39	5.0	4.0	129
19	3.9	20	20	22	68	187	45	95	32	4.8	4.3	124
20	3.9	19	22	22	62	193	43	105	29	4.6	4.8	109
21	3.7	16	23	21	58	214	43	117	26	4.6	4.4	91
22	3.9	14	21	20	56	232	41	133	24	4.6	4.3	73
23	4.1	13	21	20	52	245	44	135	22	4.5	4.1	59
24	4.0	12	34	21	51	243	51	115	20	4.3	e4.1	48
25	3.8	11	36	20	68	222	62	98	19	3.9	e4.0	41
26	3.7	9.8	32	19	79	198	80	96	18	4.2	e3.9	33
27	3.6	8.8	29	21	74	178	105	115	17	4.7	3.8	29
28	3.6	8.4	27	21	67	166	116	158	16	4.6	3.9	25
29	4.4	8.1	32	20	61	165	95	139	15	4.5	3.9	22
30	9.2	7.7	34	21	---	175	87	146	14	4.4	3.8	20
31	14	---	32	20	---	177	---	142	---	4.4	3.6	---
TOTAL	412.2	1351.8	782.6	759	1176	4069	3831	3598	1326	214.0	132.2	2286.0
MEAN	13.3	45.1	25.2	24.5	40.6	131	128	116	44.2	6.90	4.26	76.2
MAX	50	156	52	38	87	245	206	168	129	14	5.3	148
MIN	3.1	7.7	7.4	19	17	46	41	69	14	3.9	3.6	6.0
AC-FT	818	2680	1550	1510	2330	8070	7600	7140	2630	424	262	4530

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2004, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	28.9	27.5	41.1	80.0	70.6	105	144	224	150	42.0	9.69	44.1
MAX	49.0	53.8	201	438	200	251	220	379	398	180	38.1	76.2
(WY)	2000	2003	1997	1997	1996	1995	1993	1995	1995	1995	1995	2004
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1993 - 2004	
ANNUAL TOTAL	28198.1		19937.8			
ANNUAL MEAN	77.3		54.5		78.0	
HIGHEST ANNUAL MEAN					142	
LOWEST ANNUAL MEAN					25.9	
HIGHEST DAILY MEAN	725		245		2380	
LOWEST DAILY MEAN	3.1		3.1		2.3	
ANNUAL SEVEN-DAY MINIMUM	3.7		3.7		2.5	
MAXIMUM PEAK FLOW			268		2500	
MAXIMUM PEAK STAGE			5.28		12.76	
ANNUAL RUNOFF (AC-FT)	55930		39550		56520	
10 PERCENT EXCEEDS	161		148		194	
50 PERCENT EXCEEDS	47		30		42	
90 PERCENT EXCEEDS	4.9		4.3		6.1	

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<sup>2</sup>.

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<sup>3</sup>/s, Feb. 1, 1963, gage height, 6.16 ft, site and datum then in use; minimum, 1.3 ft<sup>3</sup>/s, July 30, 1961. Maximum discharge since construction of Martis Creek Lake Dam in 1971, 663 ft<sup>3</sup>/s, Feb. 28, 1986, gage height, 5.66 ft, maximum gage height, 6.01 ft, Apr. 2, 1974; minimum daily, 0.20 ft<sup>3</sup>/s, Nov. 9–14, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	5.5	7.1	9.4	8.1	25	75	20	7.1	3.9	2.8	3.7
2	4.2	5.3	7.9	7.5	8.9	23	74	19	6.9	4.0	3.0	3.6
3	4.7	5.6	7.4	9.1	9.4	19	73	19	6.5	4.0	2.9	3.5
4	4.8	5.1	6.9	9.3	8.9	18	72	19	6.2	3.8	2.9	3.7
5	4.6	5.9	7.1	9.4	7.7	18	71	19	6.0	3.5	2.8	3.8
6	4.5	5.9	12	9.4	7.8	21	62	18	5.8	3.6	2.9	3.8
7	4.5	6.3	35	9.6	8.8	26	53	16	5.7	3.6	2.9	3.8
8	4.4	6.6	18	11	7.9	32	51	15	5.4	3.4	3.1	3.7
9	4.1	7.9	12	13	8.3	41	49	15	7.4	3.2	3.1	3.6
10	3.8	7.5	11	13	7.6	51	47	14	8.8	3.2	3.0	3.6
11	3.9	6.6	9.9	12	7.3	57	44	16	7.5	3.1	2.9	3.6
12	4.1	6.4	9.2	11	7.3	59	42	16	6.4	3.1	2.9	3.5
13	4.0	6.4	9.2	11	7.2	63	41	14	6.0	3.1	3.1	3.5
14	4.2	6.4	11	10	7.5	67	38	12	5.7	3.0	3.5	3.4
15	4.4	7.1	9.3	10	7.7	70	34	12	5.4	3.0	3.7	3.4
16	4.4	7.0	9.1	9.8	11	71	31	11	5.1	3.0	4.0	3.4
17	4.4	6.9	8.4	9.5	56	71	29	11	5.0	3.1	4.0	3.6
18	4.3	6.7	8.0	9.5	76	71	26	10	4.6	3.1	3.5	3.3
19	4.3	7.0	7.9	9.4	64	71	24	10	4.5	3.0	4.1	3.4
20	4.3	7.0	9.0	9.5	38	70	23	9.9	4.4	3.2	4.4	4.2
21	4.5	7.1	10	8.8	28	70	23	9.8	4.2	3.2	4.3	5.0
22	4.6	6.7	9.7	7.8	24	70	23	9.8	4.1	3.4	4.0	4.7
23	4.7	5.9	9.2	8.1	21	70	22	9.5	4.0	3.3	3.9	4.5
24	4.5	6.5	25	8.9	20	70	21	9.3	3.7	3.3	3.9	4.3
25	4.4	6.9	41	8.7	44	71	21	9.3	3.8	3.2	3.9	4.2
26	4.2	6.5	21	7.6	75	71	21	9.2	3.8	3.1	3.7	4.1
27	4.2	6.3	12	8.5	62	71	23	8.9	3.6	3.0	3.9	4.1
28	4.4	6.5	11	8.8	38	70	24	9.2	3.8	2.9	4.0	4.1
29	4.5	6.6	10	8.4	29	70	23	9.2	3.8	2.9	4.0	4.1
30	4.4	6.9	10	8.3	---	73	20	8.3	3.8	2.8	3.9	4.3
31	5.6	---	10	8.5	---	75	---	7.6	---	2.8	3.8	---
TOTAL	135.9	195.0	384.3	294.8	706.4	1725	1180	396.0	159.0	100.8	108.8	115.5
MEAN	4.38	6.50	12.4	9.51	24.4	55.6	39.3	12.8	5.30	3.25	3.51	3.85
MAX	5.6	7.9	41	13	76	75	75	20	8.8	4.0	4.4	5.0
MIN	3.8	5.1	6.9	7.5	7.2	18	20	7.6	3.6	2.8	2.8	3.3
AC-FT	270	387	762	585	1400	3420	2340	785	315	200	216	229

## PYRAMID AND WINNEMUCCA LAKES BASIN

## 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 - 2004, BY WATER YEAR (WY)

	8.80	15.8	20.0	28.7	34.7	46.8	51.6	54.0	32.8	13.5	9.53	8.61
MEAN	8.80	15.8	20.0	28.7	34.7	46.8	51.6	54.0	32.8	13.5	9.53	8.61
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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1972 - 2004

ANNUAL TOTAL	6422.7	5501.5	
ANNUAL MEAN	17.6	15.0	27.1
HIGHEST ANNUAL MEAN			74.5 1983
LOWEST ANNUAL MEAN			6.90 1977
HIGHEST DAILY MEAN	73 Mar 16	76 Feb 18	626 Mar 1 1986
LOWEST DAILY MEAN	2.4 Aug 20	2.8 Jul 30	0.20 Nov 9 1977
ANNUAL SEVEN-DAY MINIMUM	3.2 Aug 15	2.9 Jul 30	0.21 Nov 9 1977
MAXIMUM PEAK FLOW		84 Mar 30	663 Feb 28 1986
MAXIMUM PEAK STAGE		3.18 Mar 30	6.01 Apr 2 1974
ANNUAL RUNOFF (AC-FT)	12740	10910	19610
10 PERCENT EXCEEDS	45	48	68
50 PERCENT EXCEEDS	9.3	7.3	12
90 PERCENT EXCEEDS	4.1	3.4	4.2

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, 23.5°C, July 29, 31; minimum recorded, 1.5°C, several days in February.

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	16.5	13.5	9.5	7.5	5.0	4.0	3.0	2.0	3.5	2.5	2.0	2.0
2	17.0	13.5	8.5	7.5	5.0	4.5	3.5	2.5	3.0	2.0	2.5	2.0
3	16.5	13.5	8.0	7.0	5.0	4.5	3.0	2.5	3.5	2.5	2.5	2.0
4	16.0	13.5	8.0	6.5	5.0	4.0	3.0	2.5	3.5	2.5	3.0	2.0
5	16.5	13.5	8.0	6.5	5.5	4.5	3.0	2.5	3.5	2.5	3.0	2.0
6	16.5	13.0	7.5	6.5	5.0	5.0	3.0	2.5	3.5	2.0	3.0	2.0
7	16.5	13.0	7.5	6.5	5.0	4.5	3.0	2.5	3.5	2.5	3.0	2.0
8	16.0	13.0	7.5	6.5	4.5	4.0	3.5	2.5	3.5	2.5	3.5	2.5
9	16.0	13.0	7.0	6.5	4.5	4.0	3.0	2.5	3.5	2.5	3.5	2.5
10	15.0	12.5	7.0	6.5	4.0	3.5	3.0	2.5	3.5	2.5	3.5	3.0
11	15.0	12.0	7.0	6.0	4.0	3.5	3.0	2.5	3.5	2.5	4.0	3.0
12	15.0	12.0	7.0	6.0	4.0	3.0	3.0	2.5	3.5	2.5	4.0	3.5
13	14.0	11.5	6.5	5.5	4.0	3.5	3.0	2.5	3.5	2.5	4.5	4.0
14	14.0	11.0	6.5	5.5	3.5	2.5	3.0	2.5	4.0	2.5	4.5	4.0
15	13.5	11.0	6.5	5.5	3.5	3.0	3.5	2.5	3.5	3.0	4.5	4.0
16	13.5	11.0	6.5	5.5	4.0	3.0	3.5	2.5	3.5	2.5	5.0	4.0
17	13.5	10.5	6.0	5.5	4.0	3.0	3.5	2.5	2.5	2.0	5.0	4.5
18	13.5	10.5	6.5	5.0	4.0	3.5	3.5	2.5	2.0	1.5	5.5	4.5
19	13.5	11.0	6.5	5.0	4.5	3.5	3.5	2.5	2.0	1.5	5.5	4.5
20	13.5	11.0	6.5	5.5	4.5	4.0	3.5	2.5	2.0	2.0	7.5	4.5
21	13.5	11.0	6.0	5.0	4.5	4.0	3.5	2.5	2.5	2.0	9.5	6.5
22	13.5	10.5	5.5	4.5	4.5	4.0	3.5	2.5	2.5	2.0	10.5	7.5
23	13.5	11.0	5.0	4.0	4.5	4.0	3.0	2.5	3.0	2.5	10.0	7.5
24	12.5	10.0	5.0	4.0	4.0	4.0	3.5	2.5	3.0	2.5	10.0	7.5
25	12.5	10.0	5.0	4.0	4.0	3.5	3.0	2.5	2.5	2.5	8.5	7.0
26	12.0	10.0	5.0	4.0	3.5	3.0	3.0	2.5	2.5	1.5	8.5	6.5
27	12.0	9.5	4.5	3.5	3.5	3.0	3.0	2.5	2.0	1.5	7.5	6.0
28	12.0	9.5	4.5	4.0	3.5	3.0	3.5	2.5	2.0	1.5	8.0	6.0
29	12.0	9.5	5.0	4.5	3.0	3.0	3.5	2.5	2.0	1.5	9.0	7.0
30	11.0	9.0	5.0	4.5	3.5	3.0	3.0	2.5	---	---	9.0	7.5
31	9.0	8.5	---	---	3.5	3.0	3.5	2.5	---	---	9.0	7.5
MONTH	17.0	8.5	9.5	3.5	5.5	2.5	3.5	2.0	4.0	1.5	10.5	2.0

## PYRAMID AND WINNEMUCCA LAKES BASIN

10339400 MARTIS CREEK NEAR TRUCKEE, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	8.0	13.5	12.0	18.0	15.5	21.0	18.5	22.5	18.5	21.0	15.5
2	8.0	7.5	14.5	12.5	18.5	16.0	21.0	18.0	23.0	18.5	20.0	16.0
3	9.5	7.5	15.0	13.0	18.5	16.0	21.0	18.0	22.5	18.0	19.0	15.0
4	9.0	8.5	15.5	13.5	19.0	16.0	21.5	18.0	22.5	18.0	19.5	15.0
5	10.5	8.5	15.5	14.0	19.0	16.5	21.5	18.5	22.0	17.5	19.5	14.5
6	9.5	9.0	15.5	14.0	19.5	16.5	21.5	18.5	22.0	18.0	19.5	14.5
7	9.5	8.5	15.0	13.5	19.5	17.0	22.0	19.0	22.0	17.5	20.0	14.5
8	10.0	8.0	15.0	13.0	18.0	16.5	22.0	18.5	22.5	17.0	19.5	14.5
9	11.0	8.5	15.0	13.0	17.5	16.0	22.0	19.0	22.0	17.5	19.5	14.0
10	11.0	9.0	14.5	13.5	18.0	16.0	22.5	19.0	22.0	17.0	19.5	14.5
11	11.0	9.0	14.0	13.0	18.0	16.0	22.5	19.0	---	---	19.5	14.5
12	11.5	10.0	14.5	13.0	18.5	16.0	22.5	19.0	---	---	19.5	15.0
13	11.5	10.5	14.5	13.0	18.5	16.0	22.5	19.0	---	---	19.0	14.5
14	11.0	9.5	14.5	13.0	19.0	16.5	22.5	19.0	21.5	16.5	18.5	14.0
15	10.0	9.0	15.0	13.5	19.0	16.5	22.5	19.0	21.0	17.0	18.5	14.0
16	10.0	9.0	15.5	13.5	19.5	16.5	21.5	19.0	20.5	17.0	18.5	14.0
17	9.5	9.0	16.0	14.0	19.5	17.0	22.5	19.0	21.0	16.5	18.5	14.0
18	9.0	8.5	15.5	14.0	19.5	17.0	23.0	19.0	22.5	16.0	16.5	14.0
19	9.0	8.5	15.5	13.5	20.0	17.0	22.5	19.5	21.0	16.5	15.0	13.0
20	9.5	8.5	16.0	14.0	20.0	17.5	23.0	19.0	21.0	17.0	15.0	11.5
21	9.5	8.5	15.5	14.0	20.5	17.5	22.5	19.5	21.0	16.5	15.0	12.0
22	9.5	8.5	16.0	14.0	20.5	18.0	22.5	19.5	19.0	16.5	15.0	11.5
23	10.5	8.5	16.5	14.0	20.5	18.0	23.0	19.5	20.5	16.5	15.5	12.0
24	10.0	9.0	16.5	14.0	20.5	18.0	23.0	19.5	20.5	16.0	15.5	12.0
25	11.5	9.5	16.0	14.5	21.0	18.0	23.0	19.5	20.5	16.0	15.5	12.0
26	12.5	10.5	16.0	14.0	21.0	18.0	23.0	19.5	20.0	16.0	15.5	12.0
27	12.5	11.5	16.5	14.5	21.5	18.5	22.5	19.0	20.0	15.0	15.0	12.0
28	12.5	11.5	16.0	15.0	21.5	18.5	22.5	19.5	20.0	15.0	15.0	12.0
29	12.0	11.0	17.0	15.0	22.0	18.5	23.5	19.5	20.5	15.5	15.0	12.0
30	12.5	11.0	17.0	15.0	21.5	18.5	23.0	18.5	20.5	15.5	14.5	12.0
31	---	---	17.5	15.0	---	---	23.5	19.0	20.5	15.5	---	---
MONTH	12.5	7.5	17.5	12.0	22.0	15.5	23.5	18.0	---	---	21.0	11.5

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<sup>2</sup>.

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, 17,800 acre-ft, June 8–21, maximum elevation unknown; minimum, 4,960 acre-ft, Sept. 30, elevation, 5,685.90 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 2003 TO SEPTEMBER 2004  
DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15400	10200	9750	9960	9660	9800	9400	12000	17400	17400	14900	9150
2	15100	10200	9770	9870	9650	9810	9410	12200	17400	17400	14700	8900
3	14800	10200	9780	9830	9670	9790	9400	12400	17400	17400	14500	8660
4	14600	10200	9790	9800	9660	9780	9440	12700	17500	17300	14400	8410
5	14300	10200	9800	9790	9660	9760	9560	12900	17600	17300	14200	8160
6	14000	10200	9840	9770	9660	9750	9720	13200	17700	17200	14000	7920
7	13800	10100	10100	9740	9670	9740	9830	13400	17700	17200	13900	7680
8	13500	10100	10200	9720	9660	9760	9930	13600	e17800	17100	13700	7440
9	13300	10000	10100	9700	9670	9800	10100	13800	e17800	17100	13500	7200
10	13000	9990	10000	9680	9660	9890	10200	13900	e17800	17000	13400	6950
11	12700	9990	9860	9680	9660	9890	10400	14000	e17800	16900	13200	6700
12	12400	9890	9780	9660	9660	9890	10500	14100	e17800	16900	13000	6460
13	12200	9840	9790	9660	9660	9900	10600	14100	e17800	16800	12900	6230
14	11900	9810	e9810	9660	9670	9940	10800	14100	e17800	16700	12700	6000
15	11600	9800	9830	9670	9670	10000	10800	14200	17800	16600	12600	5770
16	11400	9780	9830	9670	9670	10100	10900	14400	17800	16600	12400	5540
17	11200	9760	9840	9670	9780	10000	11000	14500	17800	16500	12200	5390
18	11100	9740	9830	9670	10100	10000	11100	14700	17800	16400	12100	5280
19	10900	9720	9830	9670	10200	10000	11100	14800	17800	16300	11900	5170
20	10700	9720	9840	9690	10200	10100	11200	15000	17800	16200	11800	5060
21	10500	9720	9850	9690	10100	10200	11200	15000	17800	16100	11600	5010
22	10300	9720	9870	9680	10100	10400	11300	15200	17700	16000	11400	5010
23	10200	9720	9880	9670	9990	10500	11200	15300	17700	16000	11300	5010
24	10200	9720	9900	9670	9910	10400	11200	15400	17600	15900	11100	5000
25	10200	9730	9990	9670	9820	10200	11200	15500	17600	15800	10800	5000
26	10200	9730	10000	9660	9810	9920	11300	15700	17600	15700	10600	4990
27	10200	9730	10000	9660	9760	9700	11400	15900	17500	15600	10400	4980
28	10200	9730	10000	9670	9790	9460	11600	16300	17500	15500	10100	4970
29	10200	9740	10100	9670	9800	9230	11600	16700	17500	15300	9890	4970
30	10200	9740	10000	9660	---	9250	11900	17000	17500	15200	9640	4960
31	10200	---	9960	9660	---	9320	---	17200	---	15000	9400	---
MEAN	12000	9890	9900	9710	9790	9880	10600	14500	17700	16500	12300	6270
MAX	15400	10200	10200	9960	10200	10500	11900	17200	17800	17400	14900	9150
MIN	10200	9720	9750	9660	9650	9230	9400	12000	17400	15000	9400	4960
a	5704.71	5703.46	5704.11	5703.22	5703.64	5702.19	5709.48	5721.08	5721.62	5716.68	5702.43	5685.90
b	-5400	-460	+220	-300	+140	-480	+2580	+5300	+300	-2500	-5600	-4440

CAL YR 2003 MEAN 16100 MAX 30600 MIN 7380 b +2210  
WTR YR 2004 MEAN 11600 MAX 17800 MIN 4960 b -10640

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<sup>2</sup>.

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<sup>3</sup>/s, Dec. 23, 1955, gage height, 10.13 ft, present datum, from rating curve extended above 910 ft<sup>3</sup>/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<sup>3</sup>/s, July 18, 1961, result of work on dam upstream. Maximum discharge since construction of Prosser Creek Dam in 1963, 2,030 ft<sup>3</sup>/s, Jan. 3, 1997, gage height, 6.72 ft, from rating curve extended above 880 ft<sup>3</sup>/s, on basis of valve setting at Prosser Creek Dam; minimum daily, 0.02 ft<sup>3</sup>/s, Jan. 2, 1975, result of temporary closing of Prosser Creek Dam for spillway maintenance.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	12	11	48	26	39	149	105	76	50	81	111
2	128	11	11	43	26	39	149	105	100	50	81	112
3	128	11	11	33	26	39	150	105	100	50	80	111
4	128	11	11	33	25	39	151	105	84	50	80	110
5	127	20	11	33	23	39	151	106	72	50	80	110
6	127	34	12	33	23	40	151	106	72	50	80	109
7	126	33	11	33	23	40	152	106	71	49	80	110
8	126	33	52	34	23	40	152	108	71	50	80	110
9	125	33	82	34	23	41	138	109	71	50	80	109
10	125	33	82	34	23	71	128	108	71	49	81	108
11	125	34	64	34	23	94	128	108	71	49	80	108
12	125	33	e30	29	23	95	128	109	72	49	80	106
13	124	28	e20	25	22	95	128	109	73	49	80	105
14	123	21	e20	25	22	96	128	86	73	49	80	104
15	103	20	e20	25	22	120	107	58	73	49	80	104
16	94	20	e20	25	23	157	81	59	73	49	79	83
17	93	21	e20	25	23	181	78	59	74	49	79	57
18	93	21	20	25	24	181	78	59	74	49	79	52
19	93	17	20	25	57	181	78	59	74	49	79	51
20	92	11	20	25	74	182	78	59	74	48	79	41
21	79	11	21	25	73	183	92	59	74	48	78	12
22	58	11	20	25	73	216	102	60	73	48	77	6.5
23	38	11	20	25	73	285	102	60	73	48	91	6.4
24	17	11	21	26	73	315	102	44	73	48	111	6.5
25	12	11	21	26	74	318	103	21	64	48	110	6.9
26	11	11	20	26	74	271	103	13	50	48	110	6.7
27	11	11	21	26	55	237	103	14	50	60	111	6.0
28	11	11	21	26	40	236	102	14	50	67	112	7.9
29	11	11	31	26	39	185	103	14	50	67	111	8.2
30	11	11	48	26	---	148	104	14	50	76	111	8.5
31	11	---	48	26	---	149	---	31	---	81	110	---
TOTAL	2604	567	840	904	1128	4352	3499	2172	2126	1626	2730	1986.6
MEAN	84.0	18.9	27.1	29.2	38.9	140	117	70.1	70.9	52.5	88.1	66.2
MAX	129	34	82	48	74	318	152	109	100	81	112	112
MIN	11	11	11	25	22	39	78	13	50	48	77	6.0
AC-FT	5170	1120	1670	1790	2240	8630	6940	4310	4220	3230	5410	3940

e Estimated.



## 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<sup>2</sup>.

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, 17,600 acre-ft, July 3–13, maximum elevation, 6,949.41 ft, July 12; minimum, 14,000 acre-ft, Dec. 16–23, minimum elevation, 6944.15 ft, Dec. 19.

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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16700	15600	14300	14500	14600	15300	16400	16600	17300	17500	17300	16900
2	16700	15600	14300	14500	14600	15300	16400	16700	17300	17500	17300	16900
3	16700	15500	14200	14500	14600	15300	16500	16700	17300	17600	17300	16900
4	16600	15500	14100	14500	14600	15300	16500	16900	17300	17600	17200	16800
5	16600	15500	14200	14500	14600	15300	16600	17000	17200	17600	17200	16800
6	16500	15400	14300	14500	14600	15300	16700	17100	17200	17600	17200	16800
7	16500	15400	14300	14500	14600	15300	16800	17100	17200	17600	17200	16800
8	16400	15400	14200	14500	14600	15300	16900	17200	17100	17600	17200	16800
9	16400	15400	14100	14500	14700	15300	16900	17200	17100	17600	17200	16800
10	16300	15400	14200	14500	14600	15300	17000	17300	17200	17600	17200	16800
11	16300	15400	14100	14500	14600	15300	17100	17300	17200	17600	17200	16800
12	16300	15300	14100	14500	14600	15400	17200	17300	17200	17600	17100	16700
13	16200	15300	14100	14500	14600	15400	17200	17300	17300	17600	17100	16700
14	16200	15200	14100	14500	14600	15400	17300	17300	17300	17500	17100	16700
15	16100	15200	14100	14500	14600	15400	17300	17300	17400	17500	17100	16700
16	16100	15100	14000	14500	14800	15500	17300	17300	17400	17500	17100	16600
17	16100	15000	14000	14500	14800	15500	17200	17300	17500	17500	17100	16600
18	16000	15000	14000	14500	14900	15600	17200	17200	17500	17500	17100	16500
19	16000	14900	14000	14500	14900	15600	17200	17300	17500	17400	17100	16500
20	15900	14900	14000	14500	14900	15700	17100	17300	17500	17400	17100	16400
21	15900	14800	14000	14500	15000	15700	17000	17300	17500	17400	17100	16400
22	15900	14800	14000	14500	15000	15800	16900	17300	17500	17400	17000	16400
23	15900	14700	14000	14500	15000	15900	16700	17300	17500	17400	17000	16300
24	15800	14600	14200	14500	15000	16000	16600	17200	17500	17400	17000	16300
25	15800	14600	14200	14500	15100	16100	16500	17200	17500	17400	17000	16200
26	15800	14500	14200	14500	15200	16100	16500	17200	17500	17400	17000	16200
27	15700	14500	14200	14600	15200	16200	16600	17300	17500	17400	17000	16100
28	15700	14400	14200	14600	15200	16200	16600	17400	17500	17400	17000	16100
29	15600	14400	14300	14600	15200	16200	16600	17400	17500	17300	16900	16000
30	15600	14400	14300	14600	---	16200	16600	17400	17500	17300	16900	16000
31	15600	---	14300	14600	---	16300	---	17300	---	17300	16900	---
MAX	16700	15600	14300	14600	15200	16300	17300	17400	17500	17600	17300	16900
MIN	15600	14400	14000	14500	14600	15300	16400	16600	17100	17300	16900	16000
a	6946.60	6944.75	6944.72	6945.04	6946.02	6947.60	6947.99	6949.07	6949.28	6949.02	6948.46	6947.12
b	-1200	-1200	-100	+300	+600	+1100	+300	+700	+200	-200	-400	-900
CAL YR 2003	MAX 17800	MIN 14000	b -300									
WTR YR 2004	MAX 17600	MIN 14000	b -800									

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.





## PYRAMID AND WINNEMUCCA LAKES BASIN

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<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1953 to current year.

PRECIPITATION DATA: Water years 1991–96.

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<sup>3</sup>/s, Jan. 1, 1997, gage height, 5.20 ft, from poor high-water mark on gage house, rating curve extended above 160 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 4.28 ft; minimum daily, 1.0 ft<sup>3</sup>/s, Sept. 13, 1960.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft<sup>3</sup>/s, or maximum:

Date	Discharge Time	Gage height (ft <sup>3</sup> /s)	(ft)
Apr. 5	1715	35	2.44

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	2.0	2.5	e3.0	2.9	3.6	19	21	8.5	3.4	1.7	1.5
2	1.8	2.0	2.7	e3.0	2.9	3.6	18	22	8.2	3.3	1.7	1.5
3	2.0	2.0	2.5	3.0	2.9	3.5	21	23	7.8	3.1	1.7	1.6
4	1.9	2.1	2.4	e3.0	2.9	3.5	25	24	7.3	2.9	1.7	1.6
5	1.8	2.1	3.7	3.0	e3.0	3.5	27	24	6.9	2.7	1.7	1.6
6	1.8	2.1	14	2.9	2.9	3.9	27	23	6.8	2.6	1.7	1.6
7	1.8	2.2	11	2.9	2.9	4.4	26	21	6.6	2.6	1.7	1.5
8	1.8	2.3	4.3	3.4	e3.0	5.1	27	19	6.3	2.5	1.6	1.5
9	1.8	2.5	3.4	3.6	2.9	6.0	28	18	6.5	2.5	1.6	1.5
10	1.7	2.3	3.2	3.5	2.9	6.8	27	18	6.2	2.4	1.6	1.5
11	1.8	2.2	3.0	3.5	2.8	7.1	27	19	5.8	2.4	1.6	1.5
12	1.8	2.2	2.9	3.5	2.8	7.5	28	16	5.4	2.3	1.6	1.5
13	1.8	2.3	3.0	3.5	2.8	8.0	28	15	5.1	2.3	1.6	1.5
14	1.8	2.3	3.1	3.4	2.7	9.0	25	14	5.0	2.2	1.6	1.6
15	1.8	2.4	2.9	3.3	2.7	10	23	13	4.8	2.2	1.6	1.6
16	1.8	2.3	2.8	3.2	7.8	11	20	13	4.8	2.2	1.7	1.6
17	1.8	2.3	2.7	3.1	14	12	18	12	4.6	2.1	1.6	1.6
18	1.8	2.3	2.7	3.1	8.3	13	17	11	4.5	2.1	1.6	1.6
19	1.8	2.4	2.7	3.1	6.1	15	15	11	4.3	2.1	1.6	1.6
20	1.8	2.5	3.3	3.1	5.2	17	17	11	4.1	2.1	1.6	1.9
21	1.8	2.4	3.3	3.0	4.7	19	16	10	4.0	2.0	1.6	1.8
22	1.8	2.2	3.0	e3.0	4.4	21	16	10	3.8	1.9	1.6	1.8
23	1.8	2.1	3.0	e3.0	4.2	22	16	9.8	3.7	1.8	1.6	1.7
24	1.8	2.1	e3.8	3.0	4.1	21	18	9.2	3.5	1.8	1.6	1.7
25	1.8	2.1	e3.7	3.0	4.5	18	19	8.9	3.4	1.8	1.6	1.6
26	1.8	2.1	3.6	e3.0	4.5	15	22	8.6	3.3	1.8	1.6	1.6
27	1.8	2.1	3.5	3.0	4.0	13	25	9.1	3.3	1.8	1.6	1.6
28	1.8	2.2	3.4	2.9	3.8	14	25	13	3.3	1.8	1.6	1.6
29	1.8	2.4	3.3	2.9	3.7	17	22	10	3.3	1.7	1.6	1.7
30	1.9	2.5	e3.3	2.9	---	21	21	9.2	3.3	1.7	1.6	1.7
31	2.0	---	3.0	2.9	---	22	---	8.8	---	1.7	1.5	---
TOTAL	56.2	67.0	115.7	96.7	122.3	356.5	663	454.6	154.4	69.8	50.3	48.2
MEAN	1.81	2.23	3.73	3.12	4.22	11.5	22.1	14.7	5.15	2.25	1.62	1.61
MAX	2.0	2.5	14	3.6	14	22	28	24	8.5	3.4	1.7	1.9
MIN	1.7	2.0	2.4	2.9	2.7	3.5	15	8.6	3.3	1.7	1.5	1.5
AC-FT	111	133	229	192	243	707	1320	902	306	138	100	96

e Estimated.

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA—Continued  
(Hydrologic Benchmark Station)

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.38	4.98	6.97	8.36	8.00	10.7	24.3	42.7	24.7	7.04	3.08	2.69
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1954 - 2004	
ANNUAL TOTAL	3171.8		2254.7			
ANNUAL MEAN	8.69		6.16		12.2	
HIGHEST ANNUAL MEAN					30.0 1983	
LOWEST ANNUAL MEAN					2.65 1977	
HIGHEST DAILY MEAN	54	May 24	28	Apr 9	800	Jan 1 1997
LOWEST DAILY MEAN	1.7	Sep 23	1.5	Aug 31	1.0	Sep 13 1960
ANNUAL SEVEN-DAY MINIMUM	1.7	Sep 23	1.5	Sep 7	1.1	Sep 9 1960
MAXIMUM PEAK FLOW			35		1230 Jan 1 1997	
MAXIMUM PEAK STAGE			2.44		5.20 Jan 1 1997	
ANNUAL RUNOFF (AC-FT)	6290		4470		8870	
10 PERCENT EXCEEDS	21		18		32	
50 PERCENT EXCEEDS	3.7		3.0		4.4	
90 PERCENT EXCEEDS	1.8		1.6		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 fair. Temperature records are excellent. Interruptions in 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 November 2000 through March 2001.

## EXTREMES FOR CURRENT YEAR.—

SPECIFIC CONDUCTANCE: Maximum recorded, 154 microsiemens, Oct. 20; minimum recorded, 50 microsiemens, May 4, 5.

WATER TEMPERATURE: Maximum recorded, 19.5°C, July 24; minimum recorded, 0.0°C, many days November through March.

## SPECIFIC CONDUCTANCE, MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	150	142	140	137	126	124	114	110	118	116	107	105
2	147	141	141	136	124	122	112	109	118	112	109	106
3	149	140	139	136	126	124	116	112	118	115	109	106
4	146	140	141	136	127	124	118	114	118	116	109	107
5	148	141	---	---	125	110	116	115	120	115	109	107
6	147	142	137	135	110	73	117	115	120	114	108	102
7	148	141	137	134	95	73	116	115	119	115	104	99
8	146	142	137	133	106	95	116	108	120	116	102	95
9	148	142	135	129	109	106	115	109	119	116	98	92
10	146	142	135	133	111	107	118	115	120	116	95	90
11	147	142	136	134	115	110	120	117	120	116	93	89
12	146	141	136	133	116	114	121	119	121	116	92	87
13	146	141	135	131	116	112	121	120	121	115	90	85
14	146	142	134	129	114	108	122	120	121	116	88	82
15	146	140	133	129	118	114	122	120	119	116	85	80
16	146	141	133	130	118	115	122	120	117	73	82	78
17	147	141	133	129	118	116	123	121	80	72	81	76
18	150	142	132	130	119	117	122	120	91	80	79	73
19	147	142	132	129	---	---	122	119	95	91	75	70
20	154	144	130	127	116	109	122	118	101	95	74	68
21	147	139	130	127	113	110	120	118	101	98	72	66
22	143	140	134	129	115	112	121	116	102	100	70	64
23	143	140	137	130	116	112	119	117	103	101	67	62
24	142	139	133	130	113	92	119	117	103	101	66	63
25	142	139	132	130	107	99	119	117	104	94	66	64
26	142	139	132	130	112	107	119	116	102	97	69	66
27	142	138	134	130	116	111	119	115	105	101	70	68
28	141	139	132	129	116	110	119	116	106	104	70	66
29	142	139	130	126	112	109	119	117	107	105	70	63
30	142	138	128	125	112	108	118	115	---	---	65	60
31	141	136	---	---	114	112	118	116	---	---	64	59
MONTH	154	136	---	---	---	---	123	108	121	72	109	59

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA—Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	63	60	57	52	73	69	114	109	141	137	147	143
2	65	61	56	52	74	70	115	109	141	138	147	143
3	64	58	56	51	74	72	117	111	141	138	146	142
4	61	56	55	50	75	73	120	114	141	138	145	142
5	60	53	54	50	76	73	123	116	141	138	145	139
6	58	55	56	52	77	74	124	118	141	138	145	142
7	59	54	56	52	78	75	125	120	141	139	145	142
8	58	53	57	54	79	76	126	121	143	139	145	142
9	57	54	58	55	79	77	126	122	143	141	145	141
10	57	54	59	57	81	78	127	122	143	141	147	141
11	57	53	60	57	83	80	128	123	144	141	147	140
12	56	53	61	59	86	81	130	124	144	133	146	141
13	55	52	63	60	88	83	130	125	145	140	145	141
14	56	53	63	60	89	85	131	127	145	143	144	140
15	57	54	64	61	95	86	132	128	145	142	143	138
16	59	56	65	62	96	92	133	127	145	141	142	139
17	59	58	65	62	98	93	134	129	145	142	142	139
18	61	59	66	63	99	94	135	130	145	142	143	138
19	61	60	67	65	100	95	136	131	145	143	142	137
20	62	59	67	65	102	96	136	131	146	143	---	---
21	61	59	68	66	103	97	137	130	146	139	---	---
22	62	60	68	66	106	99	137	134	143	139	---	---
23	62	59	69	66	107	101	137	134	145	138	---	---
24	61	58	70	67	109	102	138	135	144	142	138	136
25	60	55	71	69	109	104	141	136	146	140	138	136
26	60	53	72	70	111	105	140	136	146	142	138	136
27	57	51	71	66	111	107	139	136	145	143	138	135
28	55	51	67	64	112	108	140	137	146	142	138	135
29	56	52	69	66	113	108	140	137	146	143	138	135
30	58	53	71	67	114	109	140	137	147	143	---	---
31	---	---	73	68	---	---	140	137	147	143	---	---
MONTH	65	51	73	50	114	69	141	109	147	133	---	---

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.5	7.0	2.5	0.5	4.0	2.5	1.0	0.0	2.5	0.5	2.5	1.5
2	9.5	5.0	2.5	0.0	4.0	2.5	0.0	0.0	2.0	0.0	3.0	2.0
3	10.0	5.0	4.0	1.0	3.5	2.0	0.0	0.0	2.5	1.0	2.5	0.5
4	11.0	6.5	2.5	0.0	4.0	1.0	0.0	0.0	2.0	0.0	3.5	1.0
5	10.0	5.5	4.5	2.0	4.5	3.5	0.5	0.0	1.0	0.0	3.5	1.0
6	10.0	5.5	3.5	0.0	3.5	1.5	2.0	0.5	2.0	0.0	4.0	1.5
7	10.0	5.5	4.5	2.5	2.0	1.0	2.0	1.5	1.5	0.0	4.0	1.0
8	10.0	5.0	4.5	3.0	1.5	0.0	2.5	1.5	1.0	0.0	4.0	1.0
9	10.0	6.5	3.0	2.0	2.0	0.0	2.5	1.5	1.5	0.0	4.5	1.5
10	7.5	4.0	3.0	1.0	1.0	0.0	2.5	1.5	1.5	0.0	4.0	1.5
11	7.5	2.5	2.5	0.0	2.0	0.5	3.0	1.5	1.5	0.0	4.0	1.0
12	8.0	3.5	3.0	0.5	2.5	0.0	3.0	1.5	1.5	0.0	4.0	1.0
13	7.0	2.5	4.5	1.5	3.5	2.0	2.5	1.0	2.5	0.0	4.5	1.0
14	7.5	3.0	4.0	2.0	2.0	0.0	2.0	0.5	2.5	1.0	4.5	1.5
15	7.0	2.5	3.5	2.0	0.5	0.0	2.5	1.5	3.5	1.5	4.5	1.5
16	8.0	3.0	3.0	1.0	1.5	0.0	2.5	0.5	2.5	1.0	4.0	1.0
17	8.0	3.5	4.5	2.5	1.5	0.0	2.0	0.5	1.0	0.5	4.5	1.0
18	8.0	3.5	3.5	1.0	2.0	0.0	3.0	1.5	2.0	0.0	4.5	1.5
19	8.5	4.5	4.0	2.0	2.0	1.0	2.0	0.5	2.5	0.5	4.0	1.5
20	9.0	5.0	4.5	2.5	3.0	2.0	2.5	1.5	3.0	0.5	4.5	1.0
21	8.5	4.0	2.5	0.5	2.5	1.5	1.5	0.0	3.0	1.5	4.5	1.5
22	8.0	4.0	0.5	0.0	3.0	1.5	0.5	0.0	3.5	2.0	4.5	1.5
23	8.0	5.0	0.5	0.0	3.0	1.0	2.0	0.0	4.0	2.0	4.5	1.0
24	6.5	2.5	1.5	0.5	2.0	0.0	2.5	1.5	2.5	1.5	4.5	1.0
25	6.5	3.0	1.5	0.0	2.0	0.5	1.5	0.0	2.0	0.0	3.0	0.0
26	6.5	2.5	1.5	0.0	1.0	0.0	2.0	0.0	1.0	0.0	3.5	0.5
27	6.5	2.5	2.0	0.0	0.0	0.0	1.5	1.0	2.0	0.5	5.0	1.0
28	7.5	3.5	3.5	2.0	0.0	0.0	2.5	0.5	2.5	1.0	5.0	1.0
29	7.5	5.0	4.5	3.0	0.0	0.0	2.5	0.5	2.5	0.0	5.5	1.0
30	5.5	2.5	4.0	3.0	1.0	0.0	3.0	1.5	---	---	5.0	1.5
31	2.5	1.0	---	---	2.0	1.0	1.5	0.5	---	---	5.0	1.5
MONTH	11.5	1.0	4.5	0.0	4.5	0.0	3.0	0.0	4.0	0.0	5.5	0.0

## PYRAMID AND WINNEMUCCA LAKES BASIN

10343500 SAGEHEN CREEK NEAR TRUCKEE, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	4.0	1.0	10.5	3.0	15.5	6.0	13.5	8.0	17.5	8.0	16.0	9.5
2	5.5	1.0	11.5	3.5	16.0	6.0	14.0	7.5	17.0	9.0	14.5	8.5
3	5.5	1.5	11.5	3.5	13.0	6.5	17.5	8.0	16.5	7.0	12.0	6.0
4	6.0	1.5	11.5	4.0	16.0	6.0	18.0	8.0	16.5	7.5	13.0	5.5
5	6.5	1.5	12.0	4.5	15.0	6.0	19.0	8.5	16.0	7.5	13.5	6.0
6	6.0	1.5	11.0	5.0	16.5	6.5	19.0	9.5	16.5	8.5	14.0	7.0
7	6.5	1.5	11.0	4.5	15.0	7.5	19.0	10.5	16.5	6.5	13.5	6.5
8	6.5	1.5	11.5	4.5	9.0	5.0	18.5	8.5	17.0	8.0	13.5	6.0
9	7.0	1.5	11.5	4.0	9.5	5.0	17.5	9.0	17.5	9.0	13.0	6.0
10	7.0	1.5	9.0	4.0	14.0	6.0	17.5	9.5	17.5	8.5	13.0	6.0
11	7.5	1.5	7.0	3.0	14.5	5.0	18.0	8.5	17.5	9.0	13.0	6.0
12	7.5	2.0	11.0	2.5	15.5	6.0	18.5	8.5	16.5	9.5	13.5	8.5
13	7.5	2.5	12.0	4.0	16.5	6.5	19.0	9.5	15.0	10.5	12.5	6.0
14	7.0	2.0	11.5	4.0	17.0	7.5	18.5	9.0	17.0	9.5	12.0	5.0
15	6.5	2.0	12.5	4.0	17.0	7.5	18.5	8.5	15.0	10.5	12.0	5.0
16	5.0	2.5	13.0	4.0	15.5	7.5	17.5	8.5	14.5	9.5	12.5	6.0
17	7.0	2.0	12.0	4.5	17.0	8.0	18.0	10.0	16.0	7.5	12.5	6.0
18	4.0	2.0	11.5	4.0	17.5	7.5	19.0	10.5	15.5	8.5	10.0	7.0
19	5.0	2.0	12.0	3.5	17.0	7.5	19.0	10.0	15.0	9.0	8.0	5.0
20	7.0	2.5	12.0	4.0	17.0	7.0	19.0	9.5	17.0	9.0	7.0	4.0
21	7.5	2.5	8.0	4.0	17.5	8.0	19.0	9.5	16.5	8.5	9.0	3.0
22	8.0	1.5	12.5	4.0	18.5	8.5	19.0	9.5	12.0	8.5	10.0	4.0
23	8.5	1.5	12.5	4.0	18.5	8.5	17.5	10.0	14.5	8.5	11.0	5.0
24	9.5	2.0	11.0	4.0	17.0	8.5	19.5	10.0	15.0	8.0	11.0	4.5
25	10.0	2.5	11.0	4.5	17.5	7.5	19.0	10.0	15.0	9.0	11.0	5.0
26	10.0	2.5	12.5	4.5	17.5	7.0	19.0	9.5	13.0	7.5	11.0	5.0
27	10.5	3.0	14.0	6.5	15.5	8.0	18.5	8.5	13.5	6.0	10.0	4.0
28	9.0	3.5	10.5	6.5	15.5	9.0	19.0	9.5	14.5	6.5	10.5	5.0
29	9.0	2.5	13.5	5.5	14.5	8.0	17.5	8.5	14.5	7.5	9.5	5.0
30	10.0	2.5	14.5	5.0	13.0	8.5	17.0	7.5	15.0	7.5	8.5	5.0
31	---	---	15.0	5.5	---	---	17.5	8.0	15.0	7.0	---	---
MONTH	10.5	1.0	15.0	2.5	18.5	5.0	19.5	7.5	17.5	6.0	16.0	3.0

## CROSS SECTION ANALYSES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Depth at sample location, feet (81903)	Sam-pling depth, feet (00003)	Specif. conduc-tance, uS/cm 25 degC (00095)	Temper-ature, deg C (00010)	Loca-tion in X-sect. looking downstrm ft from l bank (00009)
OCT						
21...*	1141	.72	.60	130	5.5	3.00
21...*	1143	.68	.60	130	5.5	4.50
21...*	1145	.66	.60	130	5.5	6.00
21...*	1147	.83	.60	130	5.5	7.00
21...*	1149	.97	.60	130	5.5	8.00
21...*	1151	1.08	.60	130	6.0	9.00
21...*	1153	1.12	.60	130	6.0	10.0
21...*	1155	1.22	.60	130	6.0	11.0
21...*	1157	1.30	.60	130	6.0	12.0
21...*	1158	1.16	.60	130	6.0	13.0
MAR						
23...*	1453	1.50	1.00	63	4.5	11.0
23...*	1454	1.60	1.00	63	4.5	10.0
23...*	1455	1.60	1.00	63	4.5	9.00
23...*	1456	1.50	1.00	63	4.5	8.00
23...*	1457	1.70	1.00	63	4.5	7.00
23...*	1458	1.80	1.00	63	4.5	6.00
23...*	1459	2.00	1.00	63	4.5	5.00
23...*	1500	2.10	1.00	63	4.5	4.00
23...*	1501	2.00	1.00	63	4.5	3.00
23...*	1502	1.90	1.00	63	4.5	2.00
23...*	1503	1.80	1.00	63	4.5	1.00

\* Instantaneous discharge at time of cross-sectional measurements: Oct. 21, 1.80 ft<sup>3</sup>/s; Mar. 23, 23.0 ft<sup>3</sup>/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<sup>2</sup>.

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, 143,200 acre-ft, May 7, elevation, 5,921.20 ft; minimum, 106,300 acre-ft, Sept. 29, 30, minimum elevation, 5,905.76 ft, Sept. 30.

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 2003 TO SEPTEMBER 2004

DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139300	137300	136900	134400	130300	129900	136200	141100	132400	125100	112700	108200
2	139100	137200	136900	134300	130200	129900	136300	141300	132200	124900	112300	108100
3	139000	137300	136900	134100	130300	129800	136500	141600	132000	124700	111800	108000
4	138900	137200	136800	133900	130200	129800	136800	142000	131700	124500	111500	107900
5	138800	137200	136700	133700	130000	129700	137100	142300	131400	124400	111200	107800
6	138700	137200	136800	133600	130000	129700	137500	142800	131100	124200	111000	107800
7	138600	137200	137100	133500	129900	129600	137800	143200	130700	123900	110700	107700
8	138500	137100	137100	133300	129800	129600	138200	143100	130400	123600	110500	107700
9	138400	137200	137100	133100	129700	129600	138500	143000	130200	123300	110300	107600
10	138300	137200	137100	132900	129500	129700	138900	142900	129800	122900	110100	107500
11	138200	137200	137000	132700	129500	129800	139200	142600	129400	122500	110000	107400
12	138100	137100	136800	132500	129400	130000	139500	142200	129000	122100	109900	107400
13	137900	137100	136700	132400	129300	130200	140000	141600	128600	121700	109700	107300
14	137900	137200	136700	132200	129200	130400	140200	141100	128200	121200	109700	107200
15	137800	137200	136500	132100	129100	130700	140400	140600	127800	120800	109600	107100
16	137800	137200	136300	132000	129000	131000	140500	140000	127700	120200	109500	107100
17	137700	137300	136200	131800	129300	131100	140600	139500	127600	119800	109300	107100
18	137700	137200	136000	131700	129400	131200	140600	139000	127400	119300	109200	107000
19	137700	137300	135900	131600	129500	131500	140500	138400	127200	118900	109100	106900
20	137700	137200	135700	131500	129500	131800	140500	137800	126900	118400	109100	106900
21	137600	137200	135500	131300	129600	132200	140500	137200	126700	118400	109000	106800
22	137600	137100	135300	131100	129600	132700	140400	136600	126600	117500	109000	106800
23	137600	137000	135100	131000	129600	133300	140300	136000	126400	117000	108900	106800
24	137500	137100	135100	131000	129500	133900	140200	135300	126200	116500	108800	106700
25	137400	137000	e135100	130900	129500	134400	140200	134600	126100	116100	108700	106600
26	137400	137000	e135000	130700	129900	134900	140300	133900	125900	115600	108600	106600
27	137300	136900	134700	130700	129900	135100	140400	133300	125700	115100	108500	106500
28	137300	136900	134600	130700	129900	135200	140700	132900	125600	114600	108400	106400
29	137400	136900	134600	130600	129900	135300	140900	132900	125400	114100	108400	106300
30	137300	136900	134600	130500	---	135600	141000	132800	125300	113600	108300	106300
31	137300	---	134400	130400	---	135800	---	132600	---	113100	108200	---
MAX	139300	137300	137100	134400	130300	135800	141000	143200	132400	125100	112700	108200
MIN	137300	136900	134400	130400	129000	129600	136200	132600	125300	113100	108200	106300
a	5918.92	5918.77	5917.79	5916.21	5916.00	5918.36	5920.34	5917.11	5914.10	5908.82	5906.65	5905.76
b	-2100	-400	-2500	-4000	-500	+5900	+5200	-8400	-7300	-12200	-4900	-1900

CAL YR 2003 MAX 158000 MIN 113200 b +21200  
WTR YR 2004 MAX 143200 MIN 106300 b -33100

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<sup>2</sup>.

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<sup>3</sup>/s, Feb. 1, 1963, gage height, 9.00 ft, from rating curve extended above 1,600 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum daily, 3.0 ft<sup>3</sup>/s, Nov. 30, 1954. Maximum discharge since construction of Stampede Dam in 1969, 3,850 ft<sup>3</sup>/s, Jan. 3, 1997, gage height, 5.26 ft; minimum daily, 0.30 ft<sup>3</sup>/s, Sept. 16–21, 1969.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	32	54	132	84	87	226	245	335	101	196	31
2	77	32	54	131	84	86	225	245	334	101	196	30
3	77	32	67	130	79	86	208	245	335	101	174	31
4	77	32	79	130	84	86	230	245	334	100	127	31
5	77	32	80	130	84	85	230	245	335	100	106	31
6	67	32	80	130	84	85	227	245	335	119	106	31
7	58	32	85	130	84	87	222	328	334	e134	106	31
8	58	32	85	130	84	90	221	419	303	149	106	30
9	58	33	108	130	84	93	222	420	270	174	97	31
10	58	32	131	130	84	98	221	479	269	184	76	30
11	58	32	130	130	84	98	221	522	268	184	63	30
12	58	32	130	130	84	100	211	520	267	194	57	30
13	58	32	130	116	84	100	217	526	267	210	51	30
14	46	32	131	103	84	101	219	532	244	227	51	29
15	33	32	130	103	84	129	219	532	165	234	51	28
16	33	32	130	103	87	184	219	532	138	234	51	28
17	33	32	130	103	90	223	219	532	137	234	50	28
18	33	32	130	103	90	233	219	531	136	234	50	28
19	32	43	130	103	88	234	219	531	136	234	41	28
20	32	53	130	103	88	233	219	531	136	233	31	29
21	32	54	130	103	87	233	235	530	123	233	31	e29
22	32	54	130	103	86	233	245	531	112	234	31	e43
23	32	54	130	93	87	232	245	530	112	233	31	e57
24	32	54	134	84	87	230	245	532	112	234	31	e57
25	32	54	132	84	93	230	245	538	106	234	31	58
26	32	54	130	84	93	230	245	538	101	233	31	56
27	32	54	130	84	88	227	245	474	101	234	31	56
28	32	54	130	84	88	226	245	378	101	233	31	56
29	32	54	132	84	86	226	245	336	101	233	31	56
30	32	54	130	84	---	226	245	335	101	211	30	52
31	32	---	130	84	---	226	---	335	---	195	31	---
TOTAL	1452	1213	3562	3371	2493	5037	6854	13462	6148	5988	2126	1115
MEAN	46.8	40.4	115	109	86.0	162	228	434	205	193	68.6	37.2
MAX	77	54	134	132	93	234	245	538	335	234	196	58
MIN	32	32	54	84	79	85	208	245	101	100	30	28
AC-FT	2880	2410	7070	6690	4940	9990	13590	26700	12190	11880	4220	2210

e Estimated.





## 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<sup>2</sup>.

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 NGVD 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, estimated, July 20, elevation unknown; minimum, 3,400 acre-ft, Dec. 5, elevation, 5,544.65 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26600	16400	4310	e4630	5100	6820	16900	24400	30000	31100	30800	16900
2	26500	16000	4120	4630	5100	6930	17400	24600	29900	31100	30600	15700
3	26400	15600	3850	4540	5120	6930	17900	24900	29800	31100	30400	15200
4	26400	15200	3550	4430	5120	7110	18300	25100	29800	31100	30200	14700
5	26300	14800	3400	4430	5130	7160	18800	25300	29900	31100	29800	14300
6	26200	14300	3410	4440	5130	7190	19300	25500	30000	31000	29400	13800
7	26000	13900	3500	4450	5150	7250	19800	25600	30100	31000	29000	13400
8	25800	13500	3530	4460	5150	7330	20300	25700	30200	31000	28600	13000
9	25600	13100	3490	4480	5150	7460	20300	25800	30300	31000	28200	12600
10	25400	12700	3510	4490	5160	7620	20300	26000	30400	31000	27700	12400
11	25100	12300	3540	4500	5160	7800	21600	26300	30400	31100	27200	12100
12	24800	11900	3510	4520	5160	7980	22100	26500	30500	31100	26700	11800
13	24600	11500	3460	4590	5170	8180	22500	26700	30500	31100	26200	11500
14	24300	11100	3550	4640	5170	8390	22900	26900	30600	31200	25700	11200
15	23900	10600	3660	4690	5170	8610	23400	27200	30600	31200	25700	10800
16	23600	10200	3760	4740	5180	8940	23700	27400	30700	31300	24700	10300
17	23300	9780	3860	4790	5240	9390	23900	27700	30800	31300	24100	9610
18	22900	9370	3950	4840	5370	9880	24000	28000	30800	31400	23600	8900
19	22600	8940	4010	4890	5500	10400	24200	28400	30800	31400	23100	8180
20	22300	8510	4070	4940	5620	10900	24200	28700	30900	e31500	22600	7510
21	21900	8080	4120	4990	5720	11400	24100	28900	30900	e31400	22100	6780
22	21500	7670	4180	5040	5820	11900	24100	29000	30900	e31400	21500	6010
23	21100	7280	4230	5080	5920	12400	24000	29200	30900	31400	21000	5460
24	20600	6870	4280	5090	6020	12900	23900	29400	30900	31400	20500	5340
25	20100	6440	4390	5090	6130	13500	23900	29700	31000	31400	20000	5330
26	19600	6020	4450	5090	6360	13500	23800	30000	31000	31300	19500	5330
27	19100	5630	e4510	5090	6510	14700	23800	30400	31000	31300	19000	5330
28	18600	5240	e4570	5100	6620	15200	23800	30400	31000	31200	18400	5340
29	18100	4820	e4620	5100	6720	15700	23900	30300	31000	31200	17900	5350
30	17600	4500	4680	5100	---	16000	24200	30200	31000	31100	17400	5380
31	17000	---	4640	5100	---	16400	---	30100	---	31000	16900	---
MAX	26600	16400	4680	5100	6720	16400	24200	30400	31000	31500	30800	16900
MIN	17000	4500	3400	4430	5100	6820	16900	24400	29800	31000	16900	5330
a	5578.43	5548.59	5549.05	5550.44	5555.05	5574.51	5585.79	5593.22	5594.31	5594.23	5575.24	5551.25
b	-9800	-12500	+140	+460	+1620	+9680	+7800	+5900	+900	0	-14100	-11520

CAL YR 2003 MAX 31500 MIN 3400 b -130  
WTR YR 2004 MAX 31500 MIN 3400 b -21420

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<sup>2</sup>.

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<sup>3</sup>/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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	256	148	146	86	52	0.46	137	382	81	281	308
2	122	241	167	163	86	52	0.46	138	382	81	289	298
3	121	240	213	187	86	53	0.46	138	373	86	289	286
4	121	252	171	155	86	68	0.48	138	308	102	299	260
5	120	253	106	131	86	74	0.50	139	278	110	302	252
6	126	242	78	131	86	74	0.51	166	278	125	310	262
7	147	241	78	131	86	74	0.50	301	268	130	312	253
8	158	239	91	131	86	57	0.50	336	238	141	311	197
9	171	238	126	131	86	50	0.50	347	237	145	321	177
10	182	234	126	131	85	50	0.54	355	237	157	320	170
11	186	232	136	131	85	50	0.56	388	238	167	307	167
12	194	230	161	110	85	51	0.56	406	238	181	308	167
13	199	237	130	98	85	51	0.60	407	238	190	307	184
14	199	259	93	85	85	51	0.54	408	230	197	313	206
15	199	257	93	85	85	51	25	409	125	200	315	255
16	199	255	91	85	86	52	130	376	104	212	314	347
17	198	254	91	85	63	52	154	359	104	216	310	380
18	197	252	97	85	51	52	154	360	104	222	302	380
19	196	255	112	85	50	53	217	361	105	225	301	377
20	204	266	113	86	51	53	253	392	105	238	299	382
21	214	264	113	85	51	54	272	428	105	241	299	409
22	e240	261	113	86	51	54	284	428	105	240	297	377
23	e255	262	113	86	51	47	284	430	105	249	294	182
24	276	266	114	86	51	0.56	283	399	103	253	283	72
25	281	263	114	86	51	0.52	283	374	87	259	279	56
26	283	260	114	86	52	0.52	283	355	87	263	287	56
27	283	258	114	86	52	0.49	253	403	87	262	298	53
28	283	255	115	86	52	0.53	202	400	87	262	301	46
29	284	229	115	86	52	61	155	383	78	262	300	46
30	300	171	139	86	---	88	137	382	77	262	299	51
31	317	---	157	86	---	15	---	382	---	268	306	---
TOTAL	6387	7422	3742	3317	2048	1441.62	3376.17	10425	5493	6027	9353	6656
MEAN	206	247	121	107	70.6	46.5	113	336	183	194	302	222
MAX	317	266	213	187	86	88	284	430	382	268	321	409
MIN	120	171	78	85	50	0.49	0.46	137	77	81	279	46
AC-FT	12670	14720	7420	6580	4060	2860	6700	20680	10900	11950	18550	13200

e Estimated.

## PYRAMID AND WINNEMUCCA LAKES BASIN

## 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 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	116	84.4	94.9	112	88.4	121	271	466	297	202	154	119
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	0.00	0.02	0.11	0.00	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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1970 - 2004

ANNUAL TOTAL	41748.13	65687.79	
ANNUAL MEAN	114	179	178
HIGHEST ANNUAL MEAN			470 1983
LOWEST ANNUAL MEAN			55.6 1992
HIGHEST DAILY MEAN	445 May 2	430 May 23	2530 Jan 9 1997
LOWEST DAILY MEAN	0.28 Jan 7	0.46 Apr 1	0.00 Sep 13 1994
ANNUAL SEVEN-DAY MINIMUM	0.32 Jan 15	0.48 Apr 1	0.00 Sep 13 1994
MAXIMUM PEAK FLOW		438 May 27	2720 Jan 8 1997
MAXIMUM PEAK STAGE		3.19 May 27	6.14 Jan 8 1997
ANNUAL RUNOFF (AC-FT)	82810	130300	128800
10 PERCENT EXCEEDS	260	318	442
50 PERCENT EXCEEDS	113	162	93
90 PERCENT EXCEEDS	0.42	51	0.59

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<sup>2</sup>.

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<sup>3</sup>/s, May 29, 2003, gage height, 7.89 ft; minimum daily, 50 ft<sup>3</sup>/s, Dec. 11, 12, 2002.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	446	327	197	295	210	317	682	712	864	502	543	480
2	432	324	217	e300	216	310	663	763	860	494	542	479
3	421	352	263	311	223	300	682	833	829	491	533	485
4	419	420	220	275	217	306	733	897	720	496	539	470
5	413	457	153	260	211	310	799	911	654	495	534	454
6	412	432	197	274	212	311	808	879	646	505	529	463
7	415	413	365	276	214	326	749	955	636	505	524	465
8	408	396	261	280	211	330	775	972	570	505	520	457
9	408	390	303	291	212	358	763	960	552	499	528	470
10	408	374	299	295	214	436	734	942	526	498	525	469
11	408	359	291	292	206	489	712	911	523	504	508	459
12	410	347	270	265	207	508	723	880	517	513	509	451
13	411	344	233	242	204	530	746	871	518	517	506	456
14	406	349	206	228	204	558	693	877	547	516	508	459
15	382	347	192	228	202	628	649	866	512	514	515	484
16	365	339	193	228	230	695	646	833	483	519	512	593
17	360	333	188	225	471	733	624	831	480	519	500	624
18	358	326	189	225	395	762	588	819	470	518	486	614
19	355	326	204	224	382	824	624	788	462	515	482	609
20	361	327	209	225	366	842	664	838	483	523	478	596
21	358	322	221	230	342	896	696	880	507	522	473	569
22	361	314	213	219	332	975	720	887	504	517	470	512
23	360	310	210	218	326	1060	710	905	501	522	470	293
24	354	315	255	218	319	1030	722	833	499	523	474	169
25	349	311	301	216	378	960	758	756	490	520	466	142
26	350	306	260	213	443	847	809	707	488	519	470	135
27	349	302	228	215	405	741	857	820	489	526	484	124
28	347	298	228	217	347	716	874	971	520	529	481	109
29	343	268	239	214	324	731	771	837	514	526	474	104
30	361	216	284	215	---	767	686	819	503	527	470	106
31	394	---	305	212	---	707	---	839	---	536	475	---
TOTAL	11924	10244	7394	7626	8223	19303	21660	26592	16867	15915	15528	12300
MEAN	385	341	239	246	284	623	722	858	562	513	501	410
MAX	446	457	365	311	471	1060	874	972	864	536	543	624
MIN	343	216	153	212	202	300	588	707	462	491	466	104
AC-FT	23650	20320	14670	15130	16310	38290	42960	52750	33460	31570	30800	24400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2004, BY WATER YEAR (WY)

	2002	2003	2004	2002	2003	2004	2002	2003	2004	2002	2003	2004
MEAN	410	336	226	298	303	553	739	915	619	560	497	478
MAX	435	341	239	349	324	623	757	972	676	606	501	527
(WY)	2003	2004	2004	2003	2003	2004	2003	2003	2003	2003	2004	2003
MIN	385	331	213	246	284	484	722	858	562	513	493	410
(WY)	2004	2003	2003	2004	2004	2003	2004	2004	2004	2004	2003	2004

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2002 - 2004	
ANNUAL TOTAL	187470		173576			
ANNUAL MEAN	514		474		495	
HIGHEST ANNUAL MEAN					515	
LOWEST ANNUAL MEAN					474	
HIGHEST DAILY MEAN	1340	May 30	1060	Mar 23	1340	May 30 2003
LOWEST DAILY MEAN	153	Dec 5	104	Sep 29	50	Dec 11 2002
ANNUAL SEVEN-DAY MINIMUM	197	Dec 14	127	Sep 24	53	Dec 6 2002
MAXIMUM PEAK FLOW			1120		1590	
MAXIMUM PEAK STAGE			7.46		7.89	
ANNUAL RUNOFF (AC-FT)	371800		344300		358300	
10 PERCENT EXCEEDS	888		821		839	
50 PERCENT EXCEEDS	487		470		480	
90 PERCENT EXCEEDS	275		216		228	

e Estimated.

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<sup>2</sup>.

## 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 good except for estimated daily discharges, which are fair. See schematic diagram of [Truckee River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 248 ft<sup>3</sup>/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<sup>3</sup>/s, Feb. 6, 2002.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 3	1945	78	2.51

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	e9.5	10	e8.0	e8.5	11	23	35	48	22	15	9.5
2	9.9	e9.5	10	e8.0	e8.5	11	21	43	50	23	14	9.6
3	9.9	e9.8	10	e8.1	e8.5	12	20	52	50	22	14	9.7
4	10	e9.8	11	e8.2	e8.5	11	23	52	50	20	14	9.7
5	9.8	9.5	12	e8.3	e8.5	9.5	28	51	50	19	13	9.6
6	9.8	11	13	e8.4	e8.8	11	28	48	52	19	13	9.5
7	9.8	9.7	12	e8.5	e8.8	14	27	44	47	19	13	9.4
8	9.8	9.9	e12	8.7	e8.3	15	27	42	40	18	13	9.0
9	9.8	10	e11	8.7	e8.6	14	27	40	38	17	12	9.0
10	10	9.8	11	8.7	e8.8	16	29	33	35	18	12	9.0
11	9.9	11	e10	8.7	e8.8	17	30	30	34	17	11	8.8
12	9.5	11	e9.0	8.6	e8.8	16	30	30	34	16	11	8.8
13	9.4	10	8.8	8.7	e8.3	16	29	32	35	16	12	8.9
14	9.3	11	e8.8	e9.0	e8.3	18	29	33	36	16	11	9.1
15	9.5	10	e8.7	9.1	7.8	18	28	33	36	16	12	9.0
16	9.5	10	e8.7	e9.0	11	20	25	32	36	17	11	8.8
17	9.6	10	e8.6	e9.0	14	20	23	33	37	16	11	8.9
18	9.4	10	e8.6	9.0	14	26	22	31	37	15	11	8.5
19	9.6	10	8.0	e9.0	12	31	21	31	37	15	11	8.8
20	9.8	9.7	8.5	9.0	13	32	20	32	38	15	11	9.3
21	9.6	11	8.4	e9.0	11	37	20	31	39	15	10	9.1
22	9.5	e10	e8.2	e9.0	10	35	20	31	39	15	11	8.4
23	9.4	e10	8.2	e8.5	10	36	19	33	37	15	10	7.9
24	9.3	e9.8	e8.2	e8.5	9.8	33	21	33	34	15	10	7.9
25	8.7	e9.8	e8.2	e8.2	13	30	24	33	31	15	9.8	7.8
26	8.9	e9.7	e8.0	e8.2	16	22	28	33	28	15	9.8	7.8
27	9.1	e9.6	e8.0	8.2	17	19	34	40	25	15	10	7.8
28	9.0	e9.5	e8.0	8.0	12	19	34	41	25	15	10	7.7
29	9.2	9.5	e8.0	7.9	13	20	32	37	23	15	9.8	8.2
30	9.4	9.6	e8.0	8.0	---	23	33	41	21	15	9.7	8.4
31	9.3	---	7.9	e8.2	---	25	---	45	---	15	9.5	---
TOTAL	295.3	299.7	288.8	264.4	303.6	637.5	775	1155	1122	521	354.6	263.9
MEAN	9.53	9.99	9.32	8.53	10.5	20.6	25.8	37.3	37.4	16.8	11.4	8.80
MAX	10	11	13	9.1	17	37	34	52	52	23	15	9.7
MIN	8.7	9.5	7.9	7.9	7.8	9.5	19	30	21	15	9.5	7.7
AC-FT	586	594	573	524	602	1260	1540	2290	2230	1030	703	523

e Estimated.

10345490 GRAY CREEK NEAR FLORISTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.64	9.04	8.42	9.31	10.0	14.8	22.4	41.5	44.7	15.9	11.1	8.81
MAX	9.53	9.99	9.32	11.4	12.0	20.6	25.8	50.8	61.2	16.8	12.4	9.66
(WY)	2004	2004	2004	2003	2003	2004	2004	2003	2003	2004	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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2002 - 2004	
ANNUAL TOTAL	7184.2		6280.8			
ANNUAL MEAN	19.7		17.2		18.2	
HIGHEST ANNUAL MEAN					19.3 2003	
LOWEST ANNUAL MEAN					17.2 2004	
HIGHEST DAILY MEAN	124	May 28	52	May 3	124	May 28 2003
LOWEST DAILY MEAN	7.9	Dec 31	7.7	Sep 28	6.7	Feb 6 2002
ANNUAL SEVEN-DAY MINIMUM	8.0	Dec 25	7.9	Sep 23	7.0	Feb 2 2002
MAXIMUM PEAK FLOW			78	May 3	248	May 28 2003
MAXIMUM PEAK STAGE			2.51	May 3	3.87	Jan 24 2002
ANNUAL RUNOFF (AC-FT)	14250		12460		13200	
10 PERCENT EXCEEDS	36		35		35	
50 PERCENT EXCEEDS	12		11		11	
90 PERCENT EXCEEDS	9.2		8.4		8.0	

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. pH records are rated good. Specific conductance and turbidity records rated fair.

Interruptions in record due to sensor malfunction.

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 most years.

TURBIDITY: Maximum recorded, &gt;4,000 NTU, July 20, 21, 28, 29, Aug. 21, 2003; minimum recorded, 0.0 NTU, some days in most years.

EXTREMES FOR CURRENT YEAR.—

pH: Maximum recorded, 8.6 standard units, many days in April, August, and September; minimum recorded, 7.9 standard units, Nov. 12.

SPECIFIC CONDUCTANCE: Maximum recorded, 223 microsiemens, Feb. 26; minimum recorded, 81 microsiemens, June 2, 3.

WATER TEMPERATURE: Maximum recorded, 21.0°C, July 19; minimum recorded, 0.0°C, many days in October to March.

TURBIDITY: Maximum recorded, 980 NTU, May 4; minimum recorded, 1.1 NTU, Sep. 22, 29.

&gt; Actual value is known to be greater than value shown.

## PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.4	8.3	8.3	8.1	8.0	8.0	8.3	8.3	8.4	8.2	8.4	8.3
2	8.4	8.2	8.2	8.1	8.0	8.0	8.3	8.2	8.4	8.2	8.5	8.3
3	8.4	8.2	8.3	8.1	8.0	8.0	8.3	8.2	8.4	8.2	8.5	8.3
4	8.4	8.3	8.2	8.1	8.0	8.0	8.2	8.2	8.4	8.3	8.5	8.3
5	8.4	8.3	8.3	8.2	8.0	8.0	8.2	8.2	8.3	8.3	8.5	8.3
6	8.4	8.3	8.3	8.1	8.0	8.0	8.2	8.2	8.3	8.3	8.5	8.3
7	8.4	8.2	8.3	8.2	8.4	8.0	8.3	8.2	8.4	8.3	8.5	8.3
8	8.4	8.3	8.3	8.2	8.3	8.2	8.3	8.2	8.3	8.3	8.5	8.3
9	8.4	8.3	8.3	8.2	8.2	8.2	8.3	8.2	8.3	8.3	8.4	8.2
10	8.4	8.3	8.3	8.2	8.2	8.1	8.4	8.3	8.3	8.3	8.4	8.2
11	8.4	8.2	8.3	8.1	8.3	8.1	8.4	8.3	8.3	8.3	8.4	8.2
12	8.4	8.2	8.3	7.9	8.2	8.2	8.4	8.2	8.3	8.3	8.3	8.2
13	8.3	8.2	8.3	8.2	8.2	8.2	8.3	8.3	8.3	8.3	8.4	8.2
14	8.4	8.2	8.2	8.2	8.3	8.2	8.4	8.2	8.4	8.2	8.3	8.2
15	8.3	8.2	8.2	8.2	8.3	8.2	8.4	8.3	8.4	8.3	8.4	8.3
16	8.4	8.2	8.2	8.2	8.2	8.2	8.4	8.3	8.4	8.2	8.4	8.3
17	8.4	8.2	8.3	8.2	8.2	8.2	8.4	8.3	8.4	8.2	8.4	8.3
18	8.4	8.2	8.2	8.2	8.2	8.2	8.4	8.3	8.4	8.3	8.4	8.3
19	8.4	8.3	8.2	8.2	8.3	8.2	8.4	8.3	8.4	8.3	8.3	8.2
20	8.4	8.3	8.2	8.1	8.3	8.2	8.4	8.3	8.4	8.3	8.3	8.2
21	8.4	8.3	8.2	8.1	8.3	8.2	8.3	8.3	8.4	8.3	8.3	8.2
22	8.4	8.3	8.1	8.1	8.3	8.2	8.3	8.2	8.4	8.3	8.3	8.2
23	8.4	8.3	8.1	8.1	8.3	8.2	8.3	8.2	8.4	8.3	8.3	8.2
24	8.3	8.2	8.1	8.1	8.3	8.2	8.4	8.3	8.5	8.3	8.3	8.2
25	8.3	8.2	8.1	8.1	8.3	8.3	8.4	8.3	8.3	8.2	8.3	8.3
26	8.3	8.2	8.1	8.1	8.3	8.3	8.3	8.3	8.4	8.3	8.4	8.3
27	8.3	8.2	8.1	8.0	8.3	8.2	8.4	8.3	8.4	8.3	8.4	8.3
28	8.4	8.2	8.1	8.0	8.3	8.2	8.4	8.3	8.4	8.3	8.4	8.3
29	8.3	8.3	8.1	8.0	8.3	8.2	8.4	8.3	8.4	8.3	8.5	8.3
30	8.3	8.2	8.0	8.0	8.3	8.2	8.4	8.3	---	---	8.4	8.3
31	8.3	8.1	---	---	8.3	8.2	8.3	8.3	---	---	8.4	8.3
MONTH	8.4	8.1	8.3	7.9	8.4	8.0	8.4	8.2	8.5	8.2	8.5	8.2



10345490 GRAY CREEK NEAR FLORISTON, CA—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.4	8.3	8.5	8.2	8.3	8.1	8.3	8.2	8.5	8.3	8.6	8.4
2	8.5	8.3	8.4	8.1	8.3	8.0	8.3	8.2	8.5	8.3	8.6	8.4
3	8.4	8.3	8.4	8.1	8.2	8.0	8.4	8.2	8.5	8.3	8.6	8.4
4	8.4	8.3	8.4	8.1	8.3	8.0	8.4	8.2	8.5	8.3	8.6	8.4
5	8.4	8.3	8.3	8.1	8.2	8.0	8.4	8.2	8.5	8.3	8.6	8.4
6	8.5	8.2	8.3	8.1	8.3	8.1	8.4	8.2	8.5	8.3	8.6	8.4
7	8.5	8.3	8.3	8.1	8.2	8.1	8.4	8.2	8.5	8.3	8.6	8.4
8	8.5	8.3	8.3	8.1	8.2	8.1	8.4	8.2	8.6	8.3	8.6	8.4
9	8.5	8.3	8.3	8.1	8.2	8.1	8.4	8.2	8.5	8.3	8.6	8.4
10	8.5	8.3	8.3	8.1	8.3	8.1	8.4	8.2	8.6	8.3	8.6	8.4
11	8.5	8.3	8.3	8.2	8.3	8.1	8.4	8.2	8.6	8.3	8.6	8.4
12	8.5	8.3	8.4	8.2	8.3	8.1	8.4	8.2	8.6	8.3	8.6	8.4
13	8.5	8.3	8.4	8.2	8.3	8.1	8.5	8.3	8.5	8.3	8.6	8.4
14	8.5	8.3	8.4	8.2	8.3	8.1	8.5	8.3	8.6	8.3	8.6	8.4
15	8.5	8.3	8.3	8.2	8.3	8.1	8.5	8.3	8.5	8.4	8.6	8.4
16	8.5	8.3	8.4	8.1	8.3	8.1	8.5	8.3	8.5	8.4	8.6	8.4
17	8.5	8.3	8.4	8.1	8.3	8.1	8.5	8.3	8.5	8.3	8.6	8.4
18	8.5	8.4	8.4	8.2	8.3	8.1	8.5	8.3	8.6	8.4	8.5	8.4
19	8.6	8.4	8.4	8.2	8.3	8.1	8.5	8.3	8.6	8.4	8.5	8.4
20	8.6	8.4	8.3	8.2	8.3	8.1	8.5	8.3	8.6	8.3	8.5	8.4
21	8.6	8.4	8.3	8.2	8.3	8.1	8.5	8.3	8.5	8.4	8.5	8.3
22	8.6	8.4	8.4	8.2	8.3	8.1	8.5	8.3	8.5	8.4	8.5	8.3
23	8.6	8.3	8.4	8.2	8.3	8.1	8.5	8.3	8.6	8.4	8.5	8.4
24	8.6	8.3	8.4	8.1	8.3	8.1	8.5	8.3	8.6	8.4	8.5	8.4
25	8.6	8.3	8.4	8.2	8.3	8.1	8.5	8.3	8.6	8.4	8.6	8.4
26	8.6	8.2	8.4	8.1	8.3	8.1	8.5	8.3	8.6	8.4	8.6	8.4
27	8.4	8.2	8.4	8.1	8.3	8.1	8.5	8.3	8.6	8.4	8.5	8.4
28	8.4	8.2	8.3	8.1	8.3	8.2	8.5	8.3	8.6	8.4	8.6	8.4
29	8.4	8.2	8.3	8.1	8.3	8.2	8.5	8.3	8.6	8.4	8.6	8.4
30	8.4	8.2	8.3	8.1	8.3	8.2	8.5	8.3	8.6	8.4	8.6	8.4
31	---	---	8.3	8.1	---	---	8.5	8.3	8.6	8.4	---	---
MONTH	8.6	8.2	8.5	8.1	8.3	8.0	8.5	8.2	8.6	8.3	8.6	8.3

SPECIFIC CONDUCTANCE, MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	153	152	155	145	146	130	172	111	167	161	169	166
2	153	150	163	149	130	127	172	157	165	158	200	167
3	153	151	159	154	127	125	166	159	162	159	201	175
4	153	151	174	149	126	123	171	166	164	154	182	178
5	153	151	152	147	---	---	172	171	171	143	183	180
6	154	153	164	147	---	---	171	167	174	141	183	180
7	---	---	155	143	---	---	172	169	171	159	187	182
8	---	---	144	138	---	---	171	160	173	153	190	182
9	---	---	174	139	---	---	166	164	166	159	189	179
10	---	---	185	149	---	---	168	165	174	160	186	175
11	---	---	157	142	---	---	167	165	173	165	175	142
12	---	---	160	139	---	---	168	166	179	168	152	142
13	---	---	153	125	---	---	170	168	181	172	150	143
14	---	---	154	123	---	---	170	169	182	170	145	139
15	---	---	153	130	157	148	173	165	173	167	164	138
16	---	---	155	132	155	146	172	147	174	137	189	141
17	---	---	154	141	155	150	176	169	156	137	182	160
18	---	---	156	135	156	150	171	163	159	152	197	178
19	---	---	156	140	157	144	168	162	163	158	201	190
20	---	---	157	137	145	139	167	164	171	156	203	185
21	---	---	158	149	146	143	169	158	165	162	198	183
22	---	---	175	157	150	142	165	159	166	163	192	180
23	---	---	175	157	148	146	165	158	169	163	185	174
24	---	---	158	149	154	135	163	149	170	167	181	174
25	---	---	159	154	155	152	162	134	175	151	182	178
26	166	163	163	158	159	139	155	134	223	175	187	181
27	166	161	169	157	170	159	155	152	203	190	188	177
28	168	164	165	159	170	160	156	153	198	161	187	185
29	167	156	164	159	160	158	156	155	195	155	190	185
30	162	151	163	146	161	157	157	155	---	---	190	185
31	159	146	---	---	160	158	164	157	---	---	193	187
MONTH	---	---	185	123	---	---	176	111	223	137	203	138

## PYRAMID AND WINNEMUCCA LAKES BASIN

10345490 GRAY CREEK NEAR FLORISTON, CA—Continued

## SPECIFIC CONDUCTANCE, MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	192	183	129	116	91	83	108	99	129	115	141	136
2	184	172	123	110	91	81	106	102	131	117	141	134
3	175	170	118	96	89	81	111	103	124	117	135	130
4	171	164	110	89	90	82	113	105	124	116	140	123
5	166	162	108	90	90	82	114	106	133	117	133	129
6	172	165	107	94	90	83	117	108	132	116	130	124
7	174	159	108	97	88	83	117	110	129	120	144	116
8	159	149	109	97	89	84	119	113	127	117	144	133
9	156	144	111	99	91	88	123	116	137	125	144	132
10	149	140	111	101	92	89	120	113	137	130	144	139
11	147	137	117	110	94	89	121	115	137	132	145	134
12	144	136	124	116	96	89	122	115	138	128	145	141
13	141	136	127	113	96	89	127	115	137	127	147	142
14	143	138	124	110	96	89	124	119	140	132	146	143
15	142	138	120	108	97	90	129	119	140	131	145	143
16	146	142	114	100	97	91	126	119	139	131	146	143
17	147	143	107	97	94	91	129	120	140	129	145	137
18	147	145	106	98	97	92	134	119	140	134	145	143
19	150	147	105	97	99	92	131	125	141	133	145	141
20	155	149	104	96	98	92	134	123	142	136	143	138
21	151	150	101	96	97	93	132	121	142	132	144	138
22	153	150	102	89	100	93	124	112	142	128	144	140
23	153	146	97	88	99	94	124	114	142	130	145	143
24	151	137	96	88	98	93	125	116	143	133	145	138
25	147	130	95	90	98	94	127	117	143	133	147	136
26	137	118	97	89	98	94	128	117	143	129	147	146
27	133	118	95	84	98	95	127	114	143	125	147	146
28	129	120	90	84	99	96	127	118	144	128	148	146
29	130	120	95	87	100	98	128	114	144	126	148	146
30	132	119	95	84	110	98	129	113	145	127	148	144
31	---	---	93	83	---	---	121	111	144	131	---	---
MONTH	192	118	129	83	110	81	134	99	145	115	148	116

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	15.5	8.0	2.0	0.0	4.5	1.5	1.5	0.0	2.5	0.0	4.0	0.5
2	13.0	5.5	1.0	0.0	3.5	1.5	0.0	0.0	2.5	0.0	5.5	0.5
3	13.0	5.5	3.5	0.0	3.0	0.5	0.0	0.0	2.5	0.0	4.5	0.0
4	13.0	7.5	1.0	0.0	4.0	0.0	0.0	0.0	2.0	0.0	5.5	0.0
5	12.5	6.5	4.0	0.5	6.5	3.5	0.0	0.0	0.0	0.0	6.0	0.5
6	13.5	6.0	3.0	0.0	5.0	3.0	0.0	0.0	1.5	0.0	8.0	2.0
7	13.0	6.5	4.5	1.5	3.5	1.0	2.0	0.0	2.5	0.0	8.0	1.0
8	13.0	5.5	5.0	2.0	1.0	0.0	3.5	1.5	0.0	0.0	8.5	1.5
9	12.5	6.5	3.5	1.0	1.0	0.0	3.5	1.0	0.0	0.0	9.0	2.0
10	9.0	3.0	2.5	0.0	1.5	0.0	3.0	1.0	0.0	0.0	8.5	2.5
11	10.0	1.5	1.5	0.0	1.0	0.0	3.0	1.0	0.0	0.0	8.0	1.5
12	10.5	4.0	3.0	0.0	2.0	0.0	4.0	1.0	0.0	0.0	8.5	2.0
13	8.5	2.0	4.0	1.0	4.0	1.5	3.0	0.5	0.0	0.0	9.0	2.0
14	10.0	2.5	4.0	0.0	2.0	0.0	2.0	0.0	3.0	0.0	9.5	2.5
15	8.5	1.5	4.0	1.5	0.0	0.0	2.5	0.5	3.5	1.0	9.5	3.0
16	10.0	3.0	3.5	0.0	0.0	0.0	2.0	0.0	4.0	1.0	9.0	2.5
17	10.5	4.0	5.5	1.5	0.0	0.0	2.0	0.0	4.0	2.0	9.5	2.5
18	10.5	3.5	4.0	0.0	0.0	0.0	3.5	0.5	4.5	1.5	9.0	3.0
19	11.0	5.5	5.0	1.0	2.0	0.0	2.0	0.0	4.0	0.0	9.5	3.5
20	11.5	4.5	6.0	1.0	3.0	1.5	3.0	0.5	3.0	0.0	10.0	2.5
21	11.0	4.5	2.5	0.0	3.0	0.0	1.0	0.0	4.5	1.0	10.5	3.5
22	10.5	4.5	0.0	0.0	1.5	0.0	0.0	0.0	4.5	1.5	9.5	4.0
23	10.0	4.5	0.0	0.0	3.5	0.5	0.0	0.0	5.0	1.0	9.5	3.0
24	8.0	1.5	0.0	0.0	2.5	0.5	3.0	0.0	5.0	0.5	9.0	3.0
25	8.0	2.0	0.0	0.0	2.0	0.0	1.5	0.0	2.0	0.0	7.0	2.0
26	8.0	2.5	0.0	0.0	0.5	0.0	1.0	0.0	2.5	0.0	6.0	1.0
27	8.0	2.5	0.0	0.0	0.0	0.0	3.0	1.0	4.0	0.0	9.5	3.0
28	9.5	3.0	2.5	0.0	0.0	0.0	3.0	0.0	5.5	0.5	9.5	2.0
29	10.0	5.0	4.0	2.0	0.0	0.0	3.0	0.5	4.0	0.0	10.5	3.0
30	5.5	1.0	4.0	2.0	0.5	0.0	3.5	1.0	---	---	10.5	4.0
31	1.0	0.0	---	---	2.5	0.5	1.0	0.0	---	---	10.5	3.5
MONTH	15.5	0.0	6.0	0.0	6.5	0.0	4.0	0.0	5.5	0.0	10.5	0.0

10345490 GRAY CREEK NEAR FLORISTON, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	2.0	12.5	3.0	14.5	5.0	12.0	7.0	19.0	8.5	18.5	9.5
2	9.5	2.0	14.0	4.0	15.5	5.0	15.0	7.0	18.5	8.5	16.5	9.0
3	10.5	3.0	13.5	3.5	13.0	5.5	17.5	8.0	17.5	6.5	14.0	6.5
4	11.0	4.0	13.5	4.5	15.0	4.5	18.5	7.5	18.0	8.5	15.0	5.5
5	10.5	3.5	12.0	5.0	14.5	5.0	19.0	8.0	17.5	7.5	16.5	6.5
6	10.0	2.5	10.5	4.5	15.5	5.5	19.5	9.5	18.0	8.5	17.0	7.5
7	11.0	3.0	12.0	4.0	13.5	5.0	19.0	10.0	18.5	7.0	16.5	7.0
8	10.5	3.5	12.0	4.0	9.0	3.0	18.5	8.0	19.5	8.5	16.0	6.5
9	11.0	3.0	12.5	2.5	7.0	3.0	18.0	9.0	19.5	10.0	16.0	6.5
10	11.0	2.5	6.5	3.5	13.0	5.5	17.5	7.5	20.0	8.5	16.0	7.0
11	11.5	2.5	6.0	1.5	14.0	3.5	18.0	6.5	19.5	9.5	16.5	7.0
12	11.0	3.5	12.0	1.5	15.0	4.5	18.5	8.0	18.5	10.5	16.5	9.0
13	9.5	3.5	13.0	3.0	16.0	5.5	19.5	8.5	17.5	11.5	15.5	6.5
14	10.0	2.0	12.5	3.0	16.5	6.5	19.0	8.0	19.5	10.5	14.0	5.0
15	10.0	3.0	12.0	4.0	16.5	6.5	18.5	8.0	16.5	11.5	14.5	5.5
16	9.0	2.5	13.0	3.0	16.0	6.5	18.0	8.5	15.0	11.0	16.0	6.5
17	6.5	2.5	12.5	3.5	14.0	6.5	19.5	10.5	18.5	7.5	15.0	6.5
18	6.5	2.0	11.5	3.0	15.0	6.0	20.0	10.5	19.0	9.0	10.5	7.0
19	8.0	3.0	11.0	2.5	16.5	5.5	21.0	11.0	16.5	10.0	7.5	5.0
20	10.0	4.0	10.0	3.0	16.0	5.5	19.5	10.0	19.5	10.0	9.0	4.0
21	10.5	3.5	9.0	2.5	16.5	6.5	20.0	9.0	17.5	9.5	10.5	2.5
22	11.0	2.0	13.0	4.0	17.5	7.0	20.0	10.5	13.5	10.0	12.5	3.5
23	12.0	2.0	12.5	3.0	18.0	7.5	18.0	10.0	15.5	9.5	13.5	5.5
24	13.0	2.5	12.5	3.5	16.5	7.5	19.0	11.0	17.5	8.5	13.5	5.0
25	13.5	3.5	11.0	3.5	17.0	6.0	19.0	10.5	17.0	9.0	14.0	5.5
26	14.0	3.5	12.5	3.5	17.0	6.0	20.0	9.5	16.0	7.5	13.0	5.0
27	12.5	4.0	13.0	6.0	15.0	6.5	19.5	8.0	16.0	6.5	12.5	4.0
28	11.0	3.5	10.0	6.0	14.5	8.5	20.0	10.0	17.0	7.0	13.0	5.5
29	10.5	2.0	13.5	5.0	14.0	7.5	19.0	9.0	17.5	8.0	11.5	5.0
30	12.5	2.0	14.5	3.5	14.5	7.5	18.5	7.0	18.5	8.5	11.0	5.5
31	---	---	14.5	4.0	---	---	19.0	8.5	18.0	8.0	---	---
MONTH	14.0	2.0	14.5	1.5	18.0	3.0	21.0	6.5	20.0	6.5	18.5	2.5

TURBIDITY, WATER, MONOCHROME NEAR INFRA-RED LED LIGHT, 780-900 NM, DETECTION ANGLE 90 +/-2.5 DEGREES, FNU  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	12	4.1	6.0	46	3.7	9.6	13	5.9	8.5	33	7.5	12
2	19	4.1	6.3	96	3.8	15	9.5	4.8	6.5	39	8.4	16
3	10	4.2	5.8	20	4.7	8.7	7.5	4.0	5.2	8.7	2.3	5.2
4	14	3.4	5.6	120	3.2	15	15	3.6	6.6	5.9	2.5	3.2
5	9.4	2.8	5.2	25	6.2	9.6	40	9.3	15	9.2	2.2	3.1
6	18	3.7	5.2	43	3.3	8.6	130	10	26	16	3.0	7.8
7	14	3.9	5.3	16	4.6	6.6	69	6.9	12	110	14	23
8	13	3.2	5.1	30	4.0	6.5	23	3.9	7.9	40	14	21
9	11	3.2	5.2	28	5.7	8.7	56	3.7	11	26	9.9	13
10	12	3.4	5.0	24	4.6	8.3	63	7.5	15	22	8.1	11
11	13	3.2	4.3	58	4.2	10	45	4.7	9.8	18	7.0	9.4
12	10	2.9	4.2	23	3.2	7.3	80	3.6	11	18	6.3	9.0
13	14	2.6	4.2	18	4.6	5.9	15	6.1	8.3	13	5.1	8.1
14	9.4	2.3	4.1	12	4.0	5.7	25	6.2	10	18	6.0	8.3
15	16	2.8	4.1	12	3.7	5.1	13	3.3	4.6	15	5.3	7.8
16	9.3	3.0	4.3	9.8	3.4	4.6	18	3.0	5.4	41	5.8	8.6
17	9.5	2.0	4.2	9.8	3.2	4.7	23	2.7	4.2	49	3.7	6.8
18	13	3.0	4.4	8.8	3.3	4.5	43	3.1	6.7	18	4.9	7.2
19	11	3.1	4.4	17	3.4	4.5	90	8.3	11	14	4.7	6.3
20	9.5	2.9	4.0	17	3.6	5.0	28	9.5	16	15	4.2	5.7
21	7.4	1.8	4.0	8.6	3.3	4.6	18	5.9	8.5	100	4.2	6.4
22	17	2.8	4.4	13	3.0	4.2	34	5.0	11	19	2.9	4.5
23	11	2.6	4.2	16	3.3	5.9	20	4.4	7.3	16	2.2	5.3
24	14	2.4	4.2	28	4.1	8.5	140	5.7	19	63	6.4	13
25	20	2.6	3.9	24	3.5	8.0	22	6.0	9.8	24	3.9	7.4
26	15	2.1	3.7	30	3.1	5.9	30	2.9	5.8	95	2.6	9.8
27	17	2.1	3.6	19	2.4	11	25	2.4	3.6	17	6.9	9.4
28	18	2.3	4.0	130	9.5	16	49	2.1	7.8	16	5.1	7.2
29	23	2.4	5.3	23	8.3	13	20	6.5	12	16	4.7	6.3
30	8.8	2.1	4.1	17	6.9	10	210	11	30	15	4.9	6.7
31	32	3.4	12	---	---	---	28	9.9	15	94	4.3	8.1
MAX	32	4.2	12	130	9.5	16	210	11	30	110	14	23
MIN	7.4	1.8	3.6	8.6	2.4	4.2	7.5	2.1	3.6	5.9	2.2	3.1



10345490 GRAY CREEK NEAR FLORISTON, CA—Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT					
07...	1310	9.5	11.5	23	.59
NOV					
12...	1340	9.5	3.0	48	1.2
DEC					
19...	1030	8.0	1.0	40	.86
JAN					
15...	1300	8.5	2.5	24	.55
FEB					
05...	1410	18	.0	148	7.2
MAR					
04...	1350	10	5.5	26	.70
APR					
06...	1420	27	9.5	86	6.3
MAY					
03...	1450	41	13.5	198	22
JUN					
07...	1310	42	11.5	72	8.2
30...	1545	20	13.5	20	1.1
JUL					
21...	1350	14	18.5	9	.34
AUG					
31...	1445	9.0	18.0	4	.10

CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Depth at sample location, feet (81903)	Sampling depth, feet (000003)	Turbidity, IR LED light, det ang, 90 deg, FNU (63680)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unft uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Location in X-sect. looking downstrm ft from l bank (00009)
AUG								
31...*	1425	.60	.30	4.9	8.4	137	18.0	9.00
31...*	1426	.40	.30	5.6	8.4	137	18.0	8.00
31...*	1427	.60	.30	6.4	8.4	137	18.0	7.00
31...*	1428	.55	.30	13	8.4	137	18.0	6.00
31...*	1429	.65	.30	11	8.4	137	18.0	5.00
31...*	1430	.64	.30	5.3	8.4	137	18.0	4.00
31...*	1431	.70	.30	1.8	8.4	137	18.0	3.00
31...*	1432	.80	.30	1.6	8.4	137	18.0	2.00
31...*	1433	.85	.30	1.5	8.4	137	18.0	1.00
31...*	1434	.71	.30	4.0	8.4	137	18.0	.00

\* Instantaneous discharge at the time of cross-sectional measurements: Aug. 31, 9.5 ft<sup>3</sup>/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<sup>2</sup>.

## 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<sup>3</sup>/s, Nov. 21, 1950, gage height, 14.5 ft, present datum, from floodmarks, from slope-area measurement of peak flow; minimum, 37 ft<sup>3</sup>/s, Sept. 15, 1933.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	466	376	220	341	234	362	734	753	893	557	557	505
2	452	358	227	336	241	356	709	797	903	553	559	501
3	450	389	292	354	245	342	722	870	878	549	551	503
4	446	439	264	330	243	344	765	923	788	551	555	504
5	440	487	211	302	232	351	824	961	719	550	555	495
6	439	466	210	310	234	355	848	921	708	555	549	499
7	445	449	440	313	237	372	789	975	706	557	544	506
8	437	433	285	315	229	384	806	993	637	555	538	493
9	437	429	342	329	233	412	807	984	620	552	542	501
10	437	414	337	335	237	476	779	968	593	544	541	505
11	440	399	327	332	228	534	760	927	586	549	520	499
12	439	387	304	308	228	550	765	905	581	553	521	493
13	445	381	272	280	226	572	787	890	579	558	518	494
14	440	390	230	261	226	595	742	896	601	555	518	499
15	424	387	214	261	223	658	697	884	584	554	522	512
16	405	380	218	260	242	728	690	859	550	559	523	609
17	402	372	214	257	482	779	669	851	548	560	516	644
18	399	367	210	257	444	810	631	849	542	557	504	630
19	395	363	230	254	421	854	649	815	531	559	501	628
20	399	365	235	255	412	875	692	852	544	562	498	620
21	400	361	250	259	389	922	715	894	571	564	494	600
22	399	348	243	245	376	997	740	901	566	559	493	566
23	398	343	239	244	368	1080	734	919	561	560	495	381
24	395	353	279	250	360	1050	745	870	556	564	502	214
25	389	347	353	243	411	987	775	793	548	558	492	178
26	393	342	298	236	492	889	822	750	542	556	491	167
27	389	335	261	241	452	779	871	822	543	556	501	158
28	388	334	261	243	402	755	897	991	566	560	504	146
29	386	311	282	239	374	763	824	869	568	553	500	134
30	395	254	315	240	---	801	735	849	556	548	496	126
31	438	---	350	237	---	760	---	867	---	553	498	---
TOTAL	13007	11359	8413	8667	9121	20492	22723	27398	18668	17220	16098	13310
MEAN	420	379	271	280	315	661	757	884	622	555	519	444
MAX	466	487	440	354	492	1080	897	993	903	564	559	644
MIN	386	254	210	236	223	342	631	750	531	544	491	126
AC-FT	25800	22530	16690	17190	18090	40650	45070	54340	37030	34160	31930	26400

10346000 TRUCKEE RIVER AT FARAD, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	387	420	528	592	654	798	1262	1706	1254	658	513	469
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1909 - 2004	
ANNUAL TOTAL	194505		186476			
ANNUAL MEAN	533		509		764	
HIGHEST ANNUAL MEAN					2443	
LOWEST ANNUAL MEAN					184	
HIGHEST DAILY MEAN	1400	May 30	1080	Mar 23	13400	Dec 23 1955
LOWEST DAILY MEAN	210	Dec 6	126	Sep 30	37	Sep 15 1933
ANNUAL SEVEN-DAY MINIMUM	222	Dec 14	160	Sep 24	40	Sep 9 1933
MAXIMUM PEAK FLOW			1120	Mar 23	17500	Nov 21 1950
MAXIMUM PEAK STAGE			4.68	Mar 23	14.50	Nov 21 1950
ANNUAL RUNOFF (AC-FT)	385800		369900		553200	
10 PERCENT EXCEEDS	869		850		1660	
50 PERCENT EXCEEDS	504		499		505	
90 PERCENT EXCEEDS	292		241		209	

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, 1.64 in., Dec. 6; no precipitation for many days.

## PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.03	0.37	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.04	0.25	0.25	0.10	0.00	0.00	0.09	0.00	0.00	0.00
3	0.00	0.00	0.06	0.04	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.03	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	1.64	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.23	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.25	0.00	0.03	0.00	0.00	0.00	0.00	0.27	0.04	0.00	0.00
10	0.00	0.04	0.67	0.00	0.00	0.00	0.00	0.07	0.05	0.00	0.00	0.00
11	0.00	0.00	0.08	0.00	0.03	0.00	0.00	0.39	0.03	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.08	0.00	0.00	0.00
13	0.00	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00
16	0.00	0.08	0.03	0.00	0.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.06	0.00	0.00
19	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.06	0.10	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.06	0.03	0.06	0.00	0.04	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.04	0.00	0.00	0.00	0.00
23	0.00	0.00	0.03	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	1.21	0.04	0.08	0.00	0.00	0.00	0.00	0.28	0.00	0.00
25	0.00	0.00	0.10	0.00	1.35	0.42	0.00	0.05	0.00	0.00	0.14	0.00
26	0.00	0.00	0.12	0.00	0.69	0.00	0.00	0.00	0.00	0.14	0.00	0.00
27	0.00	0.00	0.00	0.03	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.07	0.03	0.07	0.00	0.00	0.03	0.00	0.00	0.00	0.00
29	0.00	0.00	0.54	0.04	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.17	0.03	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.03	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.53	5.80	1.02	4.10	0.65	0.13	0.61	0.52	0.52	0.17	0.00



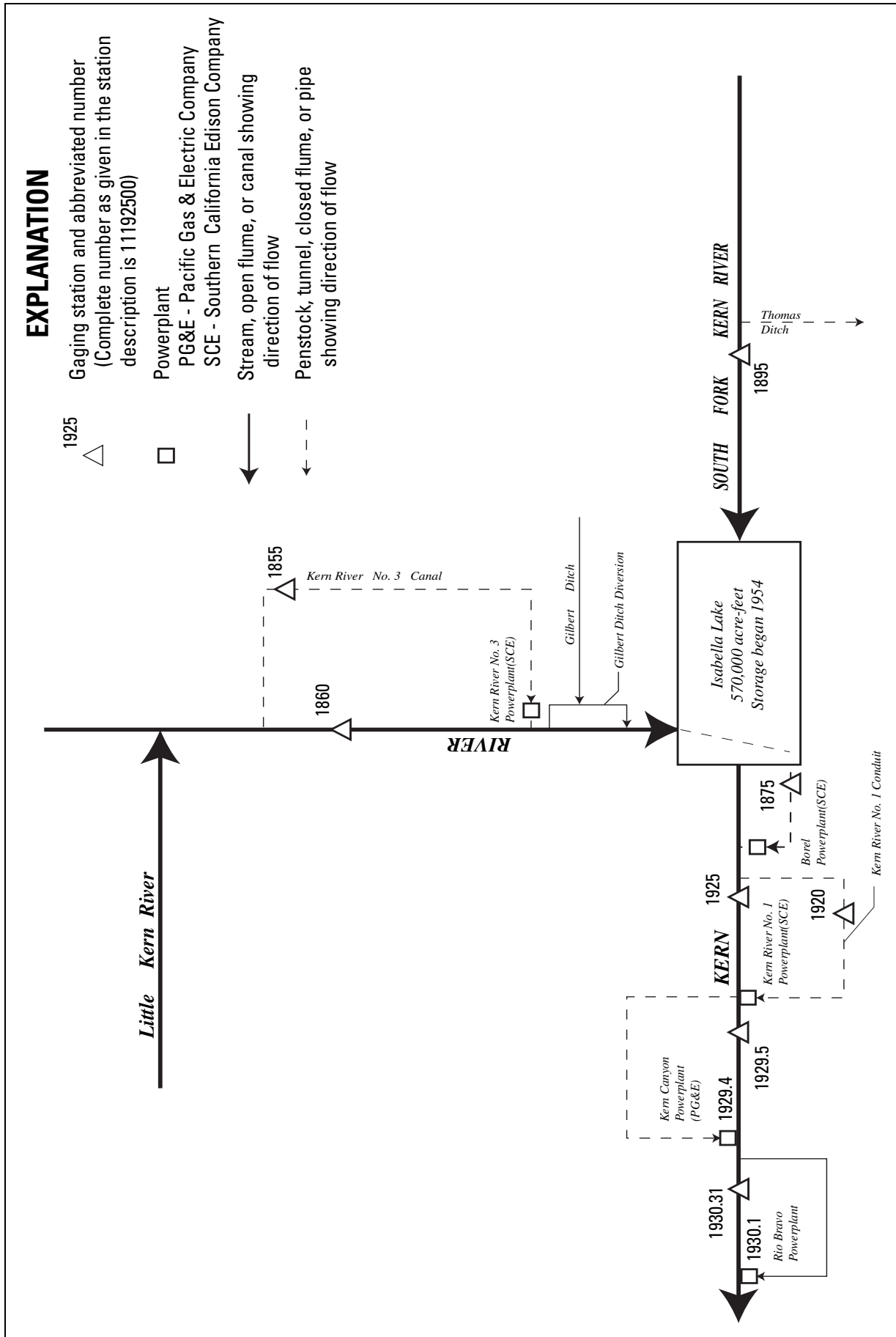


Figure 23. Diversions and storage in Kern River Basin.

## 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<sup>2</sup>.

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.

CHEMICAL ANALYSES: Water years 1956–65.

WATER TEMPERATURE: Water years 1961–65.

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<sup>3</sup>/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<sup>3</sup>/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<sup>3</sup>/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, maximum gage height, 24.39 ft, Nov. 8, 2002; no flow for many days in 1924 and 1925.

Combined river and diversion: Maximum discharge, 60,000 ft<sup>3</sup>/s, Dec. 6, 1966; minimum daily, 76 ft<sup>3</sup>/s, Dec. 22, 1990.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	114	72	287	62	346	778	1080	948	147	161	99
2	89	89	69	285	65	343	734	1240	1090	161	154	99
3	97	81	71	310	80	329	671	1480	1180	167	154	99
4	105	70	71	304	58	338	637	1800	1180	174	153	99
5	114	65	76	334	65	354	621	2000	1140	181	148	101
6	128	63	77	365	60	401	654	1880	1160	187	146	98
7	153	61	76	371	58	490	863	1670	1100	190	147	94
8	162	63	78	342	57	575	843	1590	927	203	143	91
9	129	95	44	348	57	659	692	1530	770	216	140	91
10	105	90	70	350	62	916	683	1630	653	215	136	93
11	107	65	67	332	62	928	703	1490	544	217	134	92
12	107	76	61	316	58	888	836	1330	463	246	130	90
13	106	82	90	304	59	866	910	1260	500	258	132	92
14	104	69	84	295	61	906	883	1280	574	255	141	88
15	104	63	65	293	64	951	851	1350	571	223	147	86
16	108	72	67	288	67	1050	764	1290	582	188	146	84
17	107	56	74	289	72	1130	673	1270	684	185	139	83
18	103	52	73	290	105	1220	590	1220	638	185	131	83
19	105	50	70	289	226	1210	486	1150	479	189	131	87
20	103	53	70	155	216	1240	453	1140	383	244	133	92
21	103	61	69	64	215	1290	439	1110	252	221	137	96
22	104	58	64	64	223	1310	441	1070	178	230	139	97
23	103	58	67	188	222	1350	432	1050	163	251	138	92
24	104	84	73	262	226	1390	424	1110	169	262	136	89
25	103	77	499	262	233	1250	425	1250	138	237	131	87
26	103	64	337	252	321	1280	409	966	135	182	124	85
27	103	62	260	261	348	1190	546	790	131	160	120	84
28	103	66	242	191	359	1560	1050	889	129	157	114	83
29	103	74	289	65	353	1350	1330	879	125	151	111	85
30	104	75	299	64	---	975	1100	750	126	163	105	88
31	106	---	294	64	---	805	---	807	---	167	100	---
TOTAL	3404	2108	3918	7884	4114	28890	20921	39351	17112	6212	4201	2727
MEAN	110	70.3	126	254	142	932	697	1269	570	200	136	90.9
MAX	162	114	499	371	359	1560	1330	2000	1180	262	161	101
MIN	89	50	44	64	57	329	409	750	125	147	100	83
AC-FT	6750	4180	7770	15640	8160	57300	41500	78050	33940	12320	8330	5410

BUENA VISTA LAKE BASIN

11186000 KERN RIVER NEAR KERNVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	64.0	68.4	124	174	148	279	584	1479	1572	713	215	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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004	
ANNUAL TOTAL	123459		140842			
ANNUAL MEAN	338		385		462	
HIGHEST ANNUAL MEAN					1727 1969	
LOWEST ANNUAL MEAN					3.65 1961	
HIGHEST DAILY MEAN	3510	May 29	2000	May 5	33600	Dec 6 1966
LOWEST DAILY MEAN	41	Jan 1	44	Dec 9	0.20	Dec 16 1960
ANNUAL SEVEN-DAY MINIMUM	49	Feb 5	55	Nov 17	0.26	Dec 12 1960
MAXIMUM PEAK FLOW			2200	May 25	60000	Dec 6 1966
MAXIMUM PEAK STAGE			16.65	May 25	24.39	Nov 8 2002
ANNUAL RUNOFF (AC-FT)	244900		279400		334800	
10 PERCENT EXCEEDS	705		1140		1430	
50 PERCENT EXCEEDS	147		165		85	
90 PERCENT EXCEEDS	56		65		29	

## PACIFIC SLOPE BASINS IN CALIFORNIA

## 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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	166	176	312	248	361	1130	1120	1230	470	192	143
2	137	164	174	310	258	359	1040	1290	1370	491	191	141
3	138	170	168	335	275	344	967	1520	1460	471	191	141
4	146	170	166	326	266	375	913	1840	1450	448	192	142
5	153	166	171	349	247	377	929	2040	1420	426	191	144
6	159	175	196	379	256	420	1020	1930	1450	425	185	141
7	158	175	231	392	265	510	1170	1720	1430	442	181	137
8	162	177	236	380	247	596	1180	1640	1280	438	177	134
9	155	209	184	381	246	671	1180	1580	1080	482	175	133
10	155	206	198	363	247	916	1230	1670	915	493	172	134
11	157	182	200	352	245	928	1230	1530	796	459	170	133
12	157	193	175	343	246	888	1300	1370	753	422	170	132
13	155	205	199	321	249	866	1330	1300	787	383	178	131
14	154	192	214	318	251	906	1240	1320	860	350	185	131
15	154	185	183	318	253	951	1200	1390	853	338	191	129
16	153	194	186	309	259	1050	1140	1350	857	333	189	127
17	153	186	203	306	292	1130	1030	1330	959	317	181	126
18	153	182	201	307	318	1220	918	1270	930	360	173	126
19	153	180	202	305	244	1210	841	1200	772	312	171	129
20	152	179	215	290	236	1240	805	1190	676	336	173	133
21	151	181	225	269	235	1290	829	1150	695	327	179	138
22	150	175	202	250	241	1310	806	1110	731	302	181	140
23	149	157	198	282	243	1350	768	1110	703	287	180	137
24	150	170	236	281	237	1390	777	1150	627	289	177	134
25	149	178	705	273	251	1330	798	1400	626	265	173	132
26	149	173	406	264	345	1290	885	1240	611	261	166	129
27	149	171	311	271	365	1200	1080	1060	583	254	161	128
28	149	175	297	260	374	1560	1380	1150	529	242	155	128
29	149	179	345	249	368	1420	1370	1150	497	228	152	129
30	150	179	339	251	---	1200	1140	1040	467	207	148	132
31	153	---	319	256	---	1140	---	1090	---	196	145	---
TOTAL	4694	5394	7461	9602	7807	29798	31626	42250	27397	11054	5445	4014
MEAN	151	180	241	310	269	961	1054	1363	913	357	176	134
MAX	162	209	705	392	374	1560	1380	2040	1460	493	192	144
MIN	137	157	166	249	235	344	768	1040	467	196	145	126
AC-FT	9310	10700	14800	19050	15490	59100	62730	83800	54340	21930	10800	7960

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004, BY WATER YEAR (WY)

MEAN	238	273	353	452	499	697	1106	2035	2115	1114	487	297
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 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1961 - 2004
ANNUAL TOTAL	218269	186542	
ANNUAL MEAN	598	510	806
HIGHEST ANNUAL MEAN			2264
LOWEST ANNUAL MEAN			228
HIGHEST DAILY MEAN	3930	May 29	33600
LOWEST DAILY MEAN	137	Oct 2	76
ANNUAL SEVEN-DAY MINIMUM	148	Oct 1	84
ANNUAL RUNOFF (AC-FT)	432900	370000	584200
10 PERCENT EXCEEDS	1200	1270	2000
50 PERCENT EXCEEDS	351	272	378
90 PERCENT EXCEEDS	163	149	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.

WATER TEMPERATURE: Water years 1958–79.

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<sup>3</sup>/s, Mar. 13, 14, 1952; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	482	246	216	340	257	240	479	486	484	549	539	538
2	473	198	286	342	258	245	476	486	485	559	539	517
3	427	199	275	344	258	267	474	486	484	571	538	519
4	396	191	267	343	258	290	476	484	484	572	537	537
5	419	182	249	342	251	290	476	483	483	572	537	547
6	449	181	247	342	240	295	477	481	484	571	536	543
7	449	182	263	345	240	345	478	480	483	570	534	521
8	498	183	299	345	240	431	478	484	482	586	533	489
9	561	184	317	344	241	462	449	485	483	302	336	425
10	554	211	301	346	243	448	436	485	482	482	153	376
11	500	229	240	128	250	418	446	484	483	591	418	330
12	435	231	219	4.6	257	420	434	482	486	584	538	349
13	462	232	232	0.00	257	416	435	482	415	582	536	418
14	472	231	260	0.00	257	442	436	484	3.7	582	535	477
15	442	229	247	0.00	257	477	436	485	7.5	581	533	445
16	424	205	224	0.00	257	477	436	484	24	579	531	414
17	408	186	226	68	273	477	436	485	328	577	533	397
18	377	185	227	232	295	476	437	482	463	577	535	362
19	371	185	224	296	330	477	438	483	464	565	542	342
20	404	187	224	288	360	478	437	485	463	556	541	206
21	453	187	223	285	351	477	464	484	464	552	516	117
22	469	185	223	295	336	478	485	485	468	551	513	114
23	469	186	223	295	336	477	484	483	471	551	547	112
24	465	180	234	296	336	476	484	482	472	548	544	113
25	470	170	249	278	337	477	484	483	471	548	545	113
26	483	170	248	256	284	477	486	484	470	548	546	114
27	483	168	282	249	239	477	485	484	470	547	536	219
28	511	167	337	267	240	477	485	483	512	546	438	303
29	503	167	335	285	240	478	486	484	534	545	436	297
30	455	167	338	255	--	479	486	482	571	544	511	286
31	376	---	338	256	---	478	---	484	---	541	542	---
TOTAL	14140	5804	8073	7466.60	7978	13122	13899	14994	12874.2	17129	15698	10540
MEAN	456	193	260	241	275	423	463	484	429	553	506	351
MAX	561	246	338	346	360	479	486	486	571	591	547	547
MIN	371	167	216	0.00	239	240	434	480	3.7	302	153	112
AC-FT	28050	11510	16010	14810	15820	26030	27570	29740	25540	33980	31140	20910

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 2004, BY WATER YEAR (WY)

MEAN	246	237	267	306	382	460	505	520	536	491	404	305
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.23	2.25	0.00	0.00
(WY)	1973	1946	1973	1952	1951	1973	1990	1914	1914	1990	1972	1931

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1910 - 2004
ANNUAL TOTAL	153795	141717.80	
ANNUAL MEAN	421	387	387
HIGHEST ANNUAL MEAN			585
LOWEST ANNUAL MEAN			106
HIGHEST DAILY MEAN	578	May 15	634
LOWEST DAILY MEAN	165	Feb 25	0.00
ANNUAL SEVEN-DAY MINIMUM	170	Nov 24	29
ANNUAL RUNOFF (AC-FT)	305100	281100	280700
10 PERCENT EXCEEDS	561	543	586
50 PERCENT EXCEEDS	432	440	438
90 PERCENT EXCEEDS	224	190	127

## 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<sup>2</sup>.

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<sup>3</sup>/s. See schematic diagram of Kern River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 28,700 ft<sup>3</sup>/s, Dec. 6, 1966, gage height, 18.9 ft, from floodmarks, present datum, from rating curve extended above 3,000 ft<sup>3</sup>/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<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 22	1430	396	5.57

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	18	24	32	28	58	227	91	35	7.5	0.92	0.89
2	8.8	19	23	35	28	66	215	89	33	7.2	0.93	0.87
3	9.1	19	23	33	32	63	193	89	31	7.1	0.94	0.87
4	9.4	20	20	23	30	63	196	88	30	6.8	0.90	0.86
5	9.6	19	19	26	28	66	195	88	28	6.3	0.89	0.86
6	9.9	21	22	31	28	73	205	86	27	5.4	0.89	0.88
7	10	25	26	32	30	86	194	83	25	5.0	0.86	0.93
8	10	26	27	32	29	98	181	80	24	4.6	0.85	0.88
9	10	31	25	34	28	108	181	78	24	4.2	0.82	0.89
10	10	30	20	35	28	116	185	76	24	3.7	0.81	0.89
11	10	27	22	35	28	120	180	73	25	3.3	0.80	0.92
12	10	27	20	35	29	120	169	70	24	3.1	0.78	0.92
13	10	30	19	34	28	122	162	68	23	2.9	0.78	0.92
14	10	29	21	34	29	127	154	65	22	2.6	0.78	0.94
15	10	28	21	34	30	139	147	63	21	2.4	0.89	0.98
16	11	28	19	34	30	153	141	61	21	2.3	0.92	0.95
17	11	27	19	34	31	152	136	59	22	2.1	0.84	0.95
18	11	28	23	34	36	160	130	58	19	1.9	0.94	0.95
19	11	26	23	35	44	181	123	56	17	1.9	0.98	0.93
20	11	26	24	34	41	208	119	54	16	1.9	0.98	0.96
21	11	26	26	34	46	253	114	51	14	2.0	1.0	1.0
22	11	25	25	32	49	329	109	49	13	2.0	1.1	1.2
23	11	23	24	31	54	343	105	48	13	1.9	1.1	1.3
24	11	21	27	33	52	329	101	47	12	1.7	1.1	1.4
25	11	22	54	32	52	307	100	45	11	1.6	1.0	1.3
26	12	23	50	29	97	295	97	45	9.7	1.5	1.0	1.4
27	12	21	30	29	79	271	95	46	9.3	1.4	0.99	1.4
28	12	20	23	29	62	246	95	44	8.6	1.1	0.93	1.3
29	12	21	29	29	58	246	95	42	8.0	0.88	0.91	1.4
30	13	23	35	28	---	236	93	41	7.8	0.88	0.91	3.3
31	14	---	33	29	---	232	---	38	---	0.91	0.91	---
TOTAL	330.0	729	796	991	1164	5366	4437	1971	597.4	98.07	28.45	33.24
MEAN	10.6	24.3	25.7	32.0	40.1	173	148	63.6	19.9	3.16	0.92	1.11
MAX	14	31	54	35	97	343	227	91	35	7.5	1.1	3.3
MIN	8.2	18	19	23	28	58	93	38	7.8	0.88	0.78	0.86
AC-FT	655	1450	1580	1970	2310	10640	8800	3910	1180	195	56	66

11189500 SOUTH FORK KERN RIVER NEAR ONYX, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	23.9	39.3	56.8	65.6	94.3	162	345	421	169	48.5	23.2	18.5
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1912 - 2004	
ANNUAL TOTAL	27187.5		16541.16			
ANNUAL MEAN	74.5		45.2		123	
HIGHEST ANNUAL MEAN					605	
LOWEST ANNUAL MEAN					11.5	
HIGHEST DAILY MEAN	341	Mar 16	343	Mar 23	14000	Dec 6 1966
LOWEST DAILY MEAN	6.9	Aug 20	0.78	Aug 12	0.00	Sep 1 1934
ANNUAL SEVEN-DAY MINIMUM	7.4	Aug 14	0.80	Aug 8	0.00	Jul 23 1961
MAXIMUM PEAK FLOW			396	Mar 22	28700	Dec 6 1966
MAXIMUM PEAK STAGE			5.57	Mar 22	18.90	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	53930		32810		89080	
10 PERCENT EXCEEDS	193		124		284	
50 PERCENT EXCEEDS	31		25		41	
90 PERCENT EXCEEDS	10		0.93		6.9	

## 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<sup>2</sup>.

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 1,837.70 ft above NGVD of 1929.

REMARKS.—Kern River No. 1 Conduit (station 11192000) diverts up to about 420 ft<sup>3</sup>/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<sup>3</sup>/s, Nov. 19, 1950, gage height, 30.7 ft, from rating curve extended above 8,700 ft<sup>3</sup>/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<sup>3</sup>/s, Nov. 17–19, 1951. Since regulation by Isabella Lake: Maximum discharge, 10,100 ft<sup>3</sup>/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<sup>3</sup>/s, Nov. 19, 1950; minimum daily, 123 ft<sup>3</sup>/s, Sept. 22, 1951. Since regulation by Isabella Lake: Maximum discharge, 10,100 ft<sup>3</sup>/s, Dec. 6, 1966; minimum daily, 10 ft<sup>3</sup>/s, Dec. 17, 1968.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	212	31	26	163	72	271	806	440	868	737	630	290
2	205	27	110	181	75	283	755	345	935	715	625	268
3	169	27	108	171	95	285	768	491	870	567	602	416
4	125	28	102	165	78	316	781	501	901	463	565	422
5	125	28	74	163	75	316	742	435	1200	680	543	371
6	159	27	65	163	55	317	593	394	1230	812	604	412
7	159	27	64	166	55	335	557	388	1310	865	600	286
8	164	27	110	166	54	439	510	346	1230	895	586	258
9	321	27	129	168	53	484	431	355	1070	1050	695	210
10	350	27	146	167	53	487	318	458	901	703	818	174
11	340	27	74	137	55	448	390	426	731	611	932	114
12	147	27	35	72	69	446	645	373	580	773	886	e138
13	157	27	29	70	68	447	741	357	584	799	641	e202
14	176	27	71	65	67	447	797	412	853	809	479	e270
15	162	27	73	64	68	534	790	259	808	800	405	e328
16	132	27	39	63	193	591	690	218	821	719	497	e288
17	133	109	34	57	281	597	456	381	757	523	431	e224
18	99	202	34	84	316	595	432	383	730	483	441	e168
19	79	202	35	123	354	578	488	441	630	619	516	e118
20	85	106	38	121	386	595	457	547	597	622	410	e76
21	150	27	36	107	384	627	426	580	812	680	285	71
22	169	27	36	121	362	728	445	577	863	647	250	70
23	191	29	36	119	361	744	462	524	868	686	366	68
24	174	61	39	118	360	695	364	532	872	611	380	68
25	161	27	79	116	361	699	284	582	800	494	418	66
26	180	27	95	78	393	667	380	519	687	556	393	65
27	168	27	72	69	297	624	517	558	695	609	314	65
28	190	26	156	70	280	637	630	607	783	789	240	65
29	202	26	160	124	273	746	632	616	844	719	173	65
30	170	26	161	77	---	822	641	664	837	676	249	65
31	117	---	161	74	---	821	---	788	---	698	273	---
TOTAL	5371	1360	2427	3602	5593	16621	16928	14497	25667	21410	15247	5701
MEAN	173	45.3	78.3	116	193	536	564	468	856	691	492	190
MAX	350	202	161	181	393	822	806	788	1310	1050	932	422
MIN	79	26	26	57	53	271	284	218	580	463	173	65
AC-FT	10650	2700	4810	7140	11090	32970	33580	28750	50910	42470	30240	11310

e Estimated.



11192500 KERN RIVER NEAR DEMOCRAT SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	314	237	144	178	295	494	722	974	1482	1443	1029	448
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004	
ANNUAL TOTAL	143692		134424			
ANNUAL MEAN	394		367		648	
HIGHEST ANNUAL MEAN					2837	
LOWEST ANNUAL MEAN					23.7	
HIGHEST DAILY MEAN	1390	Jul 22	1310	Jun 7	6640	Jun 7 1969
LOWEST DAILY MEAN	22	Mar 23	26	Nov 28	0.00	May 26 1977
ANNUAL SEVEN-DAY MINIMUM	26	Nov 25	26	Nov 25	0.01	May 16 1977
MAXIMUM PEAK FLOW			1330	Jul 9	10100	Dec 6 1966
MAXIMUM PEAK STAGE			9.51	Jul 9	18.55	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	285000		266600		469800	
10 PERCENT EXCEEDS	1020		788		1810	
50 PERCENT EXCEEDS	244		320		249	
90 PERCENT EXCEEDS	35		39		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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	518	311	222	360	273	271	806	760	1190	1050	936	585
2	511	212	306	379	276	283	755	667	1260	1030	932	563
3	475	213	304	370	295	285	772	815	1190	882	908	709
4	432	212	298	364	279	316	785	824	1220	777	872	715
5	432	197	270	362	276	316	902	758	1520	994	850	665
6	466	194	261	361	256	317	889	718	1550	1120	910	706
7	467	194	260	364	256	335	855	711	1630	1180	906	580
8	471	195	306	361	255	439	807	670	1550	1210	893	552
9	628	201	324	360	255	484	726	680	1390	1360	1000	503
10	657	204	342	359	255	487	612	782	1220	1010	1120	467
11	647	239	269	328	257	448	683	750	1050	923	1240	407
12	454	241	232	262	271	446	941	696	895	1080	1190	251
13	464	240	226	263	269	447	1040	680	899	1110	946	202
14	483	239	268	261	269	447	1100	735	1170	1120	783	270
15	468	239	270	261	270	534	1090	582	1130	1110	708	328
16	439	232	237	260	269	591	992	541	1140	1030	799	288
17	439	192	232	254	281	597	758	704	1080	833	732	225
18	405	202	232	281	316	595	735	705	1050	793	742	360
19	385	202	231	320	354	578	791	764	950	929	816	438
20	390	210	232	319	386	595	760	870	917	931	709	391
21	455	223	232	305	384	627	729	903	1130	989	583	372
22	474	223	233	320	362	728	750	899	1180	956	548	363
23	496	225	233	318	361	744	775	846	1190	994	662	359
24	479	257	235	318	360	695	678	853	1190	919	677	379
25	466	223	276	316	361	699	597	904	1120	802	714	301
26	485	223	291	277	393	667	693	841	1000	864	689	296
27	473	223	269	269	297	624	829	882	1010	917	610	356
28	496	222	353	269	280	637	942	928	1100	1100	537	354
29	508	222	357	324	273	746	946	938	1160	1020	469	368
30	475	222	359	277	---	822	959	985	1150	983	545	375
31	422	---	358	274	---	821	---	1110	---	1000	568	---
TOTAL	14860	6632	8518	9716	8689	16621	24697	24501	35231	31016	24594	12728
MEAN	479	221	275	313	300	536	823	790	1174	1001	793	424
MAX	657	311	359	379	393	822	1100	1110	1630	1360	1240	715
MIN	385	192	222	254	255	271	597	541	895	777	469	202
AC-FT	29470	13150	16900	19270	17230	32970	48990	48600	69880	61520	48780	25250

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2004, BY WATER YEAR (WY)

MEAN	555	461	397	460	604	813	1048	1323	1850	1766	1341	713
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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1955 - 2004

ANNUAL TOTAL	231129	217803		
ANNUAL MEAN	633	595	946	
HIGHEST ANNUAL MEAN			3173	1983
LOWEST ANNUAL MEAN			246	1961
HIGHEST DAILY MEAN	1440	Jun 23	1630	Jun 7 1969
LOWEST DAILY MEAN	172	Feb 25	192	Nov 17 1968
ANNUAL SEVEN-DAY MINIMUM	200	Nov 4	200	Nov 4 1968
ANNUAL RUNOFF (AC-FT)	458400		432000	685300
10 PERCENT EXCEEDS	1310		1080	2070
50 PERCENT EXCEEDS	464		506	596
90 PERCENT EXCEEDS	233		236	206

## 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<sup>3</sup>/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<sup>3</sup>/s, July 3, 1998, gage height, 7.61 ft; minimum daily, 6 ft<sup>3</sup>/s, Dec. 18, 1988.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	28	30	29	282	33	156	149	531	414	413	35
2	29	29	31	30	268	33	102	48	624	401	257	35
3	28	29	30	30	291	33	116	170	557	253	233	51
4	28	29	31	31	279	33	111	203	526	144	203	40
5	29	29	30	31	143	33	272	125	888	295	171	34
6	29	29	30	31	34	33	255	71	914	474	221	35
7	29	30	30	31	34	32	229	63	1040	526	234	34
8	29	30	30	31	34	32	187	36	1230	550	205	34
9	30	30	30	31	34	32	94	33	929	742	294	35
10	33	31	30	31	35	32	32	132	612	407	440	37
11	43	30	30	31	35	32	36	112	431	253	588	36
12	31	30	30	31	33	32	262	54	262	413	572	54
13	29	30	30	31	64	32	382	35	229	460	303	37
14	29	30	30	32	32	32	452	77	513	474	130	38
15	28	30	30	32	33	114	459	45	486	474	76	37
16	29	30	30	32	51	32	377	33	493	394	115	37
17	29	44	30	31	32	32	144	56	441	206	67	38
18	28	30	30	31	32	32	77	49	414	109	54	56
19	29	31	30	180	34	32	156	98	318	249	163	39
20	44	40	30	320	37	32	125	218	239	259	37	39
21	42	30	30	314	31	33	84	263	465	331	35	38
22	29	30	30	313	31	66	98	265	612	297	35	37
23	29	30	30	311	32	85	140	395	564	336	36	37
24	29	31	30	314	33	42	50	546	559	288	35	36
25	29	30	31	316	33	41	31	358	488	138	39	35
26	29	30	31	294	34	29	33	220	368	190	35	36
27	29	30	30	284	33	28	171	240	349	225	34	36
28	29	30	30	281	33	30	286	283	448	431	34	36
29	29	30	30	305	33	83	295	287	512	380	34	36
30	29	30	29	297	---	168	317	317	520	324	35	36
31	29	---	50	282	---	177	---	458	---	348	35	---
TOTAL	943	920	953	4368	2110	1510	5529	5439	16562	10785	5163	1144
MEAN	30.4	30.7	30.7	141	72.8	48.7	184	175	552	348	167	38.1
MAX	44	44	50	320	291	177	459	546	1230	742	588	56
MIN	28	28	29	29	31	28	31	33	229	109	34	34
AC-FT	1870	1820	1890	8660	4190	3000	10970	10790	32850	21390	10240	2270
a	24510	7740	11730	8750	10850	26760	35490	34230	34400	36330	33360	20980

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 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	111	102	109	152	234	223	194	335	598	570	358	140
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 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1988 - 2004
ANNUAL TOTAL	88106	55426	
ANNUAL MEAN	241	151	419
HIGHEST ANNUAL MEAN			1631 1998
LOWEST ANNUAL MEAN			24.8 1994
HIGHEST DAILY MEAN	1360 Jul 23	1230 Jun 8	4520 Jul 5 1998
LOWEST DAILY MEAN	16 Jan 1	28 Oct 1	6.0 Dec 18 1988
ANNUAL SEVEN-DAY MINIMUM	16 Jan 6	29 Oct 1	9.5 May 20 1988
MAXIMUM PEAK FLOW		1440 Jun 8	4770 Jul 3 1998
MAXIMUM PEAK STAGE		4.73 Jun 8	7.61 Jul 3 1998
ANNUAL RUNOFF (AC-FT)	174800	109900	303700
10 PERCENT EXCEEDS	719	434	1240
50 PERCENT EXCEEDS	31	37	36
90 PERCENT EXCEEDS	28	30	25

## 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<sup>3</sup>/s, Feb. 23, 1998; minimum daily, 46 ft<sup>3</sup>/s, Feb. 22, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	63	183	64	260	271	81	54	53	55	54	92
2	63	200	260	63	241	283	75	55	54	54	54	82
3	66	205	300	63	279	283	54	53	54	75	53	67
4	66	205	293	62	268	311	54	54	55	58	52	95
5	62	194	279	62	273	318	53	54	53	68	52	91
6	66	188	260	62	254	339	54	54	54	52	52	88
7	63	187	260	60	241	325	54	54	160	52	52	81
8	63	188	285	60	241	89	53	54	215	52	52	85
9	60	194	298	58	241	90	52	54	87	74	67	98
10	59	200	70	58	241	97	54	54	59	52	83	92
11	64	235	81	87	241	102	57	54	60	53	59	92
12	63	235	246	301	254	105	71	54	60	52	53	56
13	59	235	226	308	248	105	77	54	60	52	53	80
14	54	228	244	301	254	90	71	54	104	52	53	90
15	56	235	297	301	254	52	84	56	56	52	53	84
16	59	229	305	301	260	95	63	54	52	52	53	87
17	66	119	284	274	273	94	66	54	52	52	54	87
18	67	188	291	243	335	88	62	54	56	53	55	87
19	62	194	284	288	328	74	64	54	57	55	54	90
20	64	247	291	302	65	70	57	52	58	52	67	97
21	60	199	291	302	60	62	54	52	58	52	83	94
22	55	194	291	301	55	57	55	53	58	52	73	94
23	55	188	284	308	55	55	67	54	58	53	61	90
24	58	194	284	315	62	54	62	54	57	52	73	93
25	60	183	326	309	71	57	55	54	58	52	86	213
26	58	177	362	274	84	62	54	55	58	53	88	323
27	58	183	305	261	105	56	54	54	58	53	88	116
28	58	177	67	261	217	69	52	53	60	52	91	98
29	57	183	58	294	279	70	53	54	57	52	81	89
30	56	183	58	280	---	53	54	54	54	52	78	88
31	60	---	57	260	---	51	---	63	---	62	78	---
TOTAL	1877	5830	7420	6483	6039	3927	1816	1680	2035	1702	2005	3019
MEAN	60.5	194	239	209	208	127	60.5	54.2	67.8	54.9	64.7	101
MAX	67	247	362	315	335	339	84	63	215	75	91	323
MIN	54	63	57	58	55	51	52	52	52	52	52	56
AC-FT	3720	11560	14720	12860	11980	7790	3600	3330	4040	3380	3980	5990
a	24880	635	3220	6440	4400	25000	44030	43100	62870	53700	42570	22310

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 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	144	191	222	172	309	286	294	407	546	454	475	197
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1990 - 2004	
ANNUAL TOTAL	38576		43833			
ANNUAL MEAN	106		120		312	
HIGHEST ANNUAL MEAN					1056	
LOWEST ANNUAL MEAN					106	
HIGHEST DAILY MEAN	362		Dec 26		3870	
LOWEST DAILY MEAN	53		Jul 1		46	
ANNUAL SEVEN-DAY MINIMUM	56		Sep 11		47	
MAXIMUM PEAK FLOW			370		5160	
ANNUAL RUNOFF (AC-FT)	76520		86940		226200	
10 PERCENT EXCEEDS	235				900	
50 PERCENT EXCEEDS	74		66		85	
90 PERCENT EXCEEDS	58		53		55	

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<sup>2</sup>.

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. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,720 ft<sup>3</sup>/s, Feb. 23, 1998, gage height, 4.53 ft, from rating curve extended above 646 ft<sup>3</sup>/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<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 25	2015	189	6.03	Feb. 19	1700	33	5.58
Jan. 2	2145	73	5.70	Feb. 24	1500	30	5.57
Feb. 3	1330	48	5.64	Feb. 26	1130	286	6.30

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	2.5	0.78	16	5.6	1.2	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	20	2.1	19	5.0	1.1	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	35	25	13	4.1	0.93	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	12	16	9.4	3.5	0.74	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	4.5	7.3	7.6	3.4	0.51	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	2.6	4.7	6.1	3.4	0.34	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	2.1	3.9	5.8	3.4	0.32	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	2.4	3.7	6.2	3.4	0.33	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	2.3	3.1	7.0	3.0	0.55	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	2.9	2.8	7.2	2.9	0.72	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	3.1	2.8	6.9	2.7	0.79	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	2.3	2.4	6.2	2.6	0.82	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	1.8	1.9	5.5	2.5	0.79	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	1.6	1.7	5.3	2.6	0.60	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	1.7	1.7	5.0	2.7	0.35	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	1.3	1.6	5.6	2.7	0.29	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	1.1	1.6	6.2	3.0	0.24	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.94	2.9	6.1	3.8	0.20	0.00	0.00	0.00	0.00
19	0.00	0.00	0.54	0.84	15	5.7	3.4	0.29	0.00	0.00	0.00	0.00
20	0.00	0.00	2.3	0.84	18	5.3	3.0	0.33	0.00	0.00	0.00	0.00
21	0.00	0.00	2.9	0.77	14	5.8	2.8	0.27	0.00	0.00	0.00	0.00
22	0.00	0.00	3.6	0.76	13	6.2	2.8	0.24	0.00	0.00	0.00	0.00
23	0.00	0.00	5.2	0.75	20	6.9	2.6	0.25	0.00	0.00	0.00	0.00
24	0.00	0.00	6.1	0.76	26	7.2	2.5	0.25	0.00	0.00	0.00	0.00
25	0.00	0.00	69	0.67	23	7.5	2.1	0.20	0.00	0.00	0.00	0.00
26	0.00	0.00	130	0.64	136	11	1.7	0.16	0.00	0.00	0.00	0.00
27	0.00	0.00	34	0.71	64	11	1.5	0.06	0.00	0.00	0.00	0.00
28	0.00	0.00	12	1.4	46	7.9	1.4	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	5.6	0.84	24	6.3	1.3	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	3.0	0.80	---	5.3	1.2	0.00	0.00	0.00	0.00	0.00
31	0.00	---	2.5	0.75	---	5.4	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	276.74	110.67	484.98	235.6	86.6	12.87	0.00	0.00	0.00	0.00
MEAN	0.00	0.00	8.93	3.57	16.7	7.60	2.89	0.42	0.00	0.00	0.00	0.00
MAX	0.00	0.00	130	35	136	19	5.6	1.2	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.64	0.78	5.0	1.2	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	549	220	962	467	172	26	0.00	0.00	0.00	0.00

## TULARE LAKE BASIN

## 11199500 WHITE RIVER NEAR DUCOR, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.51	2.60	6.77	14.0	20.5	32.9	22.9	12.7	4.95	1.20	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	0.00	0.00	0.00	0.08	0.76	1.79	0.85	0.19	0.00	0.00	0.00	0.00
(WY)	1943	1943	1948	1949	1991	1977	1977	1992	1950	1947	1943	1943

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1943 - 2004	
ANNUAL TOTAL	2384.92		1207.46			
ANNUAL MEAN	6.53		3.30		10.0	
HIGHEST ANNUAL MEAN					52.0 1998	
LOWEST ANNUAL MEAN					0.58 1977	
HIGHEST DAILY MEAN	151	May 5	136	Feb 26	1320	Mar 9 1943
LOWEST DAILY MEAN	0.00	Jun 30	0.00	Oct 1	0.00	Oct 1 1942
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 30	0.00	Oct 1	0.00	Oct 1 1942
MAXIMUM PEAK FLOW			286	Feb 26	2720	Feb 23 1998
MAXIMUM PEAK STAGE			6.30	Feb 26	7.49	Feb 14 2000
ANNUAL RUNOFF (AC-FT)	4730		2390		7270	
10 PERCENT EXCEEDS	15		6.2		22	
50 PERCENT EXCEEDS	1.1		0.00		2.1	
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<sup>2</sup>.

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<sup>3</sup>/s, Jan. 3, 1997, gage height, 10.32 ft, from rating curve extended above 600 ft<sup>3</sup>/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<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 26	0815	218	4.49

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	5.2	8.0	14	11	38	18	8.4	4.3	1.4	0.00	0.00
2	1.4	5.8	8.0	37	12	50	17	6.9	3.6	1.2	0.00	0.00
3	1.5	6.5	8.0	31	28	37	16	7.4	3.5	2.1	0.00	0.00
4	1.6	7.6	8.3	20	20	35	13	7.4	3.2	0.50	0.00	0.00
5	1.7	7.2	7.9	16	16	32	15	7.0	2.9	0.29	0.00	0.00
6	1.8	7.0	7.9	15	15	30	15	6.9	1.7	0.40	0.00	0.00
7	1.6	7.0	9.1	16	15	31	15	7.4	1.7	0.47	0.00	0.00
8	1.7	7.0	13	16	15	34	15	6.7	3.0	0.41	0.00	0.00
9	2.1	8.6	10	17	14	35	14	6.5	2.7	0.41	0.00	0.00
10	2.2	9.4	9.3	20	13	34	14	6.2	3.5	0.68	0.00	0.00
11	2.4	8.1	11	20	13	33	11	7.7	3.5	0.34	0.00	0.00
12	2.4	7.8	13	19	13	30	13	7.7	3.2	0.06	0.00	0.00
13	1.9	8.9	11	18	13	28	12	7.5	1.7	0.01	0.00	0.00
14	1.9	8.8	13	18	13	27	12	6.7	2.0	0.00	0.00	0.00
15	1.9	8.6	18	17	12	26	13	6.4	2.9	0.00	0.00	0.00
16	2.0	12	12	16	12	27	13	5.5	2.2	0.00	0.00	0.00
17	2.2	10	11	15	12	26	13	5.0	1.9	0.00	0.00	0.00
18	2.3	9.0	10	14	15	25	13	5.9	2.1	0.00	0.00	0.00
19	2.3	9.0	10	14	36	24	14	5.7	2.0	0.00	0.00	0.00
20	2.2	8.4	11	14	23	23	13	6.0	1.0	0.00	0.00	0.00
21	2.2	8.2	11	13	20	21	13	5.9	0.97	0.00	0.00	0.00
22	2.2	8.2	11	12	18	20	12	5.1	1.7	0.00	0.00	0.00
23	2.5	7.8	11	12	21	20	12	4.5	1.4	0.00	0.00	0.00
24	2.6	8.0	12	11	25	20	11	4.1	1.0	0.00	0.00	0.00
25	2.7	8.2	79	11	22	20	9.1	5.2	1.0	0.00	0.00	0.00
26	2.5	8.0	47	11	105	26	9.3	5.2	1.3	0.00	0.00	0.00
27	2.4	8.2	26	11	69	23	9.1	4.8	0.55	0.00	0.00	0.00
28	2.8	8.3	19	11	60	21	7.8	5.0	0.34	0.00	0.00	0.00
29	3.0	8.4	16	11	43	19	8.5	5.3	0.50	0.00	0.00	0.00
30	3.0	8.3	15	11	---	18	8.5	4.9	1.1	0.00	0.00	0.00
31	3.8	---	15	11	---	18	---	4.2	---	0.00	0.00	---
TOTAL	68.9	243.5	471.5	492	704	851	379.3	189.1	62.46	8.27	0.00	0.00
MEAN	2.22	8.12	15.2	15.9	24.3	27.5	12.6	6.10	2.08	0.27	0.00	0.00
MAX	3.8	12	79	37	105	50	18	8.4	4.3	2.1	0.00	0.00
MIN	1.4	5.2	7.9	11	11	18	7.8	4.1	0.34	0.00	0.00	0.00
AC-FT	137	483	935	976	1400	1690	752	375	124	16	0.00	0.00

## TULARE LAKE BASIN

## 11200800 DEER CREEK NEAR FOUNTAIN SPRINGS, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.78	14.1	23.5	52.1	71.1	77.4	65.0	42.1	22.4	9.15	4.07	3.39
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	0.00	0.00	0.00
(WY)	1978	1991	1991	1991	1991	1977	1977	1992	1992	1972	1972	1972

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1968 - 2004	
ANNUAL TOTAL	6815.6		3470.03			
ANNUAL MEAN	18.7		9.48		32.3	
HIGHEST ANNUAL MEAN					143 1983	
LOWEST ANNUAL MEAN					4.29 1977	
HIGHEST DAILY MEAN	306	May 4	105	Feb 26	2080	Jan 3 1997
LOWEST DAILY MEAN	1.0	Sep 22	0.00	Jul 14	0.00	Jun 24 1972
ANNUAL SEVEN-DAY MINIMUM	1.4	Sep 21	0.00	Jul 14	0.00	Jun 30 1972
MAXIMUM PEAK FLOW			218	Feb 26	3790	Jan 3 1997
MAXIMUM PEAK STAGE			4.49	Feb 26	10.32	Jan 3 1997
ANNUAL RUNOFF (AC-FT)	13520		6880		23390	
10 PERCENT EXCEEDS	44		21		71	
50 PERCENT EXCEEDS	13		7.1		11	
90 PERCENT EXCEEDS	2.1		0.00		0.88	

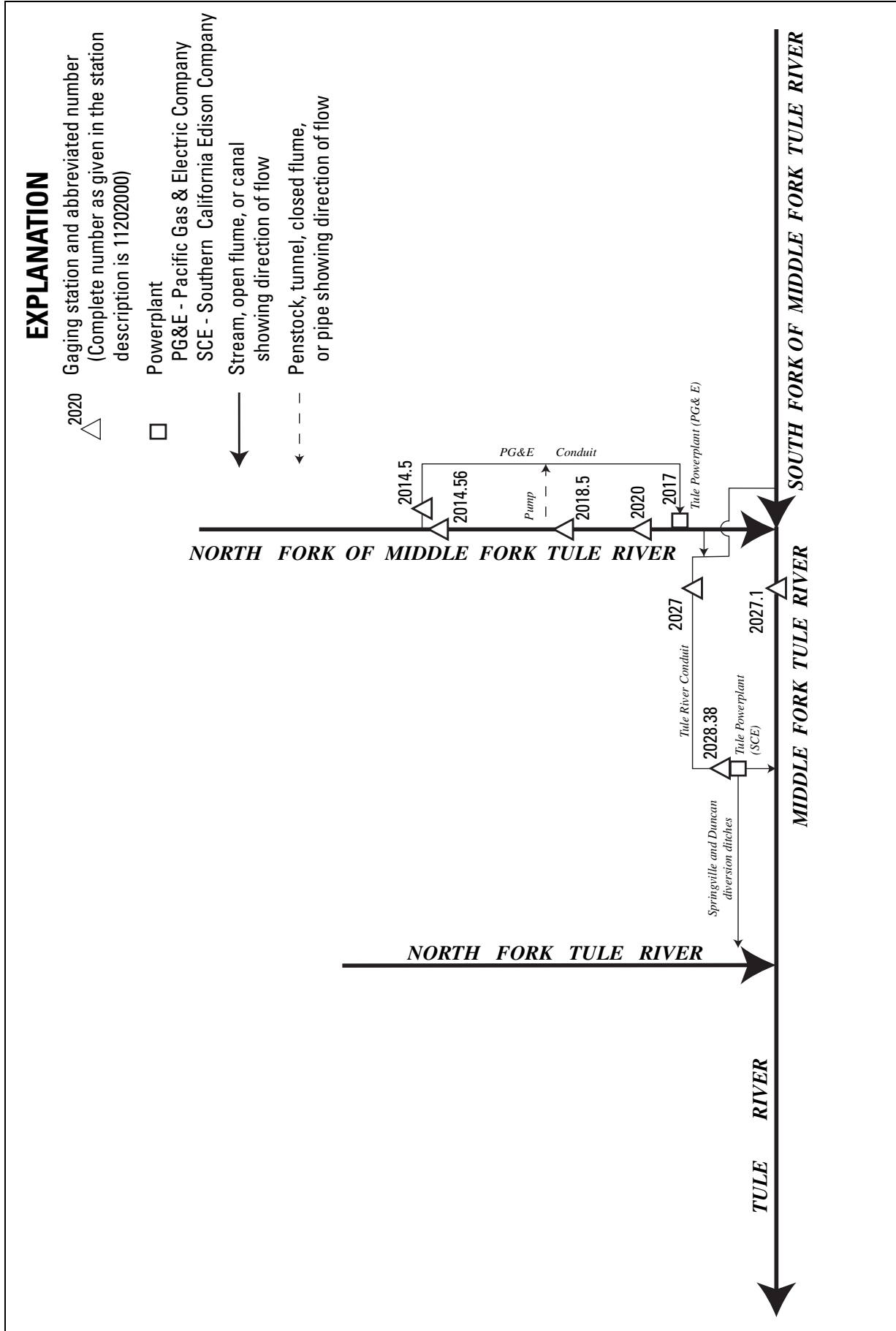


Figure 24. Diversions and storage in Tule River Basin.

## 11201450 PACIFIC GAS &amp; 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<sup>3</sup>/s, Apr. 28, May 1, 2, 2001, several days in May 2003; minimum daily, 0.10 ft<sup>3</sup>/s, Oct. 10, 1999.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	6.1	6.4	15	13	20	21	49	25	8.0	3.3	1.7
2	4.7	5.9	6.4	16	14	20	19	50	24	7.6	3.3	1.7
3	4.8	6.1	6.3	15	15	19	18	55	23	7.3	3.4	1.8
4	4.6	5.9	6.2	13	14	20	19	58	22	6.9	3.5	1.8
5	4.5	5.9	6.1	13	14	20	27	57	21	6.5	3.2	1.7
6	4.5	5.9	8.3	13	14	22	47	53	20	6.2	3.2	1.6
7	4.5	5.8	8.5	14	15	31	46	49	19	6.1	3.2	1.5
8	4.5	5.9	10	15	14	45	48	48	18	5.9	2.8	1.5
9	4.5	6.0	9.9	16	14	53	51	47	18	5.7	2.7	1.5
10	4.6	7.4	10	17	14	58	54	46	18	5.4	2.7	1.5
11	4.5	8.0	11	18	14	59	54	42	17	5.2	2.5	1.5
12	4.4	7.8	9.6	19	14	57	55	40	16	5.0	2.5	1.5
13	4.4	8.3	9.7	19	14	57	55	38	15	4.9	2.8	1.5
14	4.3	8.0	11	19	14	59	53	38	15	4.8	2.7	1.6
15	4.3	7.9	9.6	19	14	60	50	38	14	5.0	2.7	1.5
16	4.3	8.3	9.4	18	16	55	48	38	14	4.8	2.6	1.5
17	4.2	8.1	9.8	18	18	51	46	38	12	4.6	2.6	1.5
18	4.2	8.0	10	17	26	46	43	37	11	4.5	2.5	1.6
19	4.2	7.7	11	16	25	41	40	35	11	4.4	2.4	2.0
20	4.2	7.5	12	16	21	39	37	33	11	4.3	2.4	2.2
21	4.2	7.2	12	15	19	37	36	32	10	4.2	2.2	2.1
22	4.2	6.7	11	15	18	35	36	30	9.7	4.1	2.5	2.0
23	4.3	6.4	11	15	19	34	35	29	9.3	4.1	2.7	1.8
24	4.2	6.6	12	14	18	36	37	29	8.9	3.9	3.1	1.7
25	4.2	6.8	9.4	14	23	39	39	28	8.8	3.7	3.1	1.6
26	4.1	6.6	12	13	40	42	44	27	8.5	3.6	2.8	1.6
27	4.2	6.6	18	13	30	44	48	26	8.3	3.7	2.6	1.5
28	4.2	6.5	16	13	24	47	51	29	7.9	3.5	2.2	1.2
29	4.2	6.5	14	13	21	48	50	28	7.7	3.5	2.0	1.5
30	4.5	6.5	15	13	---	40	49	26	8.0	3.4	1.9	1.7
31	5.1	---	14	14	---	30	---	25	---	3.3	1.8	---
TOTAL	135.9	206.9	325.6	478	529	1264	1256	1198	431.1	154.1	83.9	49.4
MEAN	4.38	6.90	10.5	15.4	18.2	40.8	41.9	38.6	14.4	4.97	2.71	1.65
MAX	5.1	8.3	18	19	40	60	55	58	25	8.0	3.5	2.2
MIN	4.1	5.8	6.1	13	13	19	18	25	7.7	3.3	1.8	1.2
AC-FT	270	410	646	948	1050	2510	2490	2380	855	306	166	98

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2004, BY WATER YEAR (WY)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004		
MEAN	4.94	9.44	15.3	23.1	32.4	43.9	53.3	57.0	36.7	20.6	9.74	6.57
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	38.6	13.7	4.97	1.39	1.49
(WY)	2000	1995	2000	2001	2001	1999	1999	2004	2001	2004	2001	2002

## SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1995 - 2004	
ANNUAL TOTAL	9577.63		6111.9			
ANNUAL MEAN	26.2		16.7		26.0	
HIGHEST ANNUAL MEAN					37.8	
LOWEST ANNUAL MEAN					15.9	
HIGHEST DAILY MEAN	66		60		66	
LOWEST DAILY MEAN	0.63		1.2		0.10	
ANNUAL SEVEN-DAY MINIMUM	2.0		1.5		0.21	
ANNUAL RUNOFF (AC-FT)	19000		12120		18860	
10 PERCENT EXCEEDS	61		46		61	
50 PERCENT EXCEEDS	20		11		18	
90 PERCENT EXCEEDS	4.2		2.4		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<sup>2</sup>.

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<sup>3</sup>/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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	4.9	4.4	4.5	4.2	4.4	6.2	6.9	5.1	5.7	5.2	5.3
2	5.5	4.9	4.4	4.6	4.3	4.4	6.0	7.3	5.1	5.7	5.2	5.3
3	5.5	5.8	4.4	4.5	4.2	4.3	5.1	8.6	5.0	5.6	5.2	5.3
4	5.4	5.4	4.4	4.4	4.2	4.3	4.2	10	5.0	5.6	5.2	5.3
5	5.3	5.3	4.4	4.3	4.2	4.3	4.5	9.5	5.0	5.6	5.2	5.3
6	5.3	5.2	7.1	4.3	4.2	4.4	5.3	7.7	4.9	5.5	5.2	5.3
7	5.3	5.2	12	4.3	4.2	4.7	5.2	6.8	4.9	5.5	5.2	5.3
8	5.3	5.7	8.9	4.3	4.2	7.6	5.5	6.6	4.8	5.5	5.2	5.3
9	5.3	13	4.3	4.3	4.2	14	6.0	6.7	4.8	5.5	5.2	5.3
10	5.3	7.4	4.3	4.2	4.2	18	6.6	6.7	4.8	5.4	5.2	5.3
11	5.2	4.8	4.4	4.2	4.2	16	6.7	5.7	4.7	5.4	5.2	5.3
12	5.2	4.7	4.3	4.3	4.2	13	7.0	5.4	4.7	5.4	5.2	5.3
13	5.2	5.6	4.2	4.3	4.2	14	6.9	5.4	4.7	5.4	5.2	5.4
14	5.2	4.8	4.4	4.3	4.2	16	6.3	5.4	4.7	5.4	5.2	5.4
15	5.2	4.7	4.3	4.3	4.2	18	5.8	5.4	4.7	5.4	5.2	5.4
16	5.1	4.9	4.2	4.3	4.2	16	5.3	5.3	4.8	5.4	5.2	5.3
17	5.1	4.7	4.3	4.3	4.4	17	5.1	5.3	5.2	5.4	5.2	5.3
18	5.1	4.7	4.3	4.3	4.6	16	4.8	5.3	5.8	5.4	5.2	5.4
19	5.0	4.6	4.4	4.3	4.5	18	4.8	5.3	5.8	5.4	5.2	5.4
20	5.0	4.6	4.7	4.3	4.3	17	5.1	5.3	5.8	5.4	5.2	5.4
21	5.0	4.5	4.9	4.3	4.3	17	5.1	5.2	5.7	5.3	5.1	5.4
22	5.0	4.6	4.4	4.2	4.3	16	5.1	5.2	5.7	5.3	5.2	5.4
23	4.9	4.8	4.4	4.2	4.3	15	5.1	5.2	5.7	5.3	5.2	5.3
24	4.9	4.6	---	4.2	4.3	13	5.1	5.2	5.7	5.3	5.2	5.3
25	4.9	4.5	---	4.2	5.0	8.1	5.3	5.2	5.7	5.2	5.2	5.3
26	4.9	4.5	23	4.2	8.8	7.7	5.8	5.2	5.7	5.2	5.2	5.3
27	4.9	4.5	4.8	4.2	4.6	7.5	6.7	5.1	5.7	5.3	5.2	5.3
28	4.9	4.5	4.6	4.2	4.5	7.2	7.4	5.2	5.6	5.2	5.2	5.7
29	4.9	4.5	4.5	4.2	4.4	7.1	7.2	5.2	5.6	5.2	5.2	5.6
30	4.9	4.5	4.5	4.2	---	7.0	6.9	5.1	5.7	5.2	5.2	5.6
31	4.9	---	4.5	4.2	---	6.4	---	5.1	---	5.2	5.3	---
TOTAL	159.1	156.4	---	132.9	129.6	343.4	172.1	187.5	157.1	167.3	161.2	160.8
MEAN	5.13	5.21	---	4.29	4.47	11.1	5.74	6.05	5.24	5.40	5.20	5.36
MAX	5.5	13	---	4.6	8.8	18	7.4	10	5.8	5.7	5.3	5.7
MIN	4.9	4.5	---	4.2	4.2	4.3	4.2	5.1	4.7	5.2	5.1	5.3
AC-FT	316	310	---	264	257	681	341	372	312	332	320	319



## 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<sup>2</sup>.

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<sup>3</sup>/s, Dec. 6, 1966, gage height, 13.83 ft, from floodmarks, from rating curve extended above 1,820 ft<sup>3</sup>/s, on basis of critical-depth determinations at gage heights 9.67 and 12.47 ft; minimum daily, 0.06 ft<sup>3</sup>/s, Nov. 2, 1979.

Combined flow: Maximum discharge, 16,900 ft<sup>3</sup>/s, Dec. 6, 1966; minimum daily, 4.9 ft<sup>3</sup>/s, Dec. 24, 26, 1999, July 9, 2002, July 29, 2004.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	5.6	6.2	8.1	4.8	9.6	14	7.9	6.1	6.2	5.1	8.3
2	9.6	5.5	6.0	15	5.5	10	11	8.3	6.0	6.2	5.1	8.3
3	9.5	6.8	6.0	9.3	6.4	8.7	10	9.2	5.9	6.1	5.1	8.4
4	9.5	8.4	6.0	7.2	5.8	8.2	9.4	11	5.9	6.1	5.2	8.5
5	9.5	8.3	6.0	6.5	5.4	7.6	8.9	11	5.8	6.0	5.3	8.3
6	9.5	8.5	9.3	6.0	5.4	7.4	7.5	9.4	5.8	6.0	5.2	8.2
7	9.5	8.5	14	6.0	5.4	7.6	7.3	8.2	5.7	5.9	5.2	8.2
8	9.6	7.9	14	6.0	5.3	9.4	7.3	8.0	5.6	5.9	5.2	8.3
9	9.8	8.4	6.6	6.1	5.2	16	7.8	7.9	5.5	5.9	5.2	8.2
10	9.8	9.0	6.8	5.8	5.1	20	8.3	8.3	5.6	5.9	5.1	8.2
11	9.8	9.1	7.8	5.8	5.1	19	8.3	7.3	5.5	5.9	5.1	8.2
12	9.7	9.0	6.9	5.8	5.0	17	8.7	6.9	5.3	5.9	5.3	8.3
13	9.6	8.9	6.4	5.7	5.0	16	8.7	6.8	5.1	5.9	8.3	8.4
14	9.6	8.8	7.7	5.6	4.9	18	8.3	6.7	5.2	5.9	8.3	8.3
15	9.5	8.8	7.2	5.5	4.9	25	7.8	6.8	5.4	6.0	8.2	8.5
16	9.5	8.8	6.6	5.4	4.9	32	7.4	6.6	5.3	6.0	8.2	8.4
17	13	8.8	6.3	5.3	5.2	31	7.1	6.6	5.2	5.9	8.2	8.4
18	12	8.8	6.4	5.3	6.6	34	7.0	6.7	6.3	5.9	8.2	8.4
19	14	8.9	6.6	5.1	7.4	31	6.6	6.6	6.3	5.9	8.2	8.6
20	34	9.0	6.8	5.1	6.1	32	6.8	6.5	6.4	5.8	8.2	8.6
21	8.0	9.0	7.7	5.1	5.9	36	6.8	6.5	6.3	5.8	8.2	8.5
22	6.5	9.0	6.5	4.9	5.7	34	7.0	6.4	6.3	5.7	8.2	8.5
23	7.1	9.0	6.5	4.9	7.5	30	6.7	6.4	6.3	5.7	8.3	8.4
24	7.4	8.0	57	4.9	6.9	25	6.6	6.3	6.2	5.7	8.4	8.4
25	7.3	6.2	124	4.8	7.8	21	6.7	6.3	6.2	5.4	8.4	8.4
26	8.3	6.2	34	4.7	29	26	6.9	6.3	6.2	5.2	8.3	8.3
27	8.5	6.2	8.7	4.7	16	16	7.6	6.1	6.2	5.1	8.3	8.3
28	7.0	6.2	7.6	4.8	12	14	8.4	6.3	6.1	4.9	8.2	8.7
29	6.7	6.2	7.5	4.7	9.6	14	8.5	6.4	6.1	4.9	8.2	8.6
30	5.2	6.2	8.3	4.7	---	14	7.9	6.2	6.2	5.1	8.2	7.6
31	5.4	---	6.6	5.1	---	14	---	6.1	---	5.2	8.3	---
TOTAL	304.2	238.0	424.0	183.9	209.8	603.5	241.3	226.0	176.0	178.0	218.9	250.7
MEAN	9.81	7.93	13.7	5.93	7.23	19.5	8.04	7.29	5.87	5.74	7.06	8.36
MAX	34	9.1	124	15	29	36	14	11	6.4	6.2	8.4	8.7
MIN	5.2	5.5	6.0	4.7	4.8	7.4	6.6	6.1	5.1	4.9	5.1	7.6
AC-FT	603	472	841	365	416	1200	479	448	349	353	434	497

## TULARE LAKE BASIN

## 11202000 NORTH FORK OF MIDDLE FORK TULE RIVER, NEAR SPRINGVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.90	14.3	25.6	28.1	26.5	33.0	48.2	79.2	46.8	12.4	5.07	4.31
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1940 - 2004	
ANNUAL TOTAL	8018.1		3254.3			
ANNUAL MEAN	22.0		8.89		27.0	
HIGHEST ANNUAL MEAN					129	
LOWEST ANNUAL MEAN					1.25	
HIGHEST DAILY MEAN	150	May 25	124	Dec 25	13300	Dec 6 1966
LOWEST DAILY MEAN	5.2	Oct 30	4.7	Jan 26	0.06	Nov 2 1979
ANNUAL SEVEN-DAY MINIMUM	6.0	Oct 28	4.8	Jan 24	0.20	Aug 24 1964
MAXIMUM PEAK FLOW			300	Dec 25	16900	Dec 6 1966
MAXIMUM PEAK STAGE			4.63	Dec 25	13.83	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	15900		6450		19580	
10 PERCENT EXCEEDS	53		12		70	
50 PERCENT EXCEEDS	10		7.1		5.8	
90 PERCENT EXCEEDS	7.5		5.2		0.81	



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 2003 TO SEPTEMBER 2004  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	16	16	33	25	9.6	75	62	38	19	14	8.3
2	18	15	18	40	26	10	68	61	38	19	5.1	8.3
3	17	19	17	34	26	36	65	66	38	6.1	14	8.4
4	19	20	17	32	27	35	64	73	34	18	14	8.5
5	19	20	17	26	27	35	60	73	34	18	13	8.3
6	18	20	20	31	25	34	58	69	34	18	14	8.2
7	19	20	25	26	25	35	62	64	31	17	14	8.2
8	19	20	25	29	25	55	60	61	31	18	14	8.3
9	19	19	25	30	26	73	63	60	30	18	13	8.2
10	19	21	23	31	26	82	62	61	30	18	13	8.2
11	19	21	26	31	26	83	71	56	30	18	13	8.2
12	19	20	22	33	26	80	72	53	29	17	11	8.3
13	19	21	21	33	26	79	69	53	29	16	8.3	8.4
14	19	22	22	33	26	82	68	48	26	16	8.3	8.3
15	19	22	21	32	26	91	65	47	25	16	8.2	8.5
16	18	21	22	32	26	96	63	51	24	16	8.2	8.4
17	22	21	21	32	30	96	61	51	24	16	8.2	8.4
18	21	21	21	32	39	99	60	49	23	16	8.2	8.4
19	23	21	24	32	40	96	53	48	23	16	8.2	8.6
20	43	21	24	28	37	97	51	46	23	15	8.2	8.6
21	16	20	25	28	38	101	50	46	22	15	8.2	8.5
22	15	20	24	28	38	101	53	44	20	15	8.2	8.5
23	15	19	22	27	40	96	48	43	20	15	8.3	8.4
24	16	19	73	28	32	91	46	37	20	15	8.4	8.4
25	16	17	142	28	34	87	45	37	20	14	8.4	8.4
26	16	17	34	25	77	92	44	37	20	14	8.3	8.3
27	17	16	38	25	55	82	44	37	20	14	8.3	8.3
28	16	16	37	25	51	80	62	38	20	14	8.2	8.7
29	16	16	28	25	49	75	64	38	6.1	4.9	8.2	8.6
30	14	16	28	25	---	75	63	38	19	14	8.2	7.6
31	15	---	28	25	---	78	---	38	---	14	8.3	---
TOTAL	579	577	906	919	974	2261.6	1789	1585	781.1	480.0	308.9	250.7
MEAN	18.7	19.2	29.2	29.6	33.6	73.0	59.6	51.1	26.0	15.5	9.96	8.36
MAX	43	22	142	40	77	101	75	73	38	19	14	8.7
MIN	14	15	16	25	25	9.6	44	37	6.1	4.9	5.1	7.6
AC-FT	1150	1140	1800	1820	1930	4490	3550	3140	1550	952	613	497

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004, BY WATER YEAR (WY)

MEAN	17.5	29.4	48.0	53.7	59.7	74.5	103	138	91.4	39.8	21.5	17.6
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	8.36
(WY)	1962	1962	1991	1961	1991	1977	1977	1977	1992	1961	1977	2004

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1940 - 2004	
ANNUAL TOTAL	19018.1		11411.3			
ANNUAL MEAN	52.1		31.2		57.8	
HIGHEST ANNUAL MEAN					157	
LOWEST ANNUAL MEAN					15.1	
HIGHEST DAILY MEAN	216	May 24	142	Dec 25	13300	Dec 6 1966
LOWEST DAILY MEAN	8.1	Jan 27	4.9	Jul 29	4.9	Dec 24 1999
ANNUAL SEVEN-DAY MINIMUM	12	Sep 21	8.2	Aug 15	5.2	Oct 1 1987
MAXIMUM PEAK FLOW			318	Dec 25	16900	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	37720		22630		41850	
10 PERCENT EXCEEDS	115		65		131	
50 PERCENT EXCEEDS	38		24		29	
90 PERCENT EXCEEDS	16		8.4		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<sup>2</sup>.

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 (station 11202700) 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<sup>3</sup>/s, Jan. 2, 1997, gage height, 11.82 ft; minimum daily, 4.8 ft<sup>3</sup>/s, Oct. 3, 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	6.5	6.0	24	9.9	39	87	60	22	11	11	17
2	6.1	5.5	6.0	44	15	44	74	63	21	11	11	17
3	5.6	5.5	6.0	31	21	35	67	68	19	11	11	17
4	5.1	5.2	6.0	20	15	34	64	73	17	11	11	18
5	5.3	5.7	5.9	16	12	33	66	74	15	11	11	17
6	5.2	6.1	11	15	12	33	70	66	14	11	11	17
7	5.5	6.1	15	17	13	42	68	59	13	11	11	17
8	5.7	6.2	27	19	12	63	68	57	13	11	11	17
9	5.7	11	16	21	12	83	74	56	13	11	14	17
10	5.6	13	16	22	11	94	78	56	13	11	16	17
11	5.7	5.9	19	23	10	94	78	49	12	11	14	17
12	5.8	5.8	9.6	24	9.6	89	79	45	12	11	12	17
13	5.7	6.9	7.2	23	9.6	89	79	42	12	11	17	17
14	5.7	6.0	11	23	9.1	92	75	40	11	11	18	17
15	5.7	6.4	9.0	22	9.2	102	69	40	11	11	18	18
16	5.7	6.3	6.8	20	10	111	65	39	11	11	18	17
17	5.7	6.3	6.3	18	17	111	62	38	11	11	18	17
18	5.7	6.2	6.3	17	33	115	56	37	11	11	18	17
19	5.7	6.2	6.7	16	42	112	51	36	11	11	18	18
20	5.7	6.2	7.9	15	30	114	47	34	11	11	18	19
21	5.7	6.1	9.5	14	25	119	47	33	11	11	18	19
22	5.7	6.1	6.6	13	22	118	47	32	11	11	18	19
23	5.7	6.1	6.7	12	29	114	44	31	11	11	19	18
24	5.8	6.0	70	12	27	111	46	30	11	11	20	18
25	5.8	6.0	206	11	35	106	49	29	11	11	20	17
26	5.7	6.0	64	10	140	113	54	28	11	11	20	17
27	5.7	6.0	33	9.8	83	95	61	26	11	11	19	17
28	5.8	6.0	24	10	56	90	66	28	11	11	e18	17
29	5.8	6.0	20	9.6	42	90	64	29	11	11	e18	18
30	6.0	6.0	24	9.8	---	89	60	26	11	11	e18	19
31	6.7	---	19	12	---	89	---	24	---	11	17	---
TOTAL	179.5	193.3	687.5	553.2	771.4	2663	1915	1348	383	341	492	524
MEAN	5.79	6.44	22.2	17.8	26.6	85.9	63.8	43.5	12.8	11.0	15.9	17.5
MAX	8.2	13	206	44	140	119	87	74	22	11	20	19
MIN	5.1	5.2	5.9	9.6	9.1	33	44	24	11	11	11	17
AC-FT	356	383	1360	1100	1530	5280	3800	2670	760	676	976	1040

e Estimated.

## 11202710 MIDDLE FORK TULE RIVER BELOW INTAKE, ABOVE SPRINGVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	15.9	35.1	35.3	97.5	73.0	94.9	116	144	102	43.3	16.8	14.9
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	2004	1996	1996

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1989 - 2004	
ANNUAL TOTAL	19958.3		10050.9			
ANNUAL MEAN	54.7		27.5		65.6	
HIGHEST ANNUAL MEAN					199	
LOWEST ANNUAL MEAN					15.6	
HIGHEST DAILY MEAN	310	Mar 15	206	Dec 25	6030	Jan 3 1997
LOWEST DAILY MEAN	5.1	Oct 4	5.1	Oct 4	4.8	Oct 3 1996
ANNUAL SEVEN-DAY MINIMUM	5.4	Oct 3	5.4	Oct 3	5.1	Oct 2 1996
MAXIMUM PEAK FLOW			475	Dec 25	19400	Jan 2 1997
MAXIMUM PEAK STAGE			4.12	Dec 25	11.82	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	39590		19940		47550	
10 PERCENT EXCEEDS	150		71		163	
50 PERCENT EXCEEDS	29		17		19	
90 PERCENT EXCEEDS	6.0		6.0		6.4	

## 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, and 2.0 mi east of Springville.

PERIOD OF RECORD.—October 2002 to current year.

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<sup>3</sup>/s, many days in 2003 and 2004; no flow many days in 2004.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	21	23	33	32	34	35	34	34	18	9.1	0.00
2	19	22	22	33	33	34	35	35	34	18	8.8	0.00
3	19	24	22	33	34	34	35	35	34	17	8.8	0.00
4	19	25	22	32	33	34	35	35	34	17	8.9	0.00
5	19	24	22	32	33	34	35	35	33	16	8.6	0.00
6	19	23	25	32	33	34	35	35	33	15	8.6	0.00
7	19	23	31	32	33	35	35	35	33	14	8.5	0.00
8	19	23	25	33	33	35	35	35	32	14	8.1	0.00
9	19	29	20	33	33	35	35	35	32	14	3.1	0.00
10	19	30	21	33	33	35	34	35	33	14	0.00	0.00
11	19	27	22	33	33	35	34	35	32	13	0.00	0.00
12	19	25	25	33	33	35	34	35	30	13	0.00	0.00
13	19	29	27	33	33	35	34	34	28	12	0.00	0.00
14	18	28	30	33	33	35	34	35	28	12	0.00	0.00
15	18	26	28	33	33	35	34	35	27	12	0.00	0.00
16	19	28	28	33	33	35	34	35	26	13	0.00	0.00
17	18	27	28	33	34	35	34	35	24	12	0.00	0.00
18	18	27	29	33	34	35	34	35	24	12	0.00	0.00
19	17	25	31	33	35	35	34	35	23	11	0.00	0.00
20	18	25	31	33	35	34	34	35	23	11	0.00	0.00
21	17	24	32	32	34	34	34	35	22	11	0.00	0.00
22	18	23	30	32	34	33	34	35	21	11	0.00	0.00
23	18	23	29	32	34	33	34	35	20	10	0.00	0.00
24	18	24	32	32	34	33	34	35	20	10	0.00	0.00
25	18	23	32	32	35	33	34	35	19	9.5	0.00	0.00
26	17	23	31	32	35	34	34	34	19	9.2	0.00	0.00
27	18	23	32	32	35	33	34	35	19	9.1	0.00	0.00
28	18	23	32	33	34	33	34	35	18	9.1	0.00	0.00
29	18	23	32	32	34	34	35	34	17	9.1	0.00	0.00
30	18	23	33	32	---	34	34	35	17	9.1	0.00	0.00
31	19	---	32	33	---	34	---	34	---	9.0	0.00	---
TOTAL	566	743	859	1010	975	1061	1030	1080	789	384.1	72.50	0.00
MEAN	18.3	24.8	27.7	32.6	33.6	34.2	34.3	34.8	26.3	12.4	2.34	0.00
MAX	19	30	33	33	35	35	35	35	34	18	9.1	0.00
MIN	15	21	20	32	32	33	34	34	17	9.0	0.00	0.00
AC-FT	1120	1470	1700	2000	1930	2100	2040	2140	1560	762	144	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004
MEAN	16.2	20.5	20.8	33.8	32.0	33.4	34.1	34.9	30.4	22.2	12.5	6.33
MAX	18.3	24.8	27.7	35.0	33.6	34.2	34.3	34.9	34.5	31.9	22.6	12.7
(WY)	2004	2004	2004	2003	2004	2004	2004	2003	2003	2003	2003	2003
MIN	14.2	16.2	13.8	32.6	30.4	32.5	33.8	34.8	26.3	12.4	2.34	0.00
(WY)	2003	2003	2003	2004	2003	2003	2003	2004	2004	2004	2004	2004

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 2003 - 2004

ANNUAL TOTAL	10310.68	8569.60		
ANNUAL MEAN	28.2	23.4	24.7	
HIGHEST ANNUAL MEAN			26.0	2003
LOWEST ANNUAL MEAN			23.4	2004
HIGHEST DAILY MEAN	35	Jan 1	35	Feb 19
LOWEST DAILY MEAN	0.04	Feb 4	0.00	Aug 10
ANNUAL SEVEN-DAY MINIMUM	2.9	Sep 23	0.00	Aug 10
ANNUAL RUNOFF (AC-FT)	20450	17000	17910	
10 PERCENT EXCEEDS	35	35	35	
50 PERCENT EXCEEDS	33	28	32	
90 PERCENT EXCEEDS	17	0.00	1.6	

## 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 Cholollo Campground.

DRAINAGE AREA.—20.1 mi<sup>2</sup>.

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<sup>3</sup>/s, Nov. 8, 2002, gage height, 6.56 ft; minimum daily, 1.3 ft<sup>3</sup>/s, estimated, Aug. 3, 2004.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 24	2045	250	4.84	Feb. 26	0145	63	4.17

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	3.7	4.4	10	7.8	17	21	12	6.6	3.6	e1.5	2.1
2	2.7	3.3	4.4	13	9.0	17	20	12	6.4	3.7	e1.4	2.4
3	2.8	4.2	4.5	11	10	16	19	12	6.1	3.6	e1.3	2.5
4	2.6	3.6	4.5	8.7	9.1	16	18	12	5.8	3.4	e1.6	2.8
5	2.5	3.6	4.4	8.5	8.7	15	18	11	5.7	3.2	1.8	2.6
6	2.5	3.7	5.8	8.9	9.1	16	18	11	5.6	3.0	e1.5	2.5
7	2.4	3.8	9.6	11	9.8	21	18	11	5.6	2.9	e1.5	2.6
8	2.4	4.2	7.4	11	8.9	26	17	11	5.5	2.9	e1.4	2.6
9	2.4	7.4	5.2	12	8.8	31	18	11	5.9	2.9	e1.4	2.9
10	2.5	4.8	6.1	13	8.6	35	18	10	6.1	2.8	e1.4	3.0
11	2.5	3.7	7.2	13	8.6	34	17	10	5.7	2.7	e1.5	3.0
12	2.4	3.9	5.5	13	8.7	32	17	10	5.3	2.6	1.4	3.2
13	2.4	5.7	5.4	12	8.7	32	17	9.7	5.0	2.5	1.5	3.6
14	2.2	4.2	7.4	12	8.6	32	17	9.3	4.9	2.5	1.6	3.8
15	2.2	4.5	5.7	12	8.6	35	16	9.0	4.9	2.5	1.7	3.9
16	2.3	5.0	5.3	11	9.3	36	16	8.9	4.6	2.6	1.8	3.7
17	2.3	4.3	5.3	11	10	36	16	8.8	4.4	2.4	1.7	3.7
18	2.2	4.2	5.7	11	20	35	15	8.8	4.4	2.4	1.6	3.9
19	2.3	4.0	6.4	10	17	33	15	8.8	4.4	2.4	1.5	4.4
20	2.3	4.0	7.3	10	14	33	14	8.6	4.3	2.1	1.5	5.1
21	2.3	4.2	6.7	9.7	13	33	14	8.5	4.2	1.9	1.5	5.0
22	2.2	4.4	5.6	9.2	13	32	14	8.5	4.0	1.9	1.7	4.3
23	2.3	4.7	6.6	9.0	15	31	13	8.3	3.8	1.9	2.1	4.0
24	2.3	4.7	54	8.8	13	30	13	8.0	3.7	1.9	2.6	3.8
25	2.2	4.8	64	8.6	18	28	13	7.9	3.7	1.8	2.6	3.7
26	2.2	4.8	17	8.2	37	33	13	7.8	3.6	1.7	2.4	3.7
27	2.3	4.8	12	8.2	23	26	13	7.4	3.7	1.7	2.3	3.7
28	2.3	4.8	10	8.2	19	24	13	7.7	3.5	1.8	2.0	3.9
29	2.3	4.8	9.6	7.9	16	23	13	7.9	3.5	1.8	1.8	4.4
30	2.5	4.6	11	7.9	---	23	12	7.6	3.6	e1.9	1.8	4.7
31	3.0	---	9.5	8.6	---	22	---	6.9	---	e1.4	2.0	---
TOTAL	74.3	132.4	323.5	316.4	370.3	853	476	291.4	144.5	76.4	53.4	105.5
MEAN	2.40	4.41	10.4	10.2	12.8	27.5	15.9	9.40	4.82	2.46	1.72	3.52
MAX	3.0	7.4	64	13	37	36	21	12	6.6	3.7	2.6	5.1
MIN	2.2	3.3	4.4	7.9	7.8	15	12	6.9	3.5	1.4	1.3	2.1
AC-FT	147	263	642	628	734	1690	944	578	287	152	106	209

e Estimated.

## 11203580 SOUTH FORK TULE RIVER NEAR CHOLOLLO CAMPGROUND, NEAR PORTERVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.25	19.9	11.8	13.1	14.7	25.3	26.2	25.7	11.8	5.35	3.26	2.95
MAX	5.17	63.7	20.0	20.9	21.5	31.2	32.9	56.4	22.5	8.96	5.66	3.52
(WY)	2001	2003	2002	2002	2000	2000	2003	2003	2003	2003	2003	2004
MIN	2.40	4.41	4.23	5.29	9.14	19.3	15.9	9.40	4.82	2.46	1.72	2.07
(WY)	2004	2004	2001	2001	2001	2001	2004	2004	2004	2004	2004	2001

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2000 - 2004	
ANNUAL TOTAL	6317.0		3217.1			
ANNUAL MEAN	17.3		8.79		13.2	
HIGHEST ANNUAL MEAN					22.4	
LOWEST ANNUAL MEAN					8.79	
HIGHEST DAILY MEAN	118	May 4	64	Dec 25	713	Nov 8 2002
LOWEST DAILY MEAN	2.2	Oct 14	1.3	Aug 3	1.3	Aug 3 2004
ANNUAL SEVEN-DAY MINIMUM	2.3	Oct 14	1.4	Aug 6	1.4	Aug 6 2004
MAXIMUM PEAK FLOW			250	Dec 24	2380	Nov 8 2002
MAXIMUM PEAK STAGE			4.84	Dec 24	6.56	Nov 8 2002
ANNUAL RUNOFF (AC-FT)	12530		6380		9550	
10 PERCENT EXCEEDS	40		18		28	
50 PERCENT EXCEEDS	12		5.6		8.5	
90 PERCENT EXCEEDS	2.8		2.0		2.4	

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<sup>2</sup>.

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<sup>3</sup>/s, Nov. 8, 2002, gage height, 12.97 ft, from flood marks; minimum daily, 0.45 ft<sup>3</sup>/s, Aug. 14, 2004.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 75 ft<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 25	0130	246	7.68	Feb. 26	0500	528	8.16
Feb. 2	2315	84	6.76	Mar. 2	0200	114	6.91
Feb. 18	2245	83	6.73				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	5.1	4.9	14	16	58	36	20	9.6	7.1	1.7	1.0
2	3.2	4.7	4.8	41	25	78	34	20	9.1	7.5	2.1	1.2
3	3.7	5.0	4.9	33	40	54	32	19	8.9	7.4	1.6	1.3
4	4.0	6.3	4.9	18	26	51	32	18	8.3	6.6	2.0	1.5
5	3.9	4.8	4.6	16	22	43	31	17	8.0	5.5	2.4	1.7
6	3.8	4.7	5.1	15	21	41	32	17	7.8	4.6	1.8	1.8
7	3.7	4.8	8.7	17	23	45	31	17	8.0	4.2	2.4	1.3
8	3.5	4.9	18	20	22	55	30	17	7.9	3.8	2.3	1.0
9	3.6	9.4	9.4	22	20	61	30	17	8.5	4.0	1.8	1.0
10	3.7	11	9.3	25	19	65	30	17	9.6	3.1	1.1	1.1
11	4.0	6.1	14	24	19	63	30	17	9.0	2.6	0.87	1.5
12	3.6	5.6	11	24	18	56	30	16	8.1	2.0	0.83	1.2
13	3.1	9.2	10	23	18	55	29	16	7.4	1.9	0.64	1.1
14	3.2	7.8	14	23	18	55	29	15	7.1	2.0	0.45	1.3
15	2.2	6.6	16	22	18	59	28	14	6.5	2.6	0.77	2.0
16	2.6	10	12	20	18	59	28	14	6.2	3.6	1.1	2.0
17	2.2	8.5	11	19	20	56	28	14	5.8	3.5	1.4	1.5
18	2.4	7.6	12	19	29	55	30	14	5.9	2.7	1.3	1.6
19	2.3	6.7	13	19	53	52	27	15	5.9	2.6	1.1	1.9
20	2.4	6.2	15	19	33	50	26	14	5.8	2.6	0.94	2.7
21	2.2	5.8	16	18	30	51	26	14	5.5	2.4	0.94	3.2
22	2.1	6.1	14	17	29	48	26	14	5.7	1.8	1.3	3.2
23	2.1	5.7	14	17	33	47	25	14	7.2	1.1	2.0	2.5
24	2.4	5.8	28	16	36	46	23	12	6.7	1.1	2.3	1.8
25	2.4	5.8	132	16	36	44	22	12	6.6	1.4	3.9	0.98
26	2.0	5.5	39	16	257	60	22	13	5.5	1.3	4.2	0.76
27	2.0	5.5	18	16	138	46	22	12	5.5	0.82	4.0	0.67
28	1.9	5.4	14	16	90	43	22	12	5.5	0.56	2.8	1.0
29	1.8	5.4	13	16	66	40	21	13	5.2	1.3	1.3	1.5
30	2.1	5.2	14	16	---	38	21	13	5.4	1.6	0.81	2.0
31	3.0	---	14	17	---	37	---	10	---	1.5	1.00	---
TOTAL	87.8	191.2	518.6	614	1193	1611	833	467	212.2	94.78	53.15	47.31
MEAN	2.83	6.37	16.7	19.8	41.1	52.0	27.8	15.1	7.07	3.06	1.71	1.58
MAX	4.0	11	132	41	257	78	36	20	9.6	7.5	4.2	3.2
MIN	1.8	4.7	4.6	14	16	37	21	10	5.2	0.56	0.45	0.67
AC-FT	174	379	1030	1220	2370	3200	1650	926	421	188	105	94

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2004, BY WATER YEAR (WY)

MEAN	4.25	36.8	28.3	27.5	30.8	49.2	46.2	45.2	14.4	6.53	3.08	2.45
MAX (WY)	7.80	119	63.1	48.8	41.1	59.2	56.0	110	31.9	12.6	6.63	3.14
MIN (WY)	2.46	6.37	8.90	12.0	24.0	35.5	27.8	15.1	6.64	3.06	1.52	1.58
	2001	2003	2002	2002	2004	2002	2003	2003	2003	2003	2003	2003
	2003	2004	2001	2001	2001	2001	2004	2004	2001	2004	2001	2004

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 2000 - 2004
ANNUAL TOTAL	10873.3	5923.04	
ANNUAL MEAN	29.8	16.2	24.5
HIGHEST ANNUAL MEAN			39.7
LOWEST ANNUAL MEAN			15.8
HIGHEST DAILY MEAN	406	May 4	1500
LOWEST DAILY MEAN	1.8	Oct 29	0.45
ANNUAL SEVEN-DAY MINIMUM	2.1	Oct 23	0.82
MAXIMUM PEAK FLOW			528
MAXIMUM PEAK STAGE			8.16
ANNUAL RUNOFF (AC-FT)	21570	11750	17750
10 PERCENT EXCEEDS	74	40	52
50 PERCENT EXCEEDS	18	9.1	13
90 PERCENT EXCEEDS	3.0	1.4	2.1

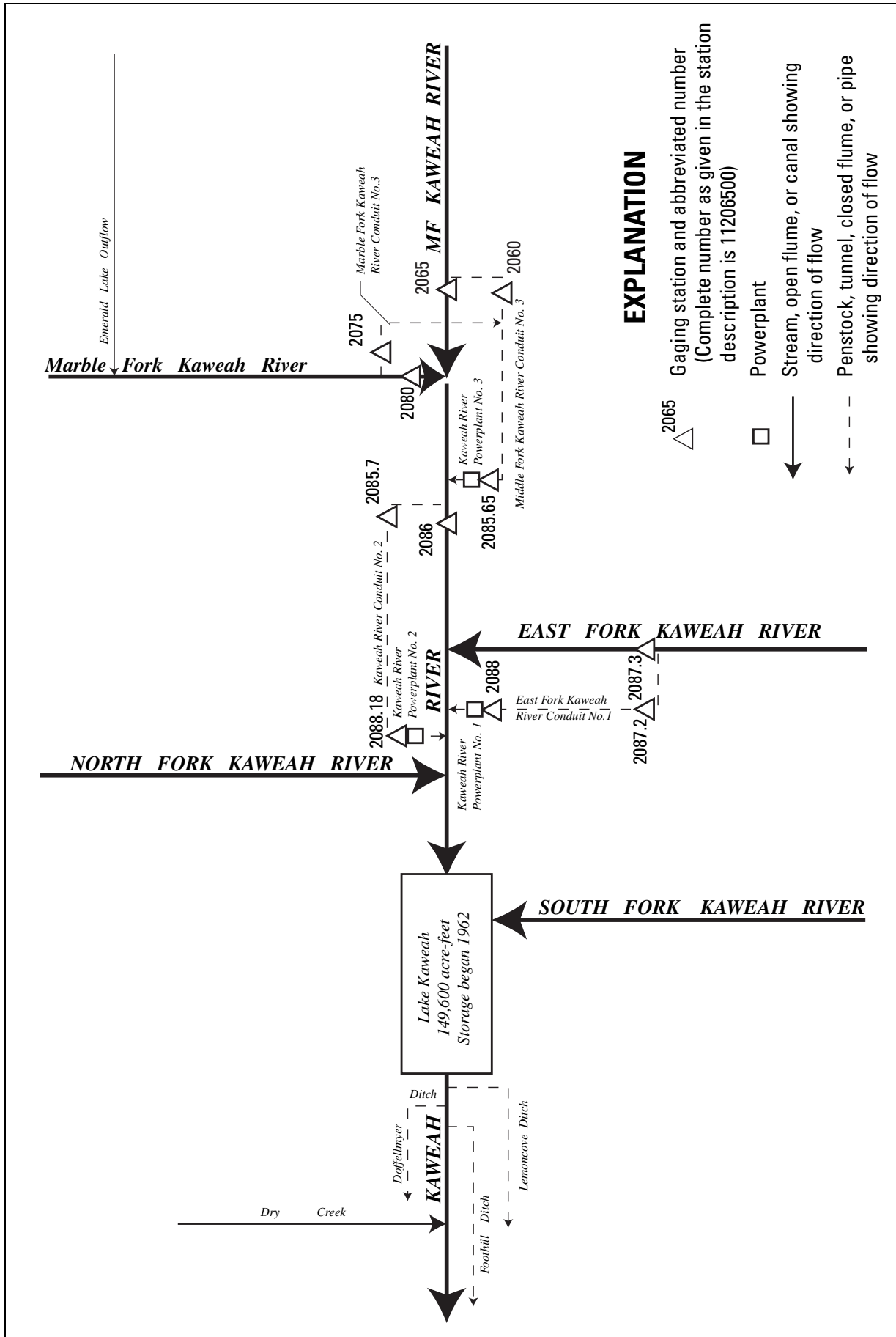


Figure 25. Diversions and storage in Kaweah River Basin.



## 11206500 MIDDLE FORK KAWEAH RIVER NEAR POTWISHA CAMP, CA

LOCATION.—Lat 36°30'47", long 118°47'27", NE 1/4 NE 1/4 sec.26, 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<sup>2</sup>.

PERIOD OF RECORD.—July 1949 to current year (since October 2003, low-flow records only). 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: Water year 1980.

SPECIFIC CONDUCTANCE: Water years 1980–81.

WATER TEMPERATURE: Water years 1959–63, 1972, 1980–81.

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). Beginning October 2003, no records computed above 38 ft<sup>3</sup>/s. 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<sup>3</sup>/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<sup>3</sup>/s, Nov. 12–15, 1949.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	12	12	---	16	---	---	---	---	---	15	12
2	12	12	12	---	---	---	---	---	---	---	15	12
3	12	12	12	---	---	---	---	---	---	18	15	12
4	12	12	12	---	16	---	---	---	---	16	e15	12
5	12	12	---	35	16	---	---	---	---	16	e15	12
6	12	12	---	30	16	---	---	---	---	17	e15	12
7	12	12	---	30	17	---	---	---	---	18	e15	12
8	12	12	---	---	16	---	---	---	---	17	e15	12
9	12	15	12	---	16	---	---	---	---	16	e15	11
10	12	12	12	---	16	---	---	---	---	16	e15	11
11	12	12	12	---	16	---	---	---	---	16	e16	11
12	12	12	12	---	16	---	---	---	---	16	e17	11
13	12	12	12	---	16	---	---	---	---	16	e16	11
14	12	12	12	---	16	---	---	---	---	16	e16	11
15	12	12	12	---	16	---	---	---	---	16	e16	11
16	12	12	12	---	---	---	---	---	---	16	e16	11
17	12	---	12	---	---	---	---	---	---	16	e16	11
18	12	---	12	---	---	---	---	---	---	16	16	11
19	12	---	13	---	---	---	---	---	---	16	14	12
20	12	21	13	---	25	---	---	---	---	16	12	12
21	12	12	16	---	22	---	---	---	---	16	12	12
22	12	12	12	---	20	---	---	---	---	16	12	12
23	12	12	12	---	---	---	---	---	---	16	12	12
24	12	12	---	---	22	---	---	---	---	16	13	12
25	12	12	---	---	---	---	---	---	---	16	13	12
26	12	12	---	---	---	---	---	---	---	16	13	12
27	12	12	---	---	---	---	---	---	---	16	13	12
28	12	12	---	---	---	---	---	---	---	16	13	12
29	12	12	---	---	---	---	---	---	---	15	13	12
30	12	12	---	16	---	---	---	---	31	15	13	12
31	12	---	---	16	---	---	---	---	---	15	13	---
TOTAL	372	---	---	---	---	---	---	---	---	---	445	350
MEAN	12.0	---	---	---	---	---	---	---	---	---	14.4	11.7
MAX	12	---	---	---	---	---	---	---	---	---	17	12
MIN	12	---	---	---	---	---	---	---	---	---	12	11
AC-FT	738	---	---	---	---	---	---	---	---	---	883	694

e Estimated.

## TULARE LAKE BASIN

## 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

## WATER YEARS 1961 - 2003

ANNUAL MEAN	145	
HIGHEST ANNUAL MEAN	417	1983
LOWEST ANNUAL MEAN	25.2	1961
HIGHEST DAILY MEAN	10500	Dec 6 1966
LOWEST DAILY MEAN	0.30	Dec 27 1960
ANNUAL SEVEN-DAY MINIMUM	0.30	Dec 27 1960
MAXIMUM PEAK FLOW	46800	Dec 23 1955
MAXIMUM PEAK STAGE	29.00	Dec 23 1955
ANNUAL RUNOFF (AC-FT)	104800	
10 PERCENT EXCEEDS	422	
50 PERCENT EXCEEDS	34	
90 PERCENT EXCEEDS	10	

## 11208000 MARBLE FORK KAWEAH RIVER AT POTWISHA CAMP, CA

LOCATION.—Lat 36°31'19", long 118°47'54", 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<sup>2</sup>.

PERIOD OF RECORD.—March 1950 to current year (since October 2002, 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 2,210 ft above NGVD of 1929, from topographic map.

REMARKS.—No records recorded above 12 ft<sup>3</sup>/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<sup>3</sup>/s, Dec. 23, 1955, gage height, 13.4 ft, from rating curve extended above 1,100 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum daily, 0.10 ft<sup>3</sup>/s, at times in 1961–64.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.8	1.8	7.3	7.2	11	12	11	11	8.3	5.3	2.5
2	1.8	1.8	1.8	7.1	7.2	11	11	10	11	7.1	5.1	2.1
3	1.8	1.8	1.8	7.0	7.2	11	11	10	11	7.0	5.0	1.9
4	1.8	1.8	1.8	7.2	7.2	11	11	8.2	11	7.0	5.0	1.7
5	1.8	1.8	1.8	7.1	7.2	11	11	9.3	11	6.9	4.9	1.9
6	1.8	1.8	1.9	6.8	7.2	11	11	11	11	6.9	4.8	2.0
7	1.8	1.8	1.9	6.8	7.2	11	11	11	11	6.9	4.7	1.9
8	1.8	1.8	1.9	6.9	7.2	11	11	11	11	6.9	4.6	1.9
9	1.8	1.9	1.9	7.0	7.2	10	11	11	11	6.9	4.3	1.9
10	1.8	1.9	1.9	7.1	7.2	10	11	11	11	7.0	4.2	1.9
11	1.8	1.9	1.9	7.2	7.1	10	12	11	11	7.0	4.0	1.9
12	1.8	1.9	1.9	7.0	7.1	11	12	11	11	6.9	3.9	2.0
13	1.8	1.9	1.9	6.7	7.1	11	12	11	11	6.8	3.9	2.0
14	1.8	1.9	1.9	6.7	7.1	11	11	11	11	7.0	3.9	2.0
15	1.8	1.9	1.9	6.6	7.2	10	12	11	11	7.4	3.8	2.0
16	1.8	1.9	1.9	6.7	7.1	9.4	12	11	11	7.3	3.9	2.0
17	1.8	1.9	1.9	6.8	7.3	10	12	11	11	7.2	3.8	2.0
18	e1.8	2.0	1.9	6.9	7.3	9.6	12	11	11	7.0	3.7	2.0
19	e1.8	1.9	1.9	6.8	7.2	10	11	11	11	6.9	3.6	2.0
20	e1.8	1.9	1.9	6.7	7.2	9.9	11	11	11	7.0	3.5	2.0
21	e1.8	1.8	1.9	6.6	7.1	10	11	12	11	7.1	3.5	2.0
22	e1.6	1.8	1.9	6.4	7.2	11	11	11	11	6.9	3.6	1.9
23	1.8	1.8	1.9	6.1	7.2	11	11	11	11	6.8	3.7	1.9
24	1.8	1.8	1.9	6.1	7.1	10	11	12	11	6.6	3.9	1.8
25	1.8	1.8	1.8	6.0	7.2	11	11	11	11	6.3	4.3	1.6
26	1.8	1.8	1.8	6.4	7.3	11	11	11	11	6.0	4.2	1.6
27	1.8	1.8	1.8	7.3	10	11	11	11	11	5.8	4.0	1.7
28	1.8	1.8	1.8	7.3	11	11	10	11	11	5.7	3.8	1.7
29	1.8	1.8	5.0	7.2	11	11	11	12	11	5.6	3.5	1.7
30	1.8	1.8	7.2	7.2	---	11	11	11	11	5.5	3.3	1.7
31	1.8	---	7.3	7.2	---	11	---	11	---	5.4	3.2	---
TOTAL	55.6	55.3	71.8	212.2	218.8	328.9	337	337.5	330	209.1	126.9	57.2
MEAN	1.79	1.84	2.32	6.85	7.54	10.6	11.2	10.9	11.0	6.75	4.09	1.91
MAX	1.8	2.0	7.3	7.3	11	11	12	12	11	8.3	5.3	2.5
MIN	1.6	1.8	1.8	6.0	7.1	9.4	10	8.2	11	5.4	3.2	1.6
AC-FT	110	110	142	421	434	652	668	669	655	415	252	113

e Estimated.

## 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	6.12	9.98	28.8	41.6	45.4	63.6	139	288	248	95.7	19.2	9.17
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

WATER YEARS 1955 - 2002

ANNUAL MEAN	82.9
HIGHEST ANNUAL MEAN	235 1969
LOWEST ANNUAL MEAN	10.9 1961
HIGHEST DAILY MEAN	5700 Dec 23 1955
LOWEST DAILY MEAN	0.10 Jan 10 1961
ANNUAL SEVEN-DAY MINIMUM	0.10 Jan 10 1961
MAXIMUM PEAK FLOW	12500 Dec 23 1955
MAXIMUM PEAK STAGE	13.40 Dec 23 1955
ANNUAL RUNOFF (AC-FT)	60090
10 PERCENT EXCEEDS	252
50 PERCENT EXCEEDS	12
90 PERCENT EXCEEDS	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 current year.

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, 91 ft<sup>3</sup>/s, many days in March 2004; no flow many days in water year 2004.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	12	18	78	60	82	90	88	88	63	8.5	0.00
2	8.8	12	17	80	63	82	87	88	88	64	7.7	0.00
3	9.5	14	16	80	73	80	87	89	88	62	7.2	0.00
4	9.1	15	16	75	68	82	87	89	88	58	6.5	0.00
5	8.6	14	17	75	64	82	88	89	88	55	5.5	0.00
6	8.5	13	57	74	65	85	89	88	89	55	5.0	0.00
7	8.3	13	77	74	73	89	89	87	88	56	4.8	0.00
8	7.9	14	68	74	65	91	89	87	87	56	1.1	0.00
9	7.8	38	56	75	64	91	89	88	85	52	0.00	0.00
10	7.7	39	56	75	62	91	89	89	84	47	0.00	0.00
11	3.3	25	60	77	62	91	89	86	84	41	0.00	0.00
12	0.00	22	49	26	64	91	89	86	87	36	0.00	0.00
13	0.00	35	51	0.00	65	91	89	88	89	33	0.00	0.00
14	2.8	30	59	0.00	61	91	88	88	90	30	0.00	0.00
15	6.7	27	47	0.00	62	91	88	88	88	28	0.00	0.00
16	6.8	30	49	0.00	65	91	87	88	88	28	0.00	0.00
17	6.6	12	51	0.00	79	91	86	88	88	31	0.00	0.00
18	6.1	0.00	56	0.04	81	91	86	88	87	27	0.00	0.00
19	6.2	0.00	64	0.03	83	91	86	88	86	26	0.00	0.00
20	5.8	9.2	67	0.00	81	91	85	88	84	24	0.00	0.00
21	5.9	26	73	0.00	78	91	86	87	83	23	0.00	0.00
22	5.7	23	63	0.00	76	91	87	86	80	21	0.00	0.00
23	5.8	21	57	0.00	78	91	87	87	81	19	0.00	0.00
24	5.9	21	70	0.00	75	91	87	88	76	18	0.00	0.00
25	5.5	20	0.89	0.00	78	91	89	88	72	16	0.00	0.00
26	5.2	19	42	0.00	90	91	89	87	70	15	0.00	0.00
27	5.2	18	82	0.00	90	90	89	88	67	13	0.00	0.00
28	5.2	18	80	0.00	88	90	89	89	64	12	0.00	0.14
29	5.0	19	78	23	85	90	88	86	62	11	0.00	0.00
30	5.4	19	79	62	---	91	87	87	60	10	0.00	0.00
31	7.0	---	77	66	---	91	---	88	---	9.1	0.00	---
TOTAL	190.60	578.20	1652.89	1014.07	2098	2763	2635	2719	2459	1039.1	46.30	0.14
MEAN	6.15	19.3	53.3	32.7	72.3	89.1	87.8	87.7	82.0	33.5	1.49	0.00
MAX	9.5	39	82	80	90	91	90	89	90	64	8.5	0.14
MIN	0.00	0.00	0.89	0.00	60	80	85	86	60	9.1	0.00	0.00
AC-FT	378	1150	3280	2010	4160	5480	5230	5390	4880	2060	92	0.3

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004
MEAN	4.52	30.9	62.6	59.2	78.8	88.1	87.8	88.3	85.8	55.0	22.7	6.74
MAX	6.15	42.6	71.9	85.6	85.4	89.1	87.9	88.9	89.6	76.4	44.0	13.5
(WY)	2004	2003	2003	2003	2003	2004	2003	2003	2003	2003	2003	2003
MIN	2.89	19.3	53.3	32.7	72.3	87.0	87.8	87.7	82.0	33.5	1.49	0.00
(WY)	2003	2004	2004	2004	2004	2003	2004	2004	2004	2004	2004	2004

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 2003 - 2004

ANNUAL TOTAL	22379.89	17195.30		
ANNUAL MEAN	61.3	47.0	55.7	
HIGHEST ANNUAL MEAN			64.5	2003
LOWEST ANNUAL MEAN			47.0	2004
HIGHEST DAILY MEAN	90	May 19	91	Mar 8 2004
LOWEST DAILY MEAN	0.00	Oct 12	0.00	Oct 12 2003
ANNUAL SEVEN-DAY MINIMUM	3.7	Oct 11	0.00	Jan 20 2004
ANNUAL RUNOFF (AC-FT)	44390	34110	40380	
10 PERCENT EXCEEDS	89	89	89	
50 PERCENT EXCEEDS	84	57	73	
90 PERCENT EXCEEDS	8.6	0.00	0.09	

## 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 diversion 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.—Not determined.

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<sup>3</sup>/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 (station 11208570) 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<sup>3</sup>/s, Jan. 2, 1997, gage height unknown; minimum daily, 5.5 ft<sup>3</sup>/s, several days in December 1994.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	21	13	49	22	80	389	486	358	23	12	10
2	17	20	13	86	26	78	301	575	360	19	12	7.6
3	18	19	12	66	32	64	255	658	366	14	12	7.6
4	18	16	13	41	22	68	238	712	340	12	12	7.6
5	17	15	13	36	21	60	267	669	313	12	14	7.4
6	17	14	42	28	21	68	316	554	312	12	15	7.1
7	17	14	34	26	24	108	302	465	287	12	15	7.1
8	17	13	21	26	22	163	324	472	238	12	15	7.1
9	17	17	14	28	23	214	327	484	167	12	15	7.1
10	17	14	13	27	23	247	360	497	121	12	15	7.2
11	17	13	14	33	23	226	365	322	98	13	15	7.7
12	16	13	14	33	23	237	396	295	108	13	15	7.6
13	16	13	13	36	23	253	386	327	124	13	14	7.6
14	17	13	15	36	22	281	322	382	154	13	14	7.6
15	16	13	13	38	21	345	302	404	131	13	14	7.6
16	16	13	13	34	22	394	280	362	119	13	14	7.7
17	15	13	14	30	37	407	238	378	135	13	14	7.6
18	15	13	14	30	39	449	208	357	124	13	14	7.6
19	15	13	16	27	43	465	192	334	109	13	14	7.8
20	15	13	19	57	30	497	186	285	96	13	13	8.4
21	16	13	21	96	26	550	189	240	94	13	13	9.7
22	16	13	14	94	23	516	202	201	86	13	13	11
23	16	13	14	91	27	502	197	217	75	13	13	10
24	16	13	168	55	26	486	239	246	61	13	13	9.7
25	16	13	423	21	47	444	319	243	52	13	14	9.7
26	16	13	132	24	320	434	413	205	48	13	13	9.6
27	16	13	62	25	148	340	506	219	40	13	13	9.3
28	17	13	45	21	110	340	536	362	31	13	13	9.1
29	16	12	36	24	93	375	470	279	31	13	13	9.1
30	16	12	43	22	---	393	402	281	e31	12	13	9.1
31	17	---	37	22	---	387	---	343	---	12	13	---
TOTAL	508	421	1328	1262	1339	9471	9427	11854	4609	411	422	249.3
MEAN	16.4	14.0	42.8	40.7	46.2	306	314	382	154	13.3	13.6	8.31
MAX	18	21	423	96	320	550	536	712	366	23	15	11
MIN	15	12	12	21	21	60	186	201	31	12	12	7.1
AC-FT	1010	835	2630	2500	2660	18790	18700	23510	9140	815	837	494

e Estimated.

## 11208600 KAWEAH RIVER BELOW CONDUIT NO. 2, NEAR HAMMOND, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	23.0	64.8	55.3	171	159	255	417	759	637	294	64.2	22.3
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	382	150	11.7	11.2	8.05
(WY)	1996	1995	1995	1994	2001	1999	1999	2004	2001	1994	1994	1994

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1994 - 2004	
ANNUAL TOTAL	69989		41301.3			
ANNUAL MEAN	192		113		244	
HIGHEST ANNUAL MEAN					512	
LOWEST ANNUAL MEAN					99.2	
HIGHEST DAILY MEAN	1530	May 29	712	May 4	9800	Jan 2 1997
LOWEST DAILY MEAN	12	Sep 4	7.1	Sep 6	5.5	Dec 21 1994
ANNUAL SEVEN-DAY MINIMUM	12	Sep 3	7.2	Sep 4	5.6	Dec 17 1994
MAXIMUM PEAK FLOW			1000	Dec 24	29000	Jan 2 1997
MAXIMUM PEAK STAGE			6.12	Dec 24	unknown	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	138800		81920		176500	
10 PERCENT EXCEEDS	557		369		706	
50 PERCENT EXCEEDS	66		22		63	
90 PERCENT EXCEEDS	13		12		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<sup>2</sup>.

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: Water years 1968–71.

WATER TEMPERATURE: Water years 1968–76.

SEDIMENT DATA: Water years 1968–71.

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<sup>3</sup>/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 location 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<sup>3</sup>/s, Dec. 6, 1966, gage height, 21 ft, from floodmarks, from rating curve extended above 850 ft<sup>3</sup>/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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	8.1	6.9	32	13	40	164	262	206	33	11	7.7
2	7.3	6.8	6.9	47	21	43	144	290	217	32	7.6	7.5
3	7.4	6.9	7.1	28	21	34	128	318	214	28	6.7	7.0
4	6.9	6.9	7.3	18	18	33	120	326	202	26	6.3	6.3
5	6.9	8.1	9.0	18	16	32	128	311	191	23	6.5	7.0
6	6.9	7.9	21	17	15	34	146	288	185	21	6.9	7.5
7	7.1	7.6	19	19	16	46	143	268	180	20	6.9	6.7
8	7.2	7.6	14	18	14	64	153	271	161	19	7.0	5.5
9	8.6	18	8.3	20	14	78	157	273	129	16	7.0	10
10	11	11	8.9	21	14	91	172	274	110	15	6.9	12
11	6.7	6.9	9.9	22	14	93	183	231	90	15	7.3	11
12	6.3	6.4	9.6	22	15	100	197	213	85	13	8.4	9.1
13	7.0	9.9	10	21	14	107	197	219	86	13	8.4	10
14	6.7	6.4	15	19	15	129	175	237	93	13	8.4	11
15	5.8	7.4	9.7	19	14	157	166	250	84	15	8.4	9.6
16	5.8	8.9	9.5	17	18	167	158	246	80	14	8.2	10
17	6.6	6.9	9.2	17	29	163	153	250	79	12	8.4	9.9
18	7.7	7.1	9.9	18	42	166	139	245	78	11	8.1	9.5
19	7.5	7.5	9.1	17	39	177	131	226	73	13	7.7	10
20	6.9	6.9	11	22	28	190	127	203	69	13	7.7	11
21	7.8	6.7	12	31	27	207	131	185	66	12	7.4	11
22	8.4	7.0	8.5	29	26	206	138	165	60	12	7.7	11
23	7.7	7.7	10	28	30	205	142	165	56	12	7.5	9.8
24	7.9	8.8	114	20	27	200	162	178	52	13	7.7	8.7
25	7.8	8.0	174	14	43	191	180	174	49	13	7.7	8.8
26	7.7	7.6	45	12	159	191	212	146	46	13	7.7	8.6
27	7.1	8.0	29	10	79	160	247	149	43	13	7.7	8.5
28	12	7.7	25	10	56	156	271	210	38	14	7.5	8.2
29	14	7.7	23	11	43	163	256	181	35	14	7.0	6.7
30	9.8	6.9	30	12	---	167	239	184	31	14	6.9	6.4
31	7.8	---	26	14	---	165	---	199	---	13	7.2	---
TOTAL	241.2	239.3	707.8	623	880	3955	5059	7137	3088	508	235.8	266.0
MEAN	7.78	7.98	22.8	20.1	30.3	128	169	230	103	16.4	7.61	8.87
MAX	14	18	174	47	159	207	271	326	217	33	11	12
MIN	5.8	6.4	6.9	10	13	32	120	146	31	11	6.3	5.5
AC-FT	478	475	1400	1240	1750	7840	10030	14160	6130	1010	468	528



## 11208730 EAST FORK KAWEAH RIVER NEAR THREE RIVERS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.43	14.0	37.4	59.3	54.9	76.0	154	351	338	123	25.3	10.3
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1952 - 2004	
ANNUAL TOTAL	36191.2		22940.1			
ANNUAL MEAN	99.2		62.7		103	
HIGHEST ANNUAL MEAN					300	
LOWEST ANNUAL MEAN					15.9	
HIGHEST DAILY MEAN	1040	May 28	326	May 4	8000	Dec 6 1966
LOWEST DAILY MEAN	5.8	Oct 15	5.5	Sep 8	0.00	Jan 22 1962
ANNUAL SEVEN-DAY MINIMUM	6.4	Oct 11	6.4	Oct 11	0.10	Sep 28 1953
MAXIMUM PEAK FLOW			476	Dec 24	13000	Dec 6 1966
MAXIMUM PEAK STAGE			5.29	Dec 24	21.00	Dec 6 1966
ANNUAL RUNOFF (AC-FT)	71790		45500		74800	
10 PERCENT EXCEEDS	266		197		304	
50 PERCENT EXCEEDS	35		16		23	
90 PERCENT EXCEEDS	7.1		7.0		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 current year.

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<sup>3</sup>/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<sup>3</sup>/s, many days in water years 2003 and 2004; no flow many days in water years 2003 and 2004.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	8.5	11	21	19	21	22	21	e22	e20	6.4	e0.00
2	9.9	8.2	11	21	18	21	22	21	e22	e20	8.8	e0.00
3	10	9.9	10	21	21	20	22	21	e22	e20	9.4	e0.00
4	9.5	9.4	10	21	20	21	22	21	e21	e20	9.3	e0.00
5	9.6	9.6	10	21	21	21	22	21	e21	e20	8.7	e0.00
6	3.3	9.9	19	21	21	20	22	21	e21	e20	8.5	e0.00
7	e0.00	9.8	20	22	21	21	22	21	e21	e20	8.3	e0.00
8	e0.00	9.8	20	22	20	20	22	21	e21	e20	7.7	e0.00
9	e0.00	17	16	21	20	20	22	21	e21	e20	7.0	e0.00
10	2.9	16	16	21	20	20	22	21	e21	e19	6.7	e0.00
11	8.2	13	18	21	20	19	22	21	e21	e18	6.4	e0.00
12	7.8	12	15	21	20	17	22	21	e22	e17	6.1	e0.00
13	7.7	17	17	22	20	17	22	21	e22	e17	5.9	e0.00
14	7.5	14	18	22	20	17	22	21	e22	15	5.4	e0.00
15	7.3	13	15	22	20	15	22	21	e22	14	5.9	e0.00
16	7.3	15	15	22	20	18	22	21	e22	15	2.1	e0.00
17	7.1	14	16	22	21	20	22	21	e22	14	e0.00	e0.00
18	6.9	13	16	21	20	20	22	21	e22	14	e0.00	e0.00
19	7.3	13	18	21	20	20	21	21	e22	13	e0.00	e0.00
20	7.2	13	19	6.8	20	20	21	21	e22	12	e0.00	e0.00
21	7.1	12	19	e0.00	20	20	21	21	e22	11	e0.00	e0.00
22	7.0	11	17	e0.00	20	20	21	21	e22	10	e0.00	e0.00
23	7.0	10	16	e0.00	20	19	21	21	e22	9.5	e0.00	e0.00
24	7.1	11	16	4.8	20	21	21	19	e21	8.2	e0.00	e0.00
25	6.8	11	e0.00	19	20	21	22	e21	e20	7.6	e0.00	e0.00
26	6.7	10	9.0	20	20	21	21	e21	e20	6.7	e0.00	e0.00
27	6.7	11	18	22	20	21	22	e22	e20	6.2	e0.00	e0.00
28	2.5	11	17	22	21	22	22	e22	e20	5.8	e0.00	e0.00
29	e0.00	12	18	21	20	22	21	e21	e20	5.7	e0.00	e0.00
30	2.2	12	20	20	---	22	21	e22	e20	5.5	e0.00	e0.00
31	7.1	---	20	20	---	22	---	e22	---	5.6	e0.00	---
TOTAL	189.20	356.1	480.00	561.60	583	619	651	653	639	429.8	112.60	0.00
MEAN	6.10	11.9	15.5	18.1	20.1	20.0	21.7	21.1	21.3	13.9	3.63	0.00
MAX	10	17	20	22	21	22	22	22	22	20	9.4	0.00
MIN	0.00	8.2	0.00	0.00	18	15	21	19	20	5.5	0.00	0.00
AC-FT	375	706	952	1110	1160	1230	1290	1300	1270	853	223	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004
MEAN	5.56	10.1	18.0	19.5	20.6	17.9	20.1	20.5	21.1	17.1	11.4	7.50
MAX	6.10	11.9	20.6	20.8	21.2	20.0	21.7	21.1	21.3	20.4	19.2	15.0
(WY)	2004	2004	2003	2003	2003	2004	2004	2004	2004	2003	2003	2003
MIN	5.03	8.23	15.5	18.1	20.1	15.9	18.6	19.9	20.9	13.9	3.63	0.00
(WY)	2003	2003	2004	2004	2004	2003	2003	2003	2003	2004	2004	2004

## SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 2003 - 2004	
ANNUAL TOTAL	6234.51		5274.30			
ANNUAL MEAN	17.1		14.4		15.8	
HIGHEST ANNUAL MEAN					17.1	
LOWEST ANNUAL MEAN					14.4	
HIGHEST DAILY MEAN	22	Jan 28	22	Jan 7	22	Jan 28 2003
LOWEST DAILY MEAN	0.00	Mar 14	0.00	Oct 7	0.00	Nov 9 2002
ANNUAL SEVEN-DAY MINIMUM	3.2	Oct 6	0.00	Aug 17	0.00	Aug 17 2004
ANNUAL RUNOFF (AC-FT)	12370		10460		11420	
10 PERCENT EXCEEDS	21		22		22	
50 PERCENT EXCEEDS	20		19		20	
90 PERCENT EXCEEDS	9.0		0.00		3.4	

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 current year.

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<sup>3</sup>/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, 81 ft<sup>3</sup>/s, Apr. 26, 27, 2004; no flow many days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	18	70	62	78	80	80	78	72	16	e0.00
2	0.00	0.00	17	76	65	78	79	80	78	75	15	e0.00
3	0.00	0.00	17	75	77	76	79	80	78	74	14	e0.00
4	0.00	5.0	16	73	70	76	79	80	78	70	14	e0.00
5	0.00	13	17	75	66	77	79	80	78	67	6.9	e0.00
6	0.00	13	67	77	67	78	80	80	78	68	e0.00	e0.00
7	0.00	13	71	77	72	78	80	79	78	69	e0.00	e0.00
8	0.00	14	69	77	66	79	80	79	78	69	e0.00	e0.00
9	0.00	45	56	77	66	79	80	79	77	64	e0.00	e0.00
10	0.00	47	56	77	63	79	80	79	76	59	e0.00	e0.00
11	0.00	26	61	77	64	79	80	78	77	52	e0.00	e0.00
12	0.00	23	50	76	65	79	80	77	78	47	e0.00	e0.00
13	0.00	36	52	77	67	79	80	78	79	43	e0.00	e0.00
14	0.00	31	61	77	64	80	80	79	79	40	e0.00	e0.00
15	0.00	28	49	77	64	80	80	79	79	40	e0.00	e0.00
16	0.00	31	50	77	67	80	79	79	79	40	e0.00	e0.00
17	0.00	23	51	77	77	80	79	79	79	41	e0.00	0.00
18	0.00	27	56	77	77	80	79	78	79	37	e0.00	0.00
19	0.00	29	64	77	78	80	79	78	79	36	e0.00	0.00
20	0.00	30	65	24	77	80	78	78	78	34	e0.00	0.00
21	0.00	26	73	0.00	77	80	79	78	78	33	e0.00	0.00
22	0.00	24	64	0.00	76	80	79	77	78	30	e0.00	0.00
23	0.00	21	57	0.00	77	80	79	78	78	29	e0.00	0.00
24	0.00	21	72	23	77	79	80	79	78	27	e0.00	0.00
25	0.00	21	6.2	69	77	79	80	79	77	25	e0.00	0.00
26	0.00	19	31	62	72	80	81	79	76	23	e0.00	0.00
27	0.00	19	68	57	79	79	81	79	73	21	e0.00	0.00
28	0.00	18	71	66	79	79	80	79	70	20	e0.00	0.00
29	0.00	19	73	66	79	80	80	78	70	19	e0.00	0.00
30	0.00	20	75	64	---	80	79	78	66	18	e0.00	0.00
31	0.00	---	73	68	---	80	---	78	---	17	e0.00	---
TOTAL	0.00	642.00	1626.2	1945.00	2067	2451	2388	2441	2307	1359	65.90	0.00
MEAN	0.00	21.4	52.5	62.7	71.3	79.1	79.6	78.7	76.9	43.8	2.13	0.00
MAX	0.00	47	75	77	79	80	81	80	79	75	16	0.00
MIN	0.00	0.00	6.2	0.00	62	76	78	77	66	17	0.00	0.00
AC-FT	0.00	1270	3230	3860	4100	4860	4740	4840	4580	2700	131	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2003 - 2004, BY WATER YEAR (WY)

MEAN	0.00	31.0	60.6	68.4	72.0	77.2	76.8	77.1	76.2	56.3	18.3	4.57
MAX	0.00	40.6	68.7	74.0	72.8	79.1	79.6	78.7	76.9	68.8	34.5	9.14
(WY)	2003	2003	2003	2003	2003	2004	2004	2004	2004	2003	2003	2003
MIN	0.00	21.4	52.5	62.7	71.3	75.3	74.1	75.5	75.5	43.8	2.13	0.00
(WY)	2003	2004	2004	2004	2004	2003	2003	2003	2003	2004	2004	2004

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 2003 - 2004

ANNUAL TOTAL		19239.50		17292.10								
ANNUAL MEAN		52.7		47.2						51.5		
HIGHEST ANNUAL MEAN										55.7		2003
LOWEST ANNUAL MEAN										47.2		2004
HIGHEST DAILY MEAN				79	Jun 10		81	Apr 26		81	Apr 26	2004
LOWEST DAILY MEAN				0.00	Sep 17		0.00	Oct 1		0.00	Oct 1	2002
ANNUAL SEVEN-DAY MINIMUM				0.00	Sep 17		0.00	Oct 1		0.00	Oct 1	2002
ANNUAL RUNOFF (AC-FT)			38160				34300			37280		
10 PERCENT EXCEEDS			77				80			79		
50 PERCENT EXCEEDS			72				66			72		
90 PERCENT EXCEEDS			0.00				0.00			0.00		

e Estimated.

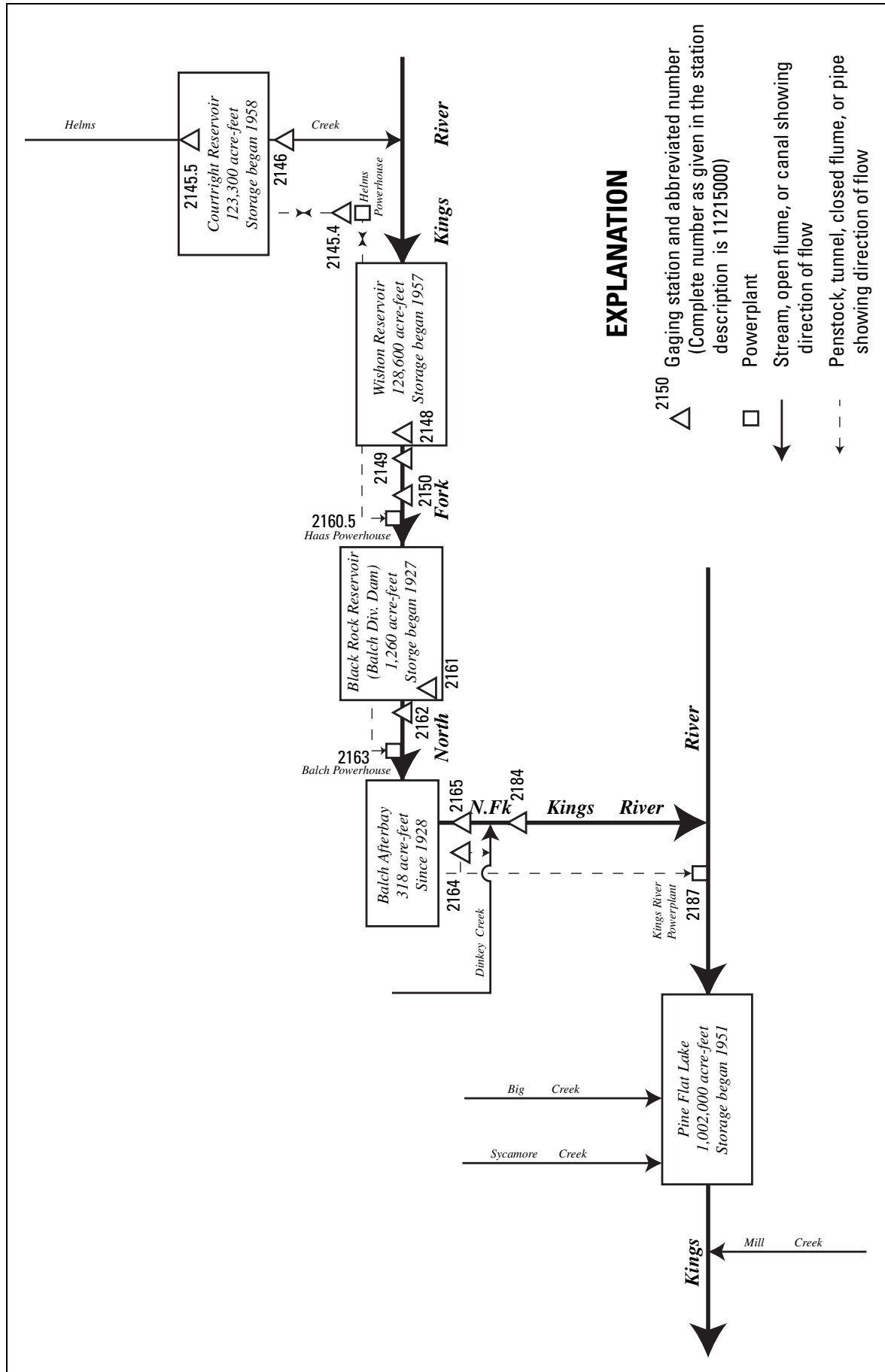


Figure 26. Diversions and storage in Kings River Basin.

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 ft above NGVD of 1929 (levels by Pacific Gas & Electric Co.).

REMARKS.—Flow is diverted from Courtright Reservoir (station 11214550) through a tunnel to 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<sup>3</sup>/s and pump up to 7,200 ft<sup>3</sup>/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<sup>3</sup>/s, Dec. 22, 1998, maximum daily pumpage, 6,860 ft<sup>3</sup>/s, Jan. 5, 1997.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	615	-441	-297	1400	32	134	-499	-1340	1530	-512	10	641
2	-202	-702	199	148	800	146	-143	-252	711	221	831	678
3	591	590	347	-695	932	-557	-586	605	90	-318	-47	-422
4	-1720	840	473	2140	28	-727	-1260	73	286	-674	292	113
5	-608	809	674	1360	441	-173	-705	-294	-1240	1100	187	1420
6	844	597	-1170	1770	-106	-890	0.00	-173	-1190	1020	-78	1810
7	580	769	-497	366	-127	-421	-362	-525	-580	275	607	815
8	1150	-400	739	680	-184	-1110	-1960	-1140	422	-180	1110	227
9	528	-1190	1420	-4.5	-450	235	-663	-1080	426	-194	975	-105
10	236	-527	-757	-1340	525	-448	-686	-872	261	-1020	2320	0.00
11	-358	269	1630	195	753	513	-354	-571	1220	243	1230	-784
12	1340	5.0	559	700	261	-574	-407	-282	-148	1140	1870	-868
13	606	608	-502	407	293	-440	53	-435	-941	634	493	-953
14	527	342	613	275	-354	-99	-368	-259	176	620	364	-1220
15	-353	-621	408	-452	-631	-146	0.00	-1840	1040	1250	590	-768
16	-419	-746	418	-2350	0.00	-312	-215	-1250	0.00	964	886	1460
17	252	-400	295	-212	-46	-246	-446	-518	42	261	1160	731
18	-101	591	264	-723	-204	-348	-373	616	-530	-511	967	-368
19	-890	434	649	-2500	59	-671	-20	357	-1030	240	707	-1870
20	131	356	-3330	-595	1190	-233	323	306	-1780	482	730	-811
21	97	364	1860	235	406	-748	536	573	-138	823	-111	325
22	-81	364	455	1080	452	-119	-471	-1090	1980	2710	-2180	367
23	-652	543	1190	845	-312	-136	-594	-1830	1920	483	-506	1090
24	-433	271	-556	-123	191	-136	-367	-640	1320	-402	-277	874
25	-1030	947	-1050	652	1350	27	72	231	624	-482	-194	-311
26	-501	-83	-72	796	1500	-658	1660	1010	292	577	319	-1070
27	-409	-777	-654	663	100	-1710	553	203	-750	534	706	-297
28	119	-1710	2140	625	-1220	-990	658	270	1170	220	341	-859
29	-236	-1620	2140	557	-282	-990	-577	-1100	-259	547	-282	-376
30	-208	-1180	846	693	---	-59	-500	-667	-716	84	875	929
31	-328	---	171	-1560	---	-221	---	617	---	-122	754	---
TOTAL	-913	-1698.0	8605	5032.5	5397.00	-12107	-7701.00	-11297	4208.00	10013	14649	398.00
MEAN	-29.5	-56.6	278	162	186	-391	-257	-364	140	323	473	13.3
MAX	1340	947	2140	2140	1500	513	1660	1010	1980	2710	2320	1810
MIN	-1720	-1710	-3330	-2500	-1220	-1710	-1960	-1840	-1780	-1020	-2180	-1870
AC-FT	-1810	-3370	17070	9980	10700	-24010	-15270	-22410	8350	19860	29060	789

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2004, BY WATER YEAR (WY)

MEAN	131	-101	44.5	32.2	99.9	9.70	-82.9	-308	27.4	156	360	306
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	-391	-734	-722	-239	-209	2.42	-169
(WY)	1993	1992	1996	1997	2000	2004	2001	1992	1997	1997	2003	2000

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1989 - 2004
ANNUAL TOTAL	4742.40	14586.50	
ANNUAL MEAN	13.0	39.9	56.0
HIGHEST ANNUAL MEAN			177
LOWEST ANNUAL MEAN			-77.5
HIGHEST DAILY MEAN	2190	Sep 22	5440
LOWEST DAILY MEAN	-4230	May 24	-6860
ANNUAL SEVEN-DAY MINIMUM	-1920	May 20	-2730
ANNUAL RUNOFF (AC-FT)	9410		40600
10 PERCENT EXCEEDS	832		1150
50 PERCENT EXCEEDS	71		0.00
90 PERCENT EXCEEDS	-957		-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<sup>2</sup>.

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, 118,600 acre-ft, June 21, elevation, 8,181.1 ft; minimum, 27,900 acre-ft, Feb. 27, elevation, 8,094.5 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74300	77800	80300	52800	40900	30700	59600	87900	113300	107800	83300	54600
2	74900	79200	79900	52600	39500	30400	60100	89100	112000	107300	81700	53300
3	73700	78000	79200	53900	38100	31500	61400	88400	111900	107900	81800	54100
4	77100	76300	78200	50600	38000	33000	64200	88800	111400	109200	81100	53900
5	78200	75300	77000	47800	37200	33300	66100	90000	113900	106800	80600	51300
6	76500	74100	79300	44300	37400	35100	66600	90900	116400	104700	80700	47000
7	75300	71900	80300	43600	37600	36000	67700	92400	117700	104100	79400	45100
8	73700	72800	78700	42300	37900	36900	69900	95000	116800	104300	77200	44700
9	72300	75200	75900	42200	38800	36500	71700	97600	116000	104600	74900	44900
10	71800	76100	72900	44900	38000	37400	73500	99700	115400	106600	71600	46000
11	72500	75500	70900	44500	36600	36400	75200	101100	113200	105900	69200	47600
12	69900	75500	69800	43100	36200	37600	76500	101900	113400	103500	66400	49300
13	68600	74300	70800	42300	35500	38400	76900	103000	115300	102200	65000	51300
14	67600	73600	69600	41700	36200	38700	78100	103800	114900	100700	64300	53700
15	68200	74800	68800	42700	37400	39000	78700	107700	112900	98200	63200	55000
16	69000	76200	67900	44600	37900	39800	79500	110200	112100	96300	61400	52200
17	68400	76900	67300	45100	37700	40400	80600	111400	112000	96000	59200	50700
18	68600	75700	66700	46600	37400	41200	81600	110700	113000	95700	57900	51400
19	70300	74800	65300	48800	37200	42700	81800	110200	115000	95100	55900	55100
20	70000	74100	68100	50000	35000	43400	81500	109800	118400	94100	54400	56600
21	69700	73300	64400	49500	34100	45100	80700	108800	118600	92200	54600	56100
22	70300	73000	63400	47300	33300	45700	81900	111100	114500	86800	59200	55400
23	71500	72000	60600	45600	33900	46300	83300	114900	110600	85800	60300	53400
24	72200	71200	61000	45800	33600	47400	84500	116200	107900	86500	61000	51800
25	74200	69500	63100	44500	31000	47800	84900	115900	106600	87400	61500	52800
26	75100	69600	63300	42900	28100	49400	82300	114000	106000	86200	60800	53200
27	75900	71100	64500	41600	27900	53100	82000	113700	107400	85100	59000	53700
28	75600	74400	60400	40400	30400	55300	81400	113500	105100	84600	58500	55400
29	76100	77500	57400	39300	31000	57100	83100	115900	105500	83500	59200	56100
30	76400	79800	55700	38000	---	57500	84700	117300	106900	83300	57400	54700
31	77000	---	55400	41000	---	58300	---	116200	---	83400	55900	---
MAX	78200	79800	80300	53900	40900	58300	84900	117300	118600	109200	83300	56600
MIN	67600	69500	55400	38000	27900	30400	59600	87900	105100	83300	54400	44700
a	8151.00	8153.30	8130.50	8113.80	8099.40	8133.50	8157.30	8179.60	8173.50	8156.30	8131.10	8129.80
b	-700	2800	-24400	-14400	-10000	27300	26400	31500	-9300	-23500	-27500	-1200

CAL YR 2003 b 18800

WTR YR 2004 b -21600

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<sup>2</sup>.

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<sup>3</sup>/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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	25	25	21	17	14	22	27	39	39	33	20
2	22	25	25	20	17	14	22	27	40	39	33	19
3	22	25	25	20	16	14	22	27	40	39	32	19
4	22	24	25	20	16	15	22	27	40	39	32	19
5	22	24	24	20	16	15	23	28	41	39	31	19
6	23	24	25	19	16	15	23	28	41	39	30	18
7	22	24	25	18	16	15	23	28	41	39	30	16
8	23	24	25	18	16	15	24	28	41	39	29	16
9	24	24	25	18	16	15	24	29	41	39	28	16
10	24	24	24	18	16	16	24	29	41	38	27	16
11	24	24	24	19	16	16	24	30	41	38	25	16
12	24	25	24	18	15	16	25	30	41	38	24	16
13	24	25	24	18	15	16	25	30	41	38	23	16
14	24	25	24	18	15	17	25	31	41	38	23	17
15	24	25	23	18	16	17	25	31	41	38	22	17
16	24	25	23	18	16	17	25	32	41	37	22	17
17	24	25	23	19	16	17	25	32	40	37	22	17
18	24	25	23	19	16	17	25	33	40	37	21	17
19	24	25	23	19	16	18	25	33	40	37	21	17
20	24	24	23	20	15	18	25	33	40	37	21	18
21	24	24	23	20	15	18	25	33	40	36	20	18
22	24	24	22	19	15	19	25	33	40	36	20	17
23	24	24	22	19	15	19	25	34	40	36	21	17
24	24	24	22	19	15	19	26	35	40	35	21	17
25	24	23	22	18	15	19	26	36	40	35	21	16
26	24	23	22	18	16	20	26	37	40	35	21	17
27	24	23	22	18	13	20	26	37	40	35	21	17
28	25	23	22	18	13	20	26	38	40	34	21	17
29	25	24	22	17	14	21	27	38	39	34	21	17
30	25	25	22	16	---	21	27	39	39	34	21	17
31	25	---	21	17	---	21	---	39	---	34	21	---
TOTAL	734	728	724	577	449	534	737	992	1209	1148	758	516
MEAN	23.7	24.3	23.4	18.6	15.5	17.2	24.6	32.0	40.3	37.0	24.5	17.2
MAX	25	25	25	21	17	21	27	39	41	39	33	20
MIN	22	23	21	16	13	14	22	27	39	34	20	16
AC-FT	1460	1440	1440	1140	891	1060	1460	1970	2400	2280	1500	1020

## TULARE LAKE BASIN

## 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 - 2004, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
MEAN	13.1	9.54	8.75	8.60	8.65	8.13	10.8	14.8	20.9	22.2	19.1	14.6									
MAX	58.3	24.3	23.4	20.6	19.7	19.0	30.5	35.6	41.8	41.5	38.8	33.8									
(WY)	1985	2004	2004	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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1985 - 2004

ANNUAL TOTAL	7635.4	9106	
ANNUAL MEAN	20.9	24.9	13.4
HIGHEST ANNUAL MEAN			25.1 2001
LOWEST ANNUAL MEAN			5.65 1987
HIGHEST DAILY MEAN	38 Jul 10	41 Jun 5	679 Oct 13 1984
LOWEST DAILY MEAN	6.9 Mar 19	13 Feb 27	0.90 Apr 17 1998
ANNUAL SEVEN-DAY MINIMUM	7.0 Mar 15	14 Feb 27	1.5 Apr 16 1998
MAXIMUM PEAK FLOW		83 Feb 26	1340 Aug 29 1969
MAXIMUM PEAK STAGE		4.87 Feb 26	7.70 Aug 23 1978
ANNUAL RUNOFF (AC-FT)	15140	18060	9730
10 PERCENT EXCEEDS	33	39	29
50 PERCENT EXCEEDS	23	24	9.0
90 PERCENT EXCEEDS	9.3	16	4.3



## 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<sup>2</sup>.

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, 78,500 acre-ft, Oct. 3, elevation, 6,495.3 ft; minimum, 35,800 acre-ft, Feb. 16, elevation, 6,433.6 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78400	60500	43900	50000	40100	42600	39200	52000	65900	58900	54500	52300
2	77700	58800	43700	49900	41100	42900	39200	53400	67500	58100	55200	53100
3	78500	59600	43400	48100	42000	41800	38500	57300	67900	58100	54100	52000
4	74900	60800	43800	50300	41500	40300	37000	60100	68700	57300	53700	51500
5	73400	61800	44300	52100	41700	40000	36800	61700	66800	57000	53100	53400
6	74000	62600	42000	54500	40900	38300	38000	63000	64600	58200	52100	56900
7	74200	63900	40800	54500	40600	37500	38500	63100	63800	58000	52600	58100
8	75000	62700	41700	55000	39800	36900	38200	62700	64800	56600	54300	57900
9	75400	60300	43600	54500	38400	37800	38100	62000	65600	55600	55600	57300
10	75000	59300	45600	51700	38500	37400	38200	61300	65900	53000	58000	55500
11	74100	59400	47800	51400	39400	38900	38400	61000	67700	52800	59400	53700
12	76000	59100	47800	52200	39200	38300	39100	61200	67000	54100	61000	51700
13	76600	60200	46500	52500	39200	38000	40500	60900	65100	54400	61000	49700
14	76600	60700	46900	52400	38100	38300	40900	61200	64900	54700	60800	47000
15	75500	59500	46800	50900	36500	38800	41400	59000	66400	56100	61000	45200
16	74200	57500	46900	48400	35800	38900	41400	57500	67600	57100	61600	47300
17	74500	56400	46300	47400	36000	39200	41100	57200	67200	56900	62500	48100
18	74100	56700	45800	45100	36500	39400	40800	59300	65500	56500	63300	47300
19	71700	57000	45700	42300	36600	38600	40900	60700	62900	55900	63500	43400
20	71500	57100	42300	40500	39000	39600	41600	62000	58900	55800	63900	41400
21	71400	57000	45300	40200	39900	39400	42900	63100	57700	56400	63000	41700
22	70800	56800	45500	41500	40700	40400	42100	61700	61300	60800	57500	41800
23	69400	57200	46800	42100	40100	41500	41100	58600	64300	61100	55200	43100
24	68400	56800	46300	41700	40400	41900	41300	57600	66000	59800	53500	44100
25	66300	57800	44300	42200	43100	43200	42200	58500	66200	58100	52000	42300
26	64900	56900	43700	42500	45500	43000	46800	60800	65500	58300	51600	42100
27	63900	55000	41900	42700	45800	40300	49600	61600	63100	58400	52400	41200
28	63900	51400	45400	43200	43300	38900	52600	63300	64300	57800	52000	39300
29	63200	47900	47800	43600	42200	38100	52900	61700	62900	57800	50400	38500
30	62500	45200	48600	44100	---	38800	53000	60800	60700	56700	51400	39700
31	61700	---	48300	40900	---	39600	---	62800	---	55700	51900	---
MAX	78500	63900	48600	55000	45800	43200	53000	63300	68700	61100	63900	58100
MIN	61700	45200	40800	40200	35800	36900	36800	52000	57700	52800	50400	38500
a	6473.90	6449.40	6454.40	6442.40	6444.60	6440.30	6461.70	6475.40	6472.70	6465.60	6460.00	6440.30
b	-16800	-16500	3100	-7400	1300	-2600	13400	9800	-2100	-5000	-3800	-12200

CAL YR 2003 b 5700

WTR YR 2004 b -38800

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<sup>2</sup>.

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<sup>3</sup>/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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	24	---	23	24	22	---	---	---	25	24
2	---	---	24	---	23	24	22	---	---	---	25	24
3	---	---	23	---	23	24	22	---	---	---	25	24
4	---	---	24	---	23	23	22	---	---	---	24	24
5	---	---	24	---	23	23	21	---	---	---	24	24
6	---	---	24	---	23	23	21	---	---	---	24	25
7	---	---	---	---	23	---	22	---	---	---	24	---
8	---	---	23	---	23	---	22	---	---	---	24	---
9	---	---	23	---	22	---	21	---	---	---	25	---
10	---	---	24	---	22	---	21	---	---	25	25	25
11	---	---	24	---	22	---	22	---	---	24	---	25
12	---	---	25	---	22	---	21	---	---	24	---	24
13	---	---	25	---	22	---	22	---	---	25	---	24
14	---	---	25	---	22	---	22	---	---	25	---	23
15	---	---	24	---	22	---	22	---	---	25	---	23
16	---	---	24	---	---	---	22	---	---	25	---	23
17	---	---	24	25	22	---	22	---	---	---	---	23
18	---	---	24	24	22	---	22	---	---	---	---	23
19	---	---	24	24	22	24	22	---	---	25	---	22
20	---	---	25	23	22	24	22	---	---	25	---	22
21	---	---	24	23	23	24	22	---	---	25	---	21
22	---	---	24	23	23	24	22	---	---	---	---	21
23	---	---	25	23	23	24	22	---	---	---	---	22
24	---	---	---	23	23	24	22	---	---	---	25	22
25	---	---	---	23	---	24	22	---	---	---	24	22
26	---	---	24	23	---	---	23	---	---	---	24	22
27	---	---	24	23	---	24	24	---	---	---	24	21
28	---	---	24	23	25	23	---	---	---	---	24	21
29	---	---	---	24	24	22	---	---	---	---	24	21
30	---	24	---	24	---	22	25	---	---	---	24	21
31	---	---	---	23	---	22	---	---	---	25	24	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
AC-FT	---	---	---	---	---	---	---	---	---	---	---	---

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1990, BY WATER YEAR (WY)

	1987	1988	1989	1990	1990	1990	1990	1990	1990	1990	1990	1990
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
LOWEST ANNUAL MEAN	10.1
HIGHEST DAILY MEAN	30
LOWEST DAILY MEAN	7.2
ANNUAL SEVEN-DAY MINIMUM	7.8
MAXIMUM PEAK FLOW	35
MAXIMUM PEAK STAGE	3.59
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<sup>2</sup>.

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. Datum 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<sup>3</sup>/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<sup>3</sup>/s, Dec. 11, 1937, gage height, 18.0 ft, from floodmarks, from rating curve extended above 4,200 ft<sup>3</sup>/s, on basis of velocity-area studies. From 1957 to 1990, maximum discharge, 5,110 ft<sup>3</sup>/s, Sept. 5, 1978, gage height, 11.96 ft.

EXTREME FOR CURRENT YEAR (Maximum only).—Maximum discharge, 160 ft<sup>3</sup>/s, Dec. 24, gage height, 4.23 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	29	---	---	---	---	33	---	---	---	---	---
2	32	---	---	---	---	---	30	---	---	---	---	---
3	32	---	---	---	---	---	---	---	---	---	---	---
4	32	---	---	---	---	---	---	---	---	---	---	---
5	32	---	---	---	---	---	---	---	---	---	---	---
6	32	29	---	---	---	---	---	---	---	---	---	---
7	32	29	---	---	---	37	---	---	---	---	---	---
8	32	30	---	---	---	42	---	---	---	---	---	---
9	32	33	---	---	---	45	---	---	---	---	---	---
10	32	---	---	---	---	48	---	---	---	---	---	---
11	32	---	---	---	---	47	---	---	---	---	---	---
12	32	---	---	---	---	52	---	---	---	---	---	---
13	32	---	---	---	---	50	---	---	---	---	---	---
14	32	---	---	---	---	50	---	---	---	---	---	---
15	32	---	---	---	---	58	---	---	---	---	---	---
16	32	---	---	---	---	55	---	---	---	---	---	---
17	32	---	---	---	---	53	---	---	---	---	---	---
18	32	---	---	---	---	56	---	---	---	---	---	---
19	31	---	---	---	---	52	---	---	---	---	---	---
20	31	---	---	---	---	52	---	---	---	---	---	---
21	31	---	---	---	---	50	---	---	---	---	---	---
22	31	---	---	---	---	49	---	---	---	---	---	---
23	31	---	---	---	---	47	---	---	---	---	---	---
24	31	---	76	---	---	46	---	---	---	---	---	---
25	30	---	50	---	---	43	---	---	---	---	---	---
26	30	---	---	---	41	52	---	---	---	---	---	---
27	30	---	---	---	31	41	---	---	---	---	---	---
28	30	---	---	---	---	38	---	---	---	---	---	---
29	30	---	---	---	---	37	---	---	---	---	---	---
30	29	---	---	---	---	36	---	---	---	---	---	---
31	29	---	---	---	---	34	---	---	---	---	---	---
TOTAL	970	---	---	---	---	---	---	---	---	---	---	---
MEAN	31.3	---	---	---	---	---	---	---	---	---	---	---
MAX	32	---	---	---	---	---	---	---	---	---	---	---
MIN	29	---	---	---	---	---	---	---	---	---	---	---
AC-FT	1920	---	---	---	---	---	---	---	---	---	---	---
a	14110	13620	24170	24260	12110	6960	13500	16640	24210	28250	29660	12000

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<sup>2</sup>.

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, 1,230 acre-ft, June 15, elevation, 4,097.30 ft; minimum, 673 acre-ft, Dec. 29, elevation, 4,078.74 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	830	867	934	753	747	1030	957	932	1050	1100	1000	999
2	839	840	996	825	830	1040	881	1060	1140	1080	861	896
3	865	816	989	863	814	1110	913	1020	1090	1060	792	944
4	874	758	922	1050	928	1100	869	948	1140	1040	735	941
5	922	843	971	1110	987	1100	955	906	1070	1020	913	971
6	845	984	905	1110	1050	1120	876	932	1010	995	1050	977
7	729	910	958	830	1040	1130	1020	797	826	1030	989	910
8	769	1030	962	856	1160	1010	1010	794	826	1060	890	834
9	861	956	950	743	1040	907	1010	861	921	976	843	860
10	1100	1040	926	881	1070	931	882	954	982	1020	829	879
11	1040	1040	695	944	1020	945	968	808	882	1020	944	884
12	1040	1110	845	983	1070	871	894	738	879	1040	886	884
13	1090	1080	869	1010	958	921	907	811	887	996	878	938
14	1070	1120	890	911	921	905	925	856	1140	851	870	971
15	1030	1050	794	889	956	1000	924	959	1230	873	876	987
16	918	1060	834	876	1040	1120	1030	951	1120	832	759	1040
17	937	1070	815	913	722	1050	945	891	1080	765	907	922
18	825	1100	700	826	796	1070	855	913	1050	764	840	965
19	793	1060	737	893	887	975	922	867	1050	880	886	879
20	886	1020	743	855	882	919	935	786	1110	874	856	887
21	878	1120	778	786	874	1030	882	739	1100	877	927	916
22	871	1120	825	898	905	1090	1010	804	712	884	869	811
23	846	1040	823	836	842	980	1060	828	849	891	890	869
24	829	1050	1000	879	826	1110	908	795	878	804	829	882
25	820	995	905	910	898	990	1180	908	888	971	750	935
26	709	1080	1020	947	861	1130	1160	917	883	935	713	993
27	704	1120	889	875	843	989	1130	863	868	887	847	1090
28	834	1070	786	837	994	1080	1150	921	877	868	893	998
29	899	1030	673	900	1080	1190	1050	1010	1140	927	1080	857
30	857	984	791	811	---	1070	991	1020	1070	1010	962	835
31	938	---	824	814	---	815	---	995	---	1070	1040	---
MAX	1100	1120	1020	1110	1160	1190	1180	1060	1230	1100	1080	1090
MIN	704	758	673	743	722	815	855	738	712	764	713	811
a	4088.10	4089.60	4084.20	4083.90	4092.70	4083.90	4089.80	4090.00	4092.40	4092.30	4091.50	4084.60
b	111	46	-160	-10	266	-265	176	4	75	0	-30	-205

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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<sup>2</sup>.

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<sup>3</sup>/s, Jan. 2, 1997, gage height, 10.54 ft, from rating curve extended above 827 ft<sup>3</sup>/s, on basis of computation of spill over Balch Diversion Dam; minimum daily, 0.62 ft<sup>3</sup>/s, Oct. 19, 2000.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	6.7	6.8	14	7.7	7.7	9.5	7.6	7.2	7.1	7.0	6.8
2	6.3	6.5	6.7	14	7.9	7.8	9.5	7.5	7.8	6.7	6.7	6.8
3	6.4	7.0	6.8	13	8.0	7.6	9.5	7.8	7.9	6.7	6.2	6.5
4	6.5	6.3	6.7	13	7.8	7.1	9.4	7.7	7.2	6.7	5.8	6.5
5	6.6	6.2	7.1	14	7.8	6.9	9.3	7.3	7.7	6.7	5.7	6.6
6	6.7	6.5	7.1	15	7.7	7.1	9.4	7.2	7.4	6.8	6.4	6.7
7	6.4	6.8	9.4	16	7.7	7.6	9.3	7.5	7.1	6.9	6.8	6.7
8	6.3	7.3	7.4	16	7.3	8.4	9.5	7.1	6.5	6.9	6.6	6.5
9	6.3	10	7.1	16	7.1	9.0	9.3	7.1	6.4	6.9	6.3	6.3
10	6.7	7.5	7.5	15	6.8	8.7	9.2	7.4	6.8	6.7	6.1	6.3
11	7.5	7.3	8.3	14	7.0	7.8	8.9	7.7	7.0	6.8	6.2	6.4
12	7.3	7.3	6.4	14	7.1	19	9.0	7.0	6.7	6.8	6.2	6.4
13	7.2	7.8	6.7	15	7.0	12	8.9	6.8	6.7	6.8	6.2	6.4
14	7.3	7.3	8.8	15	6.9	12	9.0	7.1	6.7	6.5	6.2	6.6
15	7.1	8.1	7.3	14	6.5	12	9.1	7.3	7.6	6.2	6.1	6.7
16	7.0	7.5	6.5	12	7.1	11	9.0	7.6	7.8	6.2	6.0	6.8
17	6.9	7.4	6.6	11	6.8	11	9.4	7.5	7.5	6.1	6.1	6.8
18	6.7	7.3	6.4	10	6.7	11	9.0	7.4	7.2	5.9	6.3	6.6
19	6.4	7.5	6.0	9.3	6.6	11	8.7	7.4	7.1	6.0	6.2	6.8
20	6.3	7.0	6.5	8.7	6.7	11	8.5	7.0	7.2	6.3	6.2	6.3
21	6.3	7.0	6.6	8.4	6.9	10	8.6	6.8	7.5	6.3	6.5	6.3
22	6.6	7.3	6.2	8.4	6.9	10	8.4	6.7	7.0	6.3	6.6	6.5
23	6.5	7.2	6.9	8.5	7.0	10	8.6	6.8	5.9	6.3	6.4	6.3
24	6.3	7.1	22	8.5	7.0	10	8.5	6.8	6.6	6.3	6.4	6.3
25	6.4	7.1	33	8.2	8.0	10	8.3	6.7	7.0	6.0	6.1	6.4
26	6.1	6.9	12	8.5	10	12	8.6	7.2	7.3	6.4	5.9	6.5
27	5.9	7.2	11	8.6	9.1	11	8.6	7.2	7.2	6.4	5.8	6.7
28	5.9	7.2	11	8.6	8.4	10	8.5	7.5	7.2	6.3	6.3	7.0
29	6.5	7.2	12	8.6	7.5	10	8.5	7.3	7.2	6.3	6.5	6.8
30	6.6	6.9	13	8.7	---	10	8.0	7.6	7.1	6.5	7.0	6.4
31	6.5	---	13	8.4	---	9.8	---	7.5	---	6.8	6.7	---
TOTAL	203.9	216.4	288.8	362.4	215.0	308.5	268.0	225.1	213.5	201.6	195.5	196.7
MEAN	6.58	7.21	9.32	11.7	7.41	9.95	8.93	7.26	7.12	6.50	6.31	6.56
MAX	7.5	10	33	16	10	19	9.5	7.8	7.9	7.1	7.0	7.0
MIN	5.9	6.2	6.0	8.2	6.5	6.9	8.0	6.7	5.9	5.9	5.7	6.3
AC-FT	404	429	573	719	426	612	532	446	423	400	388	390
a	15040	14740	28080	27570	15990	17660	22980	24740	26860	29490	30290	12550

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 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.67	10.9	7.85	29.6	30.4	44.0	70.2	157	275	123	7.21	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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1984 - 2004	
ANNUAL TOTAL	3668.4		2895.4			
ANNUAL MEAN	10.1		7.91		64.1	
HIGHEST ANNUAL MEAN					353 1995	
LOWEST ANNUAL MEAN					3.97 1987	
HIGHEST DAILY MEAN	328	Mar 15	33	Dec 25	4990	Jul 8 1998
LOWEST DAILY MEAN	5.9	Oct 27	5.7	Aug 5	0.62	Oct 19 2000
ANNUAL SEVEN-DAY MINIMUM	6.1	Aug 18	6.1	Jul 15	0.74	Oct 19 2000
MAXIMUM PEAK FLOW			438	Mar 12	7690	Jan 2 1997
MAXIMUM PEAK STAGE			3.39	Mar 12	10.54	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	7280		5740		46420	
10 PERCENT EXCEEDS	13		10		24	
50 PERCENT EXCEEDS	8.1		7.1		6.8	
90 PERCENT EXCEEDS	6.4		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<sup>3</sup>/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<sup>3</sup>/s, several days in June and July 1997; no flow many days most years.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	11	11	11	11	12	12	12	12	12	13	13
2	12	11	11	11	11	12	12	12	12	12	13	13
3	12	11	11	11	11	12	12	12	12	13	13	13
4	12	11	11	11	11	12	12	13	13	13	13	13
5	12	11	11	11	11	12	12	12	13	13	13	13
6	12	11	11	11	11	12	12	13	13	13	13	13
7	12	11	11	11	11	12	12	12	13	13	13	13
8	12	11	10	11	11	12	12	13	13	13	13	13
9	12	11	10	11	11	12	12	13	13	13	13	13
10	12	11	10	11	11	12	12	12	13	13	13	13
11	12	11	11	11	11	12	12	13	12	13	13	13
12	12	11	11	11	11	12	12	12	12	13	13	13
13	12	11	11	11	11	12	12	12	13	13	12	13
14	11	11	11	10	12	12	12	12	13	13	13	13
15	12	11	11	10	12	12	12	13	12	13	13	13
16	12	11	11	10	12	12	12	13	12	13	13	13
17	12	11	11	10	11	12	12	13	13	13	13	13
18	12	11	10	10	12	12	12	13	13	13	13	13
19	12	11	10	10	12	12	12	13	13	13	13	13
20	12	11	11	10	12	12	12	13	13	13	13	13
21	12	11	11	10	12	12	12	13	12	13	13	12
22	12	11	11	10	12	12	12	13	12	13	13	12
23	12	11	11	11	12	12	12	13	13	13	13	12
24	12	11	11	11	12	12	12	13	12	13	13	12
25	12	11	11	11	12	12	12	13	12	13	13	13
26	12	10	11	11	12	12	12	12	12	13	13	14
27	12	10	11	11	12	12	12	12	12	13	13	13
28	12	10	11	11	12	12	12	12	12	13	13	12
29	12	11	10	11	12	12	12	12	12	13	13	12
30	12	11	11	11	---	12	12	12	12	13	13	12
31	12	---	11	11	---	12	---	12	---	13	12	---
TOTAL	371	327	335	332	334	372	360	388	374	401	401	384
MEAN	12.0	10.9	10.8	10.7	11.5	12.0	12.0	12.5	12.5	12.9	12.9	12.8
MAX	12	11	11	11	12	12	12	13	13	13	13	14
MIN	11	10	10	10	11	12	12	12	12	12	12	12
AC-FT	736	649	664	659	662	738	714	770	742	795	795	762

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

MEAN	7.23	3.60	2.49	2.01	1.94	1.90	2.61	2.54	4.09	7.30	8.57	9.47
MAX	15.4	11.5	10.9	10.8	11.5	12.0	12.8	12.5	12.5	16.6	14.4	15.0
(WY)	2000	2002	2002	2003	2004	2004	2002	2004	2004	1997	1994	1992
MIN	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09	5.33
(WY)	1996	1987	1987	1987	1987	1987	1987	1987	1991	1993	1998	1987

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1987 - 2004

ANNUAL TOTAL	4079	4379	
ANNUAL MEAN	11.2	12.0	4.49
HIGHEST ANNUAL MEAN			12.0
LOWEST ANNUAL MEAN			0.73
HIGHEST DAILY MEAN	12	Jun 12	14
LOWEST DAILY MEAN	10	Jan 1	10
ANNUAL SEVEN-DAY MINIMUM	11	Jan 1	10
ANNUAL RUNOFF (AC-FT)	8090	8690	3260
10 PERCENT EXCEEDS	12	13	12
50 PERCENT EXCEEDS	11	12	0.00
90 PERCENT EXCEEDS	11	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<sup>2</sup>.

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 1967–79.

REVISED RECORDS.—WSP 1930: Drainage area.

GAGE.—Water-stage recorder and Cipolletti weir since 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. Concrete control Apr. 15, 1966, to May 9, 1988.

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<sup>3</sup>/s, June 4, 1922, gage height, 12.18 ft, site and datum then in use; minimum, 4.0 ft<sup>3</sup>/s, Aug. 29 to Sept. 1, 1924. Since water year 1960: Maximum discharge, 14,000 ft<sup>3</sup>/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<sup>3</sup>/s; minimum daily, 0.30 ft<sup>3</sup>/s, Nov. 3, 1964.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	23	23	22	18	19	16	19	18	18	19	22
2	23	23	23	22	18	19	17	19	19	19	19	22
3	23	23	23	20	18	18	17	19	19	19	19	21
4	23	23	23	47	17	18	16	19	19	18	19	21
5	23	23	23	415	17	18	17	19	19	18	19	21
6	23	24	23	680	17	18	17	19	19	19	19	21
7	23	23	23	678	17	18	17	19	18	19	21	21
8	23	23	23	557	17	18	16	18	19	19	22	21
9	23	24	23	364	17	17	16	19	19	19	22	21
10	23	23	23	146	17	17	16	19	19	18	22	21
11	23	23	23	357	16	17	16	19	19	18	22	21
12	23	23	23	447	17	17	17	19	19	18	22	21
13	23	23	23	403	16	17	16	19	19	18	22	20
14	23	23	23	479	16	17	16	19	19	19	22	20
15	23	23	24	413	17	17	16	19	19	19	22	21
16	23	23	22	396	16	17	18	19	19	19	22	21
17	23	22	22	466	16	17	19	19	19	19	22	21
18	23	23	22	477	17	17	19	19	19	18	22	21
19	23	23	22	346	17	17	19	19	19	19	22	21
20	23	23	22	419	16	17	19	19	19	19	22	21
21	23	23	22	512	16	17	19	18	19	19	22	20
22	22	23	21	483	17	17	19	19	19	19	22	21
23	23	23	21	583	17	17	19	18	19	19	23	21
24	23	23	22	242	17	17	19	19	19	19	22	21
25	22	23	22	393	19	17	18	19	19	19	23	21
26	23	23	22	597	27	17	19	19	19	19	22	21
27	22	23	22	706	22	17	19	19	19	19	22	21
28	23	23	22	566	19	17	19	19	19	19	22	21
29	23	23	21	263	19	17	19	19	19	19	22	20
30	23	23	22	39	---	17	19	19	18	19	22	20
31	22	---	22	18	---	17	---	19	---	19	22	---
TOTAL	709	691	695	11556	510	537	529	586	567	581	665	627
MEAN	22.9	23.0	22.4	373	17.6	17.3	17.6	18.9	18.9	18.7	21.5	20.9
MAX	23	24	24	706	27	19	19	19	19	19	23	22
MIN	22	22	21	18	16	17	16	18	18	18	19	20
AC-FT	1410	1370	1380	22920	1010	1070	1050	1160	1120	1150	1320	1240

## 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 - 2004, BY WATER YEAR (WY)

MEAN	17.9	20.8	25.7	64.9	48.1	43.0	64.1	201	295	160	43.3	27.4
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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1960 - 2004

ANNUAL TOTAL	9025	18253	
ANNUAL MEAN	24.7	49.9	81.5
HIGHEST ANNUAL MEAN			406 1983
LOWEST ANNUAL MEAN			8.47 1977
HIGHEST DAILY MEAN	242 Jan 11	706 Jan 27	7680 Dec 6 1966
LOWEST DAILY MEAN	18 Jan 8	16 Feb 11	0.30 Nov 3 1964
ANNUAL SEVEN-DAY MINIMUM	18 Jan 24	16 Apr 8	4.3 May 30 1977
MAXIMUM PEAK FLOW		722 Jan 27	14000 Feb 1 1963
MAXIMUM PEAK STAGE		3.05 Jan 27	13.24 Feb 1 1963
ANNUAL RUNOFF (AC-FT)	17900	36200	59050
10 PERCENT EXCEEDS	24	23	139
50 PERCENT EXCEEDS	20	19	16
90 PERCENT EXCEEDS	19	17	8.6

## 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<sup>2</sup>.

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<sup>3</sup>/s, Feb. 1, 1963, gage height, 19.20 ft, from rating curve extended above 10,100 ft<sup>3</sup>/s; minimum daily, 6.4 ft<sup>3</sup>/s, Oct. 3, 1977.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	48	61	136	93	158	474	478	184	63	34	38
2	46	50	58	133	104	165	377	514	174	65	35	38
3	47	53	59	116	106	154	362	554	166	68	35	37
4	46	56	58	97	99	153	404	567	156	64	34	37
5	47	54	59	490	96	151	431	521	145	59	34	38
6	47	56	78	690	99	156	504	454	139	56	34	37
7	48	54	134	667	104	198	476	400	131	53	37	38
8	46	55	119	593	96	263	512	388	124	51	42	38
9	47	104	83	523	99	313	537	377	120	50	42	38
10	47	99	80	191	96	363	561	369	121	48	41	37
11	46	70	84	431	98	354	563	314	114	47	40	38
12	47	64	77	520	98	350	569	289	107	45	40	37
13	46	64	80	437	100	361	548	289	102	44	39	36
14	46	64	94	543	97	372	467	296	99	44	40	36
15	46	63	82	420	97	456	439	292	99	43	41	37
16	46	69	76	402	103	504	407	277	95	42	40	38
17	46	65	76	498	179	518	366	279	91	41	40	39
18	47	64	79	545	157	556	328	267	88	40	40	38
19	48	64	84	359	146	548	314	253	86	40	40	37
20	46	63	99	491	137	581	307	239	83	40	40	39
21	46	62	123	548	126	624	312	225	80	40	39	38
22	46	61	97	497	123	639	332	212	77	38	40	38
23	46	59	81	699	125	616	337	208	73	38	40	38
24	46	58	241	244	121	620	377	206	71	37	40	38
25	45	58	480	534	172	563	444	202	69	37	41	38
26	46	56	176	680	418	533	503	211	68	36	42	38
27	45	56	117	725	247	422	563	199	67	36	41	38
28	46	57	108	581	185	430	569	261	65	36	40	38
29	45	58	109	348	161	474	509	260	62	35	39	37
30	46	62	114	94	---	487	445	211	62	35	39	37
31	46	---	106	96	---	483	---	194	---	35	38	---
TOTAL	1434	1866	3372	13328	3882	12565	13337	9806	3118	1406	1207	1129
MEAN	46.3	62.2	109	430	134	405	445	316	104	45.4	38.9	37.6
MAX	48	104	480	725	418	639	569	567	184	68	42	39
MIN	45	48	58	94	93	151	307	194	62	35	34	36
AC-FT	2840	3700	6690	26440	7700	24920	26450	19450	6180	2790	2390	2240
a	13560	12620	28270	5500	16330	17610	22380	24780	27020	29780	30030	11150

a Diversion, in acre-feet, to Kings River Powerplant (station 11218700), provided by Pacific Gas & Electric Co.

## TULARE LAKE BASIN

## 11218400 NORTH FORK KINGS RIVER BELOW DINKEY CREEK, NEAR BALCH CAMP, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	48.7	87.7	133	242	275	364	606	994	816	293	59.0	48.4
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004	
ANNUAL TOTAL	77554		66450			
ANNUAL MEAN	212		182		330	
HIGHEST ANNUAL MEAN					1045	
LOWEST ANNUAL MEAN					49.2	
HIGHEST DAILY MEAN	1480	Mar 15	725	Jan 27	14900	Dec 6 1966
LOWEST DAILY MEAN	37	Aug 19	34	Aug 1	6.4	Oct 3 1977
ANNUAL SEVEN-DAY MINIMUM	39	Aug 15	34	Jul 31	9.6	Oct 2 1977
MAXIMUM PEAK FLOW			1210		27400	
MAXIMUM PEAK STAGE			5.83		19.20	
ANNUAL RUNOFF (AC-FT)	153800		131800		239300	
10 PERCENT EXCEEDS	478		506		809	
50 PERCENT EXCEEDS	96		94		95	
90 PERCENT EXCEEDS	43		38		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<sup>2</sup>.

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. Minor diversion for irrigation and stock ponds.

EXTREMES FOR PERIOD OF RECORD (SINCE 1950).—Maximum discharge, 5,700 ft<sup>3</sup>/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<sup>3</sup>/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<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 25	2115	198	5.15

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
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	0.05	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.79	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	2.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	54.89	1.23	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.00	0.00	0.00	0.00	1.89	0.04	0.00	0.00	0.00	0.00	0.00	0.00
MAX	0.00	0.00	0.00	0.00	30	0.79	0.00	0.00	0.00	0.00	0.00	0.00
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
AC-FT	0.00	0.00	0.00	0.00	109	2.4	0.00	0.00	0.00	0.00	0.00	0.00

## TULARE LAKE BASIN

## 11224500 LOS GATOS CREEK ABOVE NUÑEZ CANYON, NEAR COALINGA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.27	0.87	3.51	12.9	23.3	20.1	8.65	3.10	1.05	0.29	0.10	0.24
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1947	1948	1948	1948	1948	1961	1949	1948	1948	1947	1945	1945

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1945 - 2004	
ANNUAL TOTAL	133.12		56.12			
ANNUAL MEAN	0.36		0.15		6.11	
HIGHEST ANNUAL MEAN					48.5 1983	
LOWEST ANNUAL MEAN					0.00 1989	
HIGHEST DAILY MEAN	32	May 4	30	Feb 26	2940	Mar 10 1995
LOWEST DAILY MEAN	0.00	May 30	0.00	Oct 1	0.00	Jul 5 1945
ANNUAL SEVEN-DAY MINIMUM	0.00	May 30	0.00	Oct 1	0.00	Jul 5 1945
MAXIMUM PEAK FLOW			198	Feb 25	5700	Mar 10 1995
MAXIMUM PEAK STAGE			5.15	Feb 25	13.95	Jan 16 1978
ANNUAL RUNOFF (AC-FT)	264		111		4430	
10 PERCENT EXCEEDS	0.30		0.00		6.4	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

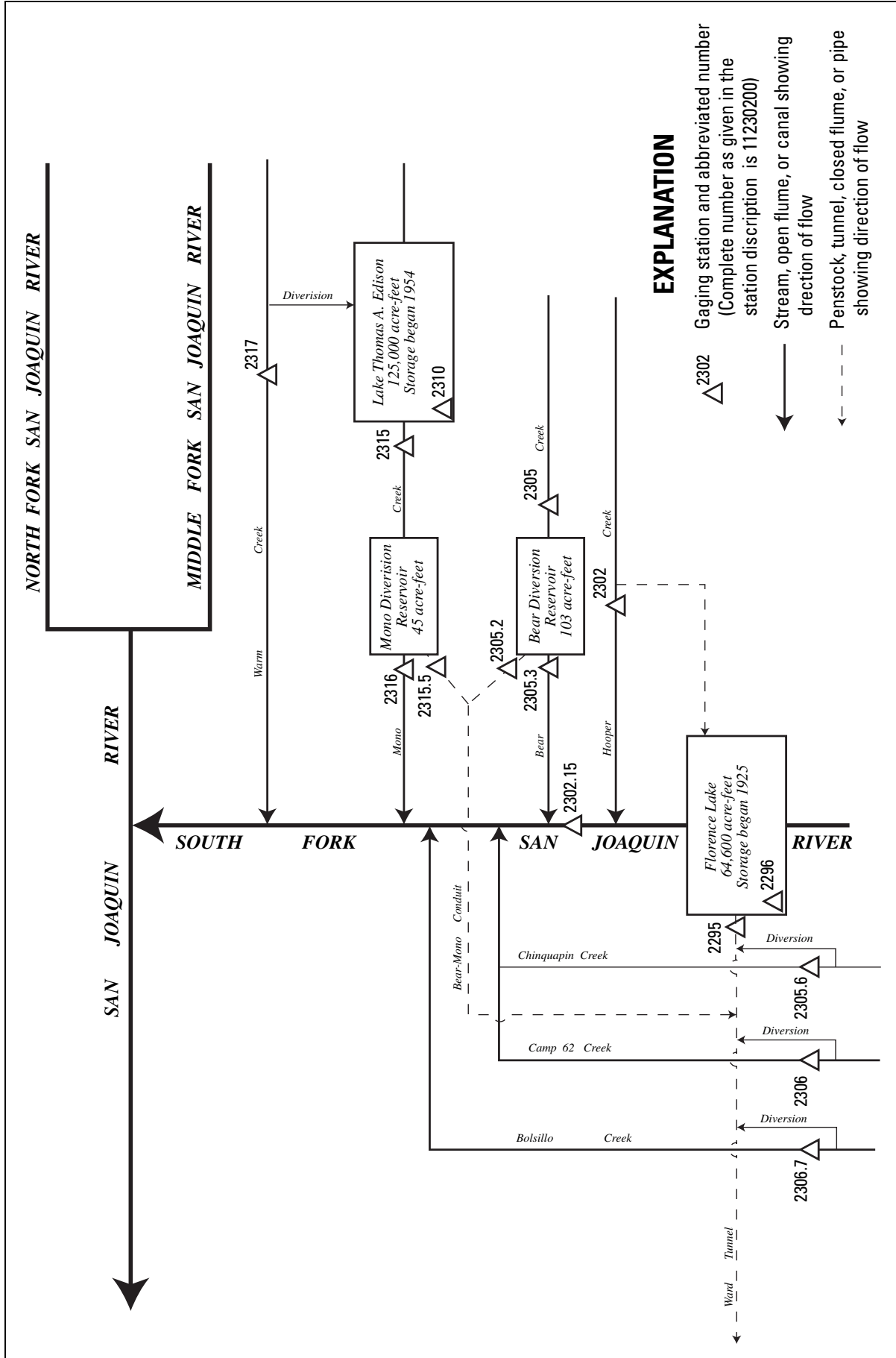


Figure 27. Diversions and storage in upper San Joaquin River Basin.

## 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<sup>3</sup>/s, Apr. 30, 1926; no flow at times.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	258	0.72	7.8	63	28	99	317	2.3	635	315	497	458
2	256	1.4	6.7	54	30	86	265	2.5	435	199	493	454
3	252	2.3	5.3	64	28	79	240	2.7	161	138	438	452
4	260	2.5	6.0	69	34	78	261	2.9	140	137	395	475
5	280	3.6	10	70	40	78	332	2.9	140	137	393	460
6	273	5.1	20	66	41	83	377	2.9	140	694	390	336
7	253	5.7	28	63	42	102	347	2.9	139	402	232	326
8	244	5.8	21	58	38	142	356	3.0	645	231	91	456
9	235	9.4	20	56	39	185	383	3.1	1170	140	91	517
10	226	9.7	24	53	38	212	418	3.3	1250	141	501	512
11	215	11	22	53	36	195	402	3.4	1430	220	420	506
12	203	13	19	54	36	196	412	137	1480	472	412	548
13	248	14	25	53	36	198	424	249	1240	496	410	540
14	186	12	23	52	35	218	403	251	1040	494	298	264
15	49	12	16	50	34	273	337	253	1060	490	176	147
16	19	12	18	48	38	309	286	254	1140	450	124	3.1
17	11	12	21	46	55	314	251	251	970	169	171	3.0
18	8.4	12	23	46	58	349	222	253	489	183	152	2.9
19	7.0	12	23	44	59	380	99	255	174	584	152	2.7
20	5.7	11	29	40	67	410	1.4	257	273	562	153	3.1
21	4.9	11	32	36	68	445	1.3	258	702	559	137	3.0
22	4.5	7.1	29	34	66	448	1.5	346	718	462	89	2.9
23	4.0	5.8	29	33	60	452	1.5	663	829	295	178	72
24	3.6	6.8	37	33	56	437	1.4	914	829	248	276	246
25	3.2	7.4	54	30	56	388	1.8	914	471	346	240	e540
26	2.9	6.4	48	28	46	343	1.7	910	391	571	320	e820
27	2.6	6.0	48	30	53	284	1.8	614	410	634	402	e840
28	2.4	7.5	50	29	80	268	2.1	457	409	608	480	e840
29	2.3	8.2	64	29	100	302	2.3	239	740	260	478	e710
30	1.9	8.1	62	30	---	338	2.3	113	615	213	473	345
31	1.2	---	62	30	---	332	---	622	---	450	464	---
TOTAL	3522.6	241.52	882.8	1444	1397	8023	6151.1	8241.9	20265	11300	9526	10884.7
MEAN	114	8.05	28.5	46.6	48.2	259	205	266	676	365	307	363
MAX	280	14	64	70	100	452	424	914	1480	694	501	840
MIN	1.2	0.72	5.3	28	28	78	1.3	2.3	139	137	89	2.7
AC-FT	6990	479	1750	2860	2770	15910	12200	16350	40200	22410	18890	21590

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2004, BY WATER YEAR (WY)

	230	124	104	75.2	75.0	114	271	460	574	535	423	345
MEAN	230	124	104	75.2	75.0	114	271	460	574	535	423	345
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	0.00	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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1925 - 2004

ANNUAL TOTAL	97376.92		81879.62									
ANNUAL MEAN	267		224							280		
HIGHEST ANNUAL MEAN										460		1956
LOWEST ANNUAL MEAN										98.1		1977
HIGHEST DAILY MEAN	1410	Jun 20				1480	Jun 12		1990	Apr 30	1926	
LOWEST DAILY MEAN	0.72	Nov 1				0.72	Nov 1		0.00	Oct 7	1925	
ANNUAL SEVEN-DAY MINIMUM	1.7	Oct 28				1.5	Apr 20		0.00	Nov 5	1925	
ANNUAL RUNOFF (AC-FT)	193100					162400			202500			
10 PERCENT EXCEEDS	818					540			674			
50 PERCENT EXCEEDS	159					137			161			
90 PERCENT EXCEEDS	9.6					3.1			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<sup>2</sup>.

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, excluding 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, 62,662 acre-ft, June 28, elevation, 7,325.68 ft; minimum, 1,045 acre-ft, Oct. 31, elevation, 7,236.02.

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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e8021	1047	1073	e1189	1132	e1307	1413	e12216	e49073	56561	46878	29409
2	e7444	1050	1066	e1188	1142	e1301	1371	14031	e51020	56728	45993	28494
3	e6930	1057	1061	e1191	1144	e1307	1368	16376	e53315	57061	45207	27566
4	e6404	1056	1081	e1196	1157	e1310	1421	18994	e55584	57377	44494	26581
5	e5832	1062	1105	e1189	1161	e1317	1471	e21563	e57936	57721	43667	e25672
6	e5261	1066	1124	e1183	1161	e1333	1473	e23832	e60233	57024	42929	e24956
7	e4707	1066	1118	e1178	1156	e1358	1460	e25841	e62271	56895	42512	e24283
8	e4154	1074	1098	1173	1156	e1374	1482	e27685	e62519	57127	42379	e23367
9	e3617	1083	1118	1173	1144	e1365	1505	e29584	e61720	57497	42238	e22312
10	e3095	1086	1115	1173	1142	e1336	1512	e31616	e60441	57787	41261	e21283
11	e2624	1091	1124	1173	1141	e1354	1503	e33121	e58758	57842	40456	e20248
12	e2193	1093	1124	1171	1141	e1392	1544	34101	e57071	57367	39664	e19133
13	e1612	1095	1117	1166	1139	e1427	1563	34857	56192	56821	38966	e18023
14	e1209	1095	e1117	1156	1137	e1444	1477	35948	56026	56312	e38466	e17469
15	e1122	1095	e1111	1154	1135	e1420	1425	37137	55841	55795	e38216	17159
16	1100	1091	e1104	1149	1164	e1380	1387	38168	55399	55363	e38055	17146
17	1086	1091	e1101	1149	1164	e1421	1369	39355	55179	55528	e37783	17133
18	1081	1091	e1100	1144	1169	e1465	1355	40398	55832	55630	e37543	17120
19	1076	1090	e1104	1141	e1182	e1484	1588	41385	56987	54913	e37296	17101
20	1073	1088	e1112	1141	e1189	e1534	2023	42446	57879	54217	e37049	17094
21	1071	1083	e1126	e1151	e1190	e1557	2454	43139	57973	53487	e36827	17088
22	1067	1071	e1125	e1159	e1188	e1576	2933	43583	57945	52997	36707	17081
23	1067	1061	e1126	e1154	e1188	e1559	3460	e43427	57581	52734	36399	16921
24	1064	1064	e1113	e1143	e1191	e1514	4116	e43091	57117	52518	35877	16382
25	1064	1066	e1145	e1146	e1224	e1463	5012	e42679	57302	52085	35429	14940
26	1062	1059	e1143	1141	e1226	e1425	6057	e42243	57572	51199	34802	12601
27	1061	1064	e1141	1141	e1276	e1386	7184	e43147	57693	50166	34023	10236
28	1059	1079	e1148	1142	e1307	e1398	8638	e44523	57740	49151	33094	e7847
29	1059	1074	e1153	1142	e1314	e1434	e9859	e45888	57080	48801	32165	e5727
30	1054	1078	e1164	1134	---	e1450	e10906	e47146	56570	48520	31251	e4983
31	1050	---	e1164	1134	---	1440	---	e48015	---	47753	30330	---
MAX	8021	1095	1164	1196	1314	1576	10906	48015	62519	57842	46878	29409
MIN	1050	1047	1061	1134	1132	1301	1355	12216	49073	47753	30330	4983
a	7231.05	7231.21	---	7231.54	---	7233.26	---	---	7319.20	7309.39	7287.84	---
b	-7549	+28	+86	-30	+180	+126	+9466	+37109	+8555	-8817	-17423	-25347

CAL YR 2003 b +39  
WTR YR 2004 b -3616

e Estimated.

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<sup>2</sup>.

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<sup>3</sup>/s, July 17, 1995; minimum daily, 0.50 ft<sup>3</sup>/s, estimated, during period of ice effect, Dec. 23, 2002.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	1.9	2.0	2.2	e2.2	e2.5	11	2.2	2.8	3.6	3.1	1.9
2	2.2	1.9	1.9	2.4	e2.1	e2.7	11	2.2	2.8	3.6	3.0	1.9
3	2.2	2.0	1.9	2.1	e2.5	e2.9	10	2.2	2.8	3.7	2.9	2.0
4	2.2	2.1	2.0	2.0	e2.4	e2.9	11	2.3	2.7	3.6	2.9	2.0
5	2.2	2.2	3.2	2.1	e2.3	e3.0	11	2.7	2.8	3.6	2.8	1.9
6	2.2	2.1	2.4	2.1	e2.4	e4.4	11	2.9	3.2	3.6	2.7	1.9
7	2.1	2.1	2.3	2.1	e2.3	e4.8	11	2.8	3.2	3.6	2.6	1.8
8	2.1	2.1	2.6	2.1	e2.3	e6.4	11	2.9	2.9	3.6	2.6	1.8
9	2.0	2.3	2.2	2.1	e2.3	e6.0	12	2.9	2.6	3.6	2.5	1.8
10	2.0	2.2	2.1	2.2	e2.7	e7.0	13	2.9	e2.9	3.6	2.4	1.8
11	2.0	2.1	2.4	2.2	e2.4	e6.5	13	2.9	3.6	3.6	2.4	1.8
12	2.0	2.1	4.4	2.2	e2.3	e6.5	8.0	2.9	3.6	3.6	2.7	1.8
13	1.9	2.2	2.2	2.2	e2.2	e6.5	2.6	2.8	3.8	3.6	2.7	1.8
14	1.9	2.2	2.2	2.2	e2.2	e7.0	2.6	2.8	3.9	3.6	e2.7	1.7
15	1.9	2.1	13	2.2	e2.1	e8.0	2.6	2.8	3.8	3.6	e2.8	1.7
16	1.9	2.2	2.5	2.2	e2.5	e7.5	2.6	2.8	3.8	3.7	e2.5	1.7
17	1.9	2.1	2.3	2.2	e2.6	e7.5	2.5	2.8	3.9	3.7	e2.4	1.7
18	1.9	2.1	2.2	2.2	e2.8	8.0	2.5	2.8	3.9	3.7	e2.6	1.8
19	1.9	2.1	2.2	e2.2	e2.6	e8.3	2.5	2.8	3.9	3.7	e2.7	2.0
20	1.9	2.0	2.2	e2.2	e2.4	e9.9	2.5	2.8	3.8	3.7	e2.7	2.0
21	1.9	2.0	2.2	e2.2	e2.2	11	2.5	2.7	3.8	3.6	e2.8	2.0
22	1.9	2.7	2.4	e2.4	e2.5	12	2.5	2.7	3.8	3.6	e2.8	1.9
23	1.9	2.0	2.1	e2.1	e2.3	12	2.5	2.7	3.8	3.6	e2.8	1.9
24	1.9	2.0	2.4	e2.1	e2.4	12	2.5	2.7	3.8	3.6	e2.8	1.9
25	1.9	2.0	2.3	e2.1	e2.9	12	2.5	2.7	3.8	3.6	e2.6	1.8
26	1.9	2.0	e2.2	e2.1	e3.2	12	2.5	2.7	3.8	3.6	e2.3	1.8
27	1.8	2.0	e10	e2.2	e2.6	10	2.4	2.7	3.7	3.5	2.2	1.8
28	1.8	2.6	e8.0	e2.2	e2.2	10	2.4	2.8	3.6	3.5	2.2	1.9
29	1.8	2.2	2.3	e2.2	e2.0	11	2.3	2.7	3.6	3.4	2.1	1.9
30	1.9	2.0	2.3	e2.2	---	11	2.3	2.7	3.6	3.3	2.1	1.9
31	1.9	---	2.2	e2.2	---	11	---	2.8	---	3.2	2.0	---
TOTAL	61.1	63.6	96.6	67.4	69.9	242.3	177.8	84.1	104.0	111.1	80.4	55.6
MEAN	1.97	2.12	3.12	2.17	2.41	7.82	5.93	2.71	3.47	3.58	2.59	1.85
MAX	2.2	2.7	13	2.4	3.2	12	13	2.9	3.9	3.7	3.1	2.0
MIN	1.8	1.9	1.9	2.0	2.0	2.5	2.3	2.2	2.6	3.2	2.0	1.7
AC-FT	121	126	192	134	139	481	353	167	206	220	159	110

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	2.61	2.55	2.39	2.68	2.57	3.89	6.35	9.84	12.3	11.3	4.50	2.70						
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1987 - 2004	
ANNUAL TOTAL	1186.6		1213.9			
ANNUAL MEAN	3.25		3.32		5.32	
HIGHEST ANNUAL MEAN					15.6	
LOWEST ANNUAL MEAN					2.39	
HIGHEST DAILY MEAN	51	Jun 5	13	Dec 15	112	Jul 17 1995
LOWEST DAILY MEAN	1.3	Feb 8	1.7	Sep 14	0.50	Dec 23 2002
ANNUAL SEVEN-DAY MINIMUM	1.6	Feb 4	1.7	Sep 11	1.2	Dec 21 2002
ANNUAL RUNOFF (AC-FT)	2350		2410		3850	
10 PERCENT EXCEEDS	3.6		6.5		7.0	
50 PERCENT EXCEEDS	2.3		2.5		2.8	
90 PERCENT EXCEEDS	1.9		1.9		1.9	

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<sup>2</sup>.

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<sup>3</sup>/s, Sept. 26, 1982, gage height, 11.42 ft; minimum daily, 3.9 ft<sup>3</sup>/s, Oct. 24, 1979.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	14	13	15	15	18	31	24	30	25	28	22
2	16	12	13	17	e15	18	30	25	30	26	28	23
3	15	12	13	17	e16	e18	29	25	30	26	28	27
4	15	12	13	20	e16	18	30	27	31	26	27	26
5	15	12	16	17	e16	19	31	28	32	25	25	26
6	15	12	14	16	e16	21	30	28	32	25	25	26
7	14	12	15	16	e16	26	29	28	33	25	25	26
8	14	13	13	16	e16	31	29	29	31	25	24	26
9	14	14	13	16	e17	36	30	29	27	25	24	26
10	14	13	14	16	e17	38	30	29	28	25	24	25
11	14	13	e14	16	e17	36	30	29	28	25	24	25
12	14	14	e15	16	e17	36	27	29	27	24	24	25
13	14	14	15	16	e17	35	22	29	27	24	24	25
14	14	14	e15	16	e18	38	22	29	27	24	24	24
15	15	14	e15	16	e18	44	21	29	27	24	24	24
16	15	14	e15	16	e18	43	21	29	26	24	24	24
17	14	14	e15	16	e18	42	22	29	26	24	24	24
18	14	14	15	16	e18	44	21	29	26	24	24	24
19	14	14	15	16	e18	44	21	29	26	24	24	25
20	14	14	16	16	18	45	21	29	26	24	24	25
21	14	14	15	e16	18	46	21	30	26	23	24	25
22	14	14	15	e16	18	44	21	30	26	23	25	25
23	14	14	15	e16	18	41	21	30	26	23	24	25
24	14	13	18	16	17	39	21	30	26	22	24	24
25	14	13	19	15	17	37	22	30	25	22	23	24
26	14	e13	e17	e15	21	38	22	30	26	22	23	24
27	14	e13	e16	16	19	35	22	29	26	22	23	23
28	14	13	e16	15	e19	33	23	32	26	21	23	23
29	14	14	e16	15	e18	33	23	31	26	21	22	e22
30	13	13	e16	15	---	32	24	30	26	26	22	e21
31	15	---	16	15	---	32	---	30	---	28	22	---
TOTAL	450	399	466	496	502	1060	747	894	829	747	753	734
MEAN	14.5	13.3	15.0	16.0	17.3	34.2	24.9	28.8	27.6	24.1	24.3	24.5
MAX	22	14	19	20	21	46	31	32	33	28	28	27
MIN	13	12	13	15	15	18	21	24	25	21	22	21
AC-FT	893	791	924	984	996	2100	1480	1770	1640	1480	1490	1460

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 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	19.1	17.1	16.3	18.2	20.4	26.2	29.3	43.7	321	266	62.2	36.1
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1979 - 2004	
ANNUAL TOTAL	10633		8077			
ANNUAL MEAN	29.1		22.1		73.1	
HIGHEST ANNUAL MEAN					396 1983	
LOWEST ANNUAL MEAN					18.5 1979	
HIGHEST DAILY MEAN	728	Jun 6	46	Mar 21	5200	Sep 26 1982
LOWEST DAILY MEAN	12	Nov 2	12	Nov 2	3.9	Oct 24 1979
ANNUAL SEVEN-DAY MINIMUM	12	Nov 2	12	Nov 2	4.4	Oct 13 1979
MAXIMUM PEAK FLOW			55	Mar 15	5950	Sep 26 1982
MAXIMUM PEAK STAGE			4.53	Mar 15	11.42	Sep 26 1982
ANNUAL RUNOFF (AC-FT)	21090		16020		52950	
10 PERCENT EXCEEDS	29		30		45	
50 PERCENT EXCEEDS	22		22		23	
90 PERCENT EXCEEDS	14		14		14	



## 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<sup>3</sup>/s, May 29, 2003; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	3.0	e6.3	76	29	41	105	202	303	97	28	14
2	6.0	3.2	e5.8	116	25	31	78	254	337	90	25	13
3	6.0	3.5	e7.3	e198	30	29	76	318	361	98	23	12
4	6.0	3.4	e6.0	e218	44	27	e90	358	359	113	21	11
5	5.8	4.3	e11	e153	42	26	123	350	361	117	19	11
6	5.6	4.9	e14	e148	35	26	120	304	363	130	18	10
7	5.6	4.6	e13	143	31	32	101	256	347	132	17	9.4
8	5.3	4.1	e13	59	33	47	115	243	302	132	16	8.4
9	5.3	5.4	e15	53	32	60	115	250	222	117	15	8.4
10	5.0	5.3	14	49	29	70	133	264	168	101	15	7.4
11	4.7	8.0	13	52	e27	65	122	195	159	87	14	7.5
12	4.4	11	15	47	e27	69	137	165	175	78	15	7.1
13	4.4	7.7	15	46	26	70	139	169	221	75	20	7.0
14	4.2	9.6	13	49	24	78	105	198	286	78	20	6.1
15	4.0	8.6	14	50	21	101	92	208	261	78	48	5.7
16	4.0	9.6	17	48	20	113	79	192	243	76	35	5.4
17	3.8	8.6	20	46	20	109	72	220	222	78	29	5.2
18	3.6	8.6	20	47	20	119	68	218	232	77	25	5.0
19	3.6	8.1	23	39	31	131	69	199	220	72	22	5.0
20	3.6	7.6	23	36	29	140	68	182	217	68	30	6.1
21	3.6	7.5	22	e41	24	157	66	153	222	62	34	6.5
22	3.6	7.7	28	e47	25	171	70	150	192	57	70	6.3
23	3.6	e8.4	19	45	22	153	68	170	186	57	45	6.1
24	3.7	e6.8	20	44	20	144	86	183	177	52	36	6.0
25	3.5	e6.6	19	43	22	123	119	177	175	47	30	5.6
26	3.4	e7.5	25	43	40	101	157	154	171	44	25	5.4
27	3.4	e8.6	65	45	48	86	191	188	147	40	22	5.0
28	3.4	e7.9	109	41	39	85	203	303	140	37	20	5.0
29	3.2	e7.6	143	40	42	101	179	246	127	35	18	5.1
30	3.2	e6.8	89	38	---	112	164	231	113	32	16	5.1
31	3.1	---	100	32	---	112	---	277	---	30	15	---
TOTAL	133.8	204.5	917.4	2132	857	2729	3310	6977	7009	2387	786	220.8
MEAN	4.32	6.82	29.6	68.8	29.6	88.0	110	225	234	77.0	25.4	7.36
MAX	6.0	11	143	218	48	171	203	358	363	132	70	14
MIN	3.1	3.0	5.8	32	20	26	66	150	113	30	14	5.0
AC-FT	265	406	1820	4230	1700	5410	6570	13840	13900	4730	1560	438

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	11.5	12.1	15.9	22.4	20.0	36.1	90.4	219	192	75.2	43.7	19.4						
MAX	45.3	26.5	48.0	68.8	41.3	88.0	138	345	343	168	181	84.1						
(WY)	1995	1995	2003	2004	1996	2004	1989	1997	1999	1996	1995	1995						
MIN	2.22	3.68	3.23	3.46	0.00	0.00	43.2	59.2	0.00	0.00	10.1	2.56						
(WY)	2002	1991	1991	1991	1997	1997	1991	1995	1995	1995	2001	2001						

## SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1987 - 2004	
ANNUAL TOTAL	24802.0		27663.5			
ANNUAL MEAN	68.0		75.6		63.2	
HIGHEST ANNUAL MEAN					82.4	
LOWEST ANNUAL MEAN					49.2	
HIGHEST DAILY MEAN	537		363		537	
LOWEST DAILY MEAN	3.0		3.0		0.00	
ANNUAL SEVEN-DAY MINIMUM	3.2		3.2		0.00	
ANNUAL RUNOFF (AC-FT)	49190		54870		45750	
10 PERCENT EXCEEDS	180		202		200	
50 PERCENT EXCEEDS	26		40		24	
90 PERCENT EXCEEDS	5.3		5.2		3.4	

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<sup>2</sup>.

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<sup>3</sup>/s, July 9, 1995, gage height, 14.75 ft; minimum daily, 0.94 ft<sup>3</sup>/s, Oct. 15, 1987.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	1.4	e1.3	1.4	1.3	1.3	1.3	1.3	2.4	2.2	2.7	2.6
2	1.4	1.4	e1.3	1.4	1.3	1.3	1.3	1.3	2.4	2.2	2.7	2.6
3	1.4	1.4	e1.3	e1.3	1.3	1.3	1.3	2.9	2.4	2.2	2.7	2.6
4	1.4	1.4	e1.3	e1.3	1.4	1.3	e1.3	3.5	2.4	2.2	2.7	2.6
5	1.4	1.4	e1.3	e1.3	1.3	1.3	1.3	2.4	2.4	2.2	2.7	2.6
6	1.4	1.4	e1.3	e1.3	1.2	1.3	1.3	2.4	2.4	2.2	2.7	2.6
7	1.4	1.4	e1.3	1.3	1.3	1.3	1.3	2.4	2.4	2.4	2.7	2.6
8	1.4	1.4	e1.3	1.3	1.2	1.3	1.3	2.4	2.4	2.9	2.7	2.6
9	1.4	1.4	e1.2	1.3	1.2	1.3	1.3	2.4	2.4	2.9	2.7	2.6
10	1.4	1.4	1.2	1.3	1.2	1.4	1.3	2.4	2.3	2.9	2.7	2.6
11	1.4	1.4	1.2	1.3	e1.3	1.4	1.3	2.4	2.3	2.9	2.7	2.5
12	1.4	1.3	1.2	1.3	e1.3	1.4	1.3	2.3	2.3	2.9	2.6	2.6
13	1.4	1.4	1.2	1.3	1.3	1.4	1.3	2.3	2.3	2.9	2.7	2.5
14	1.4	1.4	1.3	1.3	1.3	1.4	1.3	2.4	2.4	2.8	2.7	2.6
15	1.4	1.4	1.3	1.3	1.3	1.4	1.3	2.4	2.4	2.8	2.7	2.6
16	1.4	1.4	1.2	1.3	1.3	1.4	1.3	2.4	2.4	2.8	2.7	2.6
17	1.4	1.4	1.2	1.3	1.3	1.4	1.3	2.4	2.3	2.8	2.6	2.5
18	1.4	1.4	1.3	1.3	1.3	1.4	1.3	2.4	2.4	2.8	2.6	2.6
19	1.4	1.4	1.3	1.3	1.3	1.4	1.3	2.4	2.4	2.8	2.7	2.6
20	1.4	1.4	1.3	1.3	1.3	1.4	1.3	2.3	2.4	2.8	2.7	2.6
21	1.4	1.4	1.3	e1.3	1.3	1.4	1.3	2.3	2.3	2.8	2.7	2.6
22	1.4	1.4	1.3	e1.2	1.3	1.4	1.3	2.3	2.3	2.8	2.7	2.6
23	1.4	e1.4	1.3	1.2	1.3	1.4	1.3	2.3	2.2	2.8	2.7	2.6
24	1.3	e1.4	1.3	1.3	1.3	1.4	1.3	2.3	2.2	2.8	2.7	2.3
25	1.4	e1.4	1.3	1.3	1.3	1.4	1.3	2.3	2.2	2.8	2.6	2.3
26	1.4	e1.4	1.4	1.3	1.3	1.4	1.3	2.3	2.2	2.8	2.6	2.3
27	1.4	e1.4	1.3	1.3	1.3	1.3	1.3	2.3	2.2	2.8	2.6	2.4
28	1.4	e1.4	1.2	1.3	1.3	1.3	1.3	2.4	2.2	2.7	2.6	2.4
29	1.4	e1.4	1.2	1.3	1.3	1.3	1.3	2.3	2.2	2.7	2.6	2.3
30	1.4	e1.3	1.3	1.3	---	1.3	1.3	2.3	2.2	2.7	2.6	2.3
31	1.4	---	1.4	1.4	---	1.4	---	2.4	---	2.7	2.6	---
TOTAL	44.1	41.8	39.6	40.4	37.4	42.1	39.0	72.6	69.7	83.0	82.7	75.8
MEAN	1.42	1.39	1.28	1.30	1.29	1.36	1.30	2.34	2.32	2.68	2.67	2.53
MAX	2.2	1.4	1.4	1.4	1.4	1.4	1.3	3.5	2.4	2.9	2.7	2.6
MIN	1.3	1.3	1.2	1.2	1.2	1.3	1.3	1.3	2.2	2.2	2.6	2.3
AC-FT	87	83	79	80	74	84	77	144	138	165	164	150

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

MEAN	2.71	2.41	2.66	5.17	3.24	5.48	7.24	25.8	105	90.5	11.9	3.77
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	1.28	1.30	1.29	1.36	1.30	2.34	2.32	2.25	2.25	2.44
(WY)	1988	2002	2004	2004	2004	2004	2004	2004	2004	1994	1994	1994

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1987 - 2004

ANNUAL TOTAL	7529.8	668.2	
ANNUAL MEAN	20.6	1.83	22.3
HIGHEST ANNUAL MEAN			131
LOWEST ANNUAL MEAN			1.83
HIGHEST DAILY MEAN	747	Jun 3	1420
LOWEST DAILY MEAN	1.2	Dec 9	0.94
ANNUAL SEVEN-DAY MINIMUM	1.2	Dec 7	1.0
MAXIMUM PEAK FLOW			1730
MAXIMUM PEAK STAGE			14.75
ANNUAL RUNOFF (AC-FT)	14940	1330	16170
10 PERCENT EXCEEDS	2.6	2.7	6.0
50 PERCENT EXCEEDS	2.4	1.4	2.5
90 PERCENT EXCEEDS	1.4	1.3	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<sup>2</sup>.

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. 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 nos. 67 and 120.

NOTE.—No diversion during the 2004 water year.



## 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<sup>2</sup>.

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. 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 nos. 67 and 120.

NOTE.—No diversion during 2004 water year.

## 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<sup>2</sup>.

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 April 20 to June 29. 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 nos. 67 and 120.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	0.53	0.51	---	---	---
2	---	---	---	---	---	---	---	0.52	0.51	---	---	---
3	---	---	---	---	---	---	---	0.56	0.52	---	---	---
4	---	---	---	---	---	---	---	1.2	0.53	---	---	---
5	---	---	---	---	---	---	---	1.9	0.53	---	---	---
6	---	---	---	---	---	---	---	1.2	0.52	---	---	---
7	---	---	---	---	---	---	---	0.69	0.52	---	---	---
8	---	---	---	---	---	---	---	0.70	0.51	---	---	---
9	---	---	---	---	---	---	---	0.81	0.51	---	---	---
10	---	---	---	---	---	---	---	0.92	0.51	---	---	---
11	---	---	---	---	---	---	---	0.51	0.51	---	---	---
12	---	---	---	---	---	---	---	0.51	0.51	---	---	---
13	---	---	---	---	---	---	---	0.51	0.51	---	---	---
14	---	---	---	---	---	---	---	0.56	0.50	---	---	---
15	---	---	---	---	---	---	---	0.61	0.51	---	---	---
16	---	---	---	---	---	---	---	0.58	0.52	---	---	---
17	---	---	---	---	---	---	---	0.77	0.54	---	---	---
18	---	---	---	---	---	---	---	0.65	0.55	---	---	---
19	---	---	---	---	---	---	---	0.53	0.55	---	---	---
20	---	---	---	---	---	---	0.51	0.52	0.55	---	---	---
21	---	---	---	---	---	---	0.58	0.52	0.57	---	---	---
22	---	---	---	---	---	---	0.59	0.51	0.59	---	---	---
23	---	---	---	---	---	---	0.59	0.52	0.55	---	---	---
24	---	---	---	---	---	---	0.59	0.50	0.59	---	---	---
25	---	---	---	---	---	---	0.58	0.48	0.59	---	---	---
26	---	---	---	---	---	---	0.57	0.47	0.57	---	---	---
27	---	---	---	---	---	---	0.56	0.46	0.54	---	---	---
28	---	---	---	---	---	---	0.54	0.46	e0.53	---	---	---
29	---	---	---	---	---	---	0.54	0.46	e0.53	---	---	---
30	---	---	---	---	---	---	0.54	0.47	---	---	---	---
31	---	---	---	---	---	---	---	0.51	---	---	---	---
TOTAL	---	---	---	---	---	---	---	20.14	---	---	---	---
MEAN	---	---	---	---	---	---	---	0.65	---	---	---	---
MAX	---	---	---	---	---	---	---	1.9	---	---	---	---
MIN	---	---	---	---	---	---	---	0.46	---	---	---	---
AC-FT	---	---	---	---	---	---	---	40	---	---	---	---

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<sup>2</sup>.

PERIOD OF RECORD.—October 1954 to current year. Prior to 1960, maximum and minimum daily contents were published.

GAGE.—Water-stage recorder. Elevation 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 Ward Creek (station 11231700). Water is released for diversion to Ward Tunnel via Mono Creek Conduit (station 11231550). Records, excluding 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, 111,099 acre-ft, June 30, elevation, 7,634.88 ft; minimum, 49,536 acre-ft, Mar. 10, 11, elevation, 7,596.93 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61607	51437	51216	52401	52277	50245	56479	68132	92000	110577	101093	90721
2	60877	51367	51174	52443	52374	50136	56751	68963	93038	110216	101074	90014
3	60081	51395	51174	52541	52305	50027	56981	69990	94150	109857	100756	89242
4	59362	51353	51174	52486	52347	49917	57328	71104	95159	109442	100103	88417
5	58617	51353	51353	52528	52277	49808	57774	72207	96240	109047	99450	87595
6	57790	51353	51408	52528	52111	49712	58151	73237	97290	108723	98747	86844
7	57011	51381	51532	52555	52056	49686	58516	74093	98361	108490	98291	86077
8	56207	51408	51477	52597	51974	49644	58895	74969	99275	108509	98325	85243
9	55523	51422	51532	52597	51822	49631	59332	75785	99962	108760	98291	84482
10	54700	51422	51587	52625	51684	49618	59772	76702	100439	108939	98238	83704
11	53896	51395	51616	52640	51616	49644	60199	77360	100986	109137	98238	82910
12	53155	51422	51587	52667	51450	49821	60672	77887	101482	108975	98325	82135
13	52388	51450	51602	52640	51408	49985	61145	78448	102137	108562	98325	81379
14	51919	51422	51711	52667	51216	50149	61518	79161	102917	108095	98429	80628
15	51892	51422	51657	52709	51147	50394	61906	79927	103575	107592	98500	79842
16	51837	51422	51671	52680	51064	50654	62233	80561	104269	107199	98519	79030
17	51822	51367	51684	52680	50968	50886	62578	81313	105018	106788	98429	78267
18	51781	51395	51698	52723	51008	51216	62820	82085	105696	106358	98184	77541
19	51753	51437	51671	52709	50831	51561	63045	82742	106286	105893	97956	77228
20	51796	51381	51753	52709	50763	51960	63316	83398	106930	105410	97886	77146
21	51726	51408	51740	52680	50695	52361	63649	84024	107520	104876	97641	77096
22	51726	51367	51711	52723	50627	52862	63814	84532	108041	104447	97483	77130
23	51684	51298	51726	52709	50490	53253	63996	85194	108509	103877	97149	76998
24	51629	51353	51932	52709	50368	53713	64333	85772	108921	103361	96449	76309
25	51616	51298	52002	52680	50503	54122	64683	86451	109424	102829	95752	75557
26	51574	51271	52071	52667	50477	54488	65141	86929	109857	102313	95070	74693
27	51574	51229	52002	52723	50436	54800	65724	87579	110236	101800	94306	74046
28	51547	51229	51974	52736	50354	55081	66357	88761	110595	101145	93646	73237
29	51492	51243	52126	52680	50272	55408	66914	89499	110938	100951	93004	72593
30	51505	51243	52126	52513	---	55722	67491	90256	110973	101005	92225	71789
31	51464	---	52195	52443	---	56093	---	91101	---	101039	91515	---
MAX	61607	51450	52195	52736	52374	56093	67491	91101	110973	110577	101093	90721
MIN	51464	51229	51174	52401	50272	49618	56479	68132	92000	100951	91515	71789
a	7598.34	7598.18	7598.87	7599.05	7597.47	7601.64	7609.28	7623.56	7634.79	7629.25	7623.78	7612.00
b	-10903	-221	+952	+248	-2171	+5821	+11398	+23610	+19872	-9934	-9524	-19726

CAL YR 2003 b -1950

WTR YR 2004 b +9422

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<sup>2</sup>.

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<sup>3</sup>/s, Sept. 26, 1982, gage height, 8.87 ft; minimum daily, 0.3 ft<sup>3</sup>/s, Nov. 11, 12, 1954.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	421	21	22	29	86	91	20	20	28	354	23	421
2	421	21	22	29	86	91	20	20	28	354	23	421
3	421	21	22	29	75	91	20	22	28	354	218	421
4	420	21	22	29	23	91	20	27	28	354	367	421
5	431	21	22	29	54	91	21	27	28	356	367	421
6	431	21	22	29	89	91	21	27	28	354	370	421
7	431	21	22	29	89	91	21	27	28	354	249	420
8	431	21	22	29	89	91	20	27	28	164	25	417
9	429	21	22	29	89	91	20	27	28	34	24	417
10	426	21	22	29	89	90	20	27	28	34	24	417
11	426	21	22	29	89	51	20	27	28	34	24	417
12	426	20	22	29	89	17	20	27	28	199	24	417
13	426	20	22	29	89	17	20	27	28	358	24	417
14	252	20	22	29	89	17	20	27	28	358	24	413
15	21	20	22	29	89	17	20	27	29	358	25	412
16	21	20	23	29	89	17	20	27	29	358	25	412
17	21	20	26	29	89	17	20	27	29	358	99	412
18	21	21	29	29	89	17	20	27	29	358	157	412
19	21	22	29	29	89	18	20	27	29	358	157	175
20	21	22	29	29	89	19	20	27	29	352	157	14
21	21	22	29	29	89	19	20	27	29	349	157	13
22	21	22	29	29	89	20	20	27	29	349	157	12
23	21	22	29	29	89	20	20	27	29	349	259	56
24	21	22	29	29	89	20	20	27	29	349	394	398
25	21	22	29	29	89	20	20	28	29	349	394	398
26	21	22	29	29	91	20	20	28	29	349	394	398
27	21	22	29	29	91	19	20	28	29	349	391	398
28	21	22	29	29	91	19	20	28	29	349	389	398
29	21	22	29	55	91	19	20	28	29	159	389	398
30	21	22	29	86	---	20	20	28	190	23	400	395
31	21	---	29	86	---	20	---	28	---	23	421	---
TOTAL	6149	636	785	1039	2468	1332	603	825	1017	8800	6151	10562
MEAN	198	21.2	25.3	33.5	85.1	43.0	20.1	26.6	33.9	284	198	352
MAX	431	22	29	86	91	91	21	28	190	358	421	421
MIN	21	20	22	29	23	17	20	20	28	23	23	12
AC-FT	12200	1260	1560	2060	4900	2640	1200	1640	2020	17450	12200	20950



## 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<sup>3</sup>/s, Apr. 7, 1995; minimum daily, -18 ft<sup>3</sup>/s, June 11, 1993 (reverse flow from Bear Creek Conduit).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	413	13	15	21	80	85	14	14	18	343	12	411
2	414	13	15	20	80	85	14	14	e16	343	12	411
3	414	13	15	20	69	85	14	11	e9.0	343	207	411
4	414	13	15	20	17	85	14	14	e10	343	356	410
5	424	13	15	20	48	85	15	17	e10	345	356	410
6	424	14	15	20	83	85	15	17	e11	343	359	410
7	424	14	16	20	83	85	15	17	e14	343	238	409
8	423	14	16	20	83	85	14	17	17	153	14	406
9	421	14	16	20	83	85	14	17	17	23	13	406
10	418	14	16	20	83	84	14	17	17	23	13	406
11	419	14	16	20	83	45	14	17	17	23	13	406
12	419	13	16	21	83	11	14	17	17	188	13	407
13	419	13	16	22	83	11	14	17	17	347	13	407
14	245	13	16	23	83	11	14	17	17	347	13	402
15	14	13	16	23	83	11	14	17	18	347	14	401
16	14	13	17	23	83	11	14	17	18	347	14	401
17	14	13	20	23	83	11	14	17	18	347	88	401
18	14	14	24	23	83	11	14	17	18	347	146	401
19	13	15	22	23	83	12	14	17	18	347	146	164
20	13	15	22	23	83	13	14	17	18	341	146	3.0
21	13	15	22	23	83	13	14	17	18	338	146	2.0
22	13	15	22	23	83	14	14	17	18	338	146	2.0
23	13	15	22	23	83	14	14	17	18	338	248	46
24	13	15	22	23	83	14	14	17	18	338	383	388
25	13	15	22	23	83	14	14	18	18	338	383	388
26	13	15	22	23	85	14	14	18	18	338	383	388
27	13	15	22	23	85	13	14	18	18	338	380	388
28	13	15	22	23	85	13	14	18	18	338	379	388
29	13	15	22	49	85	13	14	18	18	148	379	388
30	13	15	22	80	---	14	14	18	179	12	390	385
31	13	---	22	80	---	14	---	18	---	12	411	---
TOTAL	5916	421	581	818	2294	1146	423	519	656.0	8459	5814	10246.0
MEAN	191	14.0	18.7	26.4	79.1	37.0	14.1	16.7	21.9	273	188	342
MAX	424	15	24	80	85	85	15	18	179	347	411	411
MIN	13	13	15	20	17	11	14	11	9.0	12	12	2.0
AC-FT	11730	835	1150	1620	4550	2270	839	1030	1300	16780	11530	20320

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	101	126	120	94.8	90.0	141	105	53.5	57.4	194	283	215						
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	0.00	8.00	5.47	6.00	6.00	0.00	93.0	11.8						
(WY)	2001	2001	1991	1991	1997	1990	2001	2001	2001	1995	1996	1989						

## SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1987 - 2004	
ANNUAL TOTAL	45272		37293.0			
ANNUAL MEAN	124		102		132	
HIGHEST ANNUAL MEAN					227	
LOWEST ANNUAL MEAN					50.5	
HIGHEST DAILY MEAN					499	
LOWEST DAILY MEAN	424	Oct 5	424	Oct 5	Apr 7	1995
ANNUAL SEVEN-DAY MINIMUM	13	Oct 19	2.0	Sep 21	Jun 11	1993
ANNUAL RUNOFF (AC-FT)	13	Oct 19	11	Mar 12	0.00	Dec 5 1990
10 PERCENT EXCEEDS	89800		73970		95750	
50 PERCENT EXCEEDS	386		388		403	
90 PERCENT EXCEEDS	17		18		55	
90 PERCENT EXCEEDS	14		13		6.4	

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<sup>2</sup>.

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<sup>3</sup>/s, July 11, 12, 1995; minimum daily, 4.1 ft<sup>3</sup>/s, Dec. 12–16, 1990.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	8.3	6.7	8.2	5.9	5.8	5.7	5.7	10	11	11	10
2	6.6	8.3	6.7	8.6	5.9	5.8	5.7	5.7	e12	11	11	10
3	6.6	8.3	6.6	8.6	5.9	5.8	5.7	11	e19	11	11	10
4	6.5	8.3	6.6	8.6	5.8	5.8	5.7	13	e18	11	11	11
5	7.1	7.8	6.6	8.6	5.8	5.8	5.7	10	e18	11	11	11
6	7.0	7.3	6.6	8.6	5.9	5.8	5.7	10	e17	11	11	11
7	7.2	7.3	6.5	8.5	5.9	5.8	5.7	10	e14	11	11	11
8	8.1	7.3	6.3	8.6	5.9	5.8	5.7	10	11	11	11	11
9	8.1	7.3	6.3	8.6	5.9	5.8	5.7	10	11	11	11	11
10	7.5	7.3	6.3	8.6	5.9	5.8	5.7	10	11	11	11	11
11	7.1	7.3	6.3	8.6	5.9	5.8	5.7	10	11	11	11	11
12	7.1	7.3	6.3	7.7	5.9	5.7	5.7	10	11	11	11	9.7
13	7.1	7.3	5.8	6.6	5.8	5.7	5.7	10	11	11	11	9.7
14	7.1	7.3	5.7	6.0	5.8	5.7	5.7	10	11	11	11	11
15	7.4	7.3	5.7	5.8	5.8	5.7	5.7	10	11	11	11	11
16	7.4	7.3	5.6	5.8	5.8	5.7	5.7	10	11	11	11	11
17	7.4	7.3	5.6	5.8	5.8	5.7	5.7	10	11	11	11	11
18	7.2	7.1	5.0	5.8	5.9	5.7	5.7	10	11	11	11	11
19	8.3	6.7	6.9	5.8	5.8	5.7	5.7	10	11	11	11	11
20	8.3	6.7	7.0	5.8	5.8	5.7	5.7	10	11	11	11	11
21	8.4	6.7	7.0	5.8	5.8	5.7	5.7	10	11	11	11	11
22	8.3	6.7	7.0	5.8	5.8	5.7	5.7	10	11	11	11	10
23	8.3	6.7	7.0	5.8	5.8	5.7	5.7	10	11	11	11	10
24	8.3	6.7	7.0	5.8	5.8	5.7	5.7	10	11	11	11	10
25	8.3	6.7	7.0	5.8	5.9	5.7	5.7	10	11	11	11	10
26	8.3	6.7	7.0	5.8	5.9	5.7	5.7	10	11	11	11	10
27	8.3	6.7	7.0	5.8	5.9	5.7	5.7	10	11	11	11	10
28	8.3	6.7	7.0	5.8	5.9	5.7	5.7	10	11	11	10	10
29	8.3	6.7	7.0	5.8	5.8	5.7	5.7	10	11	11	10	10
30	8.3	6.7	7.0	5.9	---	5.7	5.7	10	11	11	10	10
31	8.3	---	7.0	5.9	---	5.7	---	10	---	11	10	---
TOTAL	238.6	216.1	202.1	213.2	169.7	177.8	171.0	305.4	361	341	337	315.4
MEAN	7.70	7.20	6.52	6.88	5.85	5.74	5.70	9.85	12.0	11.0	10.9	10.5
MAX	8.4	8.3	7.0	8.6	5.9	5.8	5.7	13	19	11	11	11
MIN	6.5	6.7	5.0	5.8	5.8	5.7	5.7	5.7	10	11	10	9.7
AC-FT	473	429	401	423	337	353	339	606	716	676	668	626

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

MEAN	10.0	9.52	9.10	8.48	8.68	8.34	9.13	12.7	38.0	63.2	20.8	12.8
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1987 - 2004	
ANNUAL TOTAL	3294.5		3048.3			
ANNUAL MEAN	9.03		8.33		17.6	
HIGHEST ANNUAL MEAN					79.4	
LOWEST ANNUAL MEAN					7.83	
HIGHEST DAILY MEAN	74	Sep 16	19	Jun 3	1300	Jul 11 1995
LOWEST DAILY MEAN	5.0	Dec 18	5.0	Dec 18	4.1	Dec 12 1990
ANNUAL SEVEN-DAY MINIMUM	5.7	Dec 12	5.7	Dec 12	4.2	Dec 12 1990
ANNUAL RUNOFF (AC-FT)	6530		6050		12770	
10 PERCENT EXCEEDS	10		11		16	
50 PERCENT EXCEEDS	8.4		7.8		10	
90 PERCENT EXCEEDS	7.0		5.7		5.8	

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<sup>2</sup>.

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 Apr. 15 to June 30. See schematic diagram of [upper San Joaquin River Basin](#).

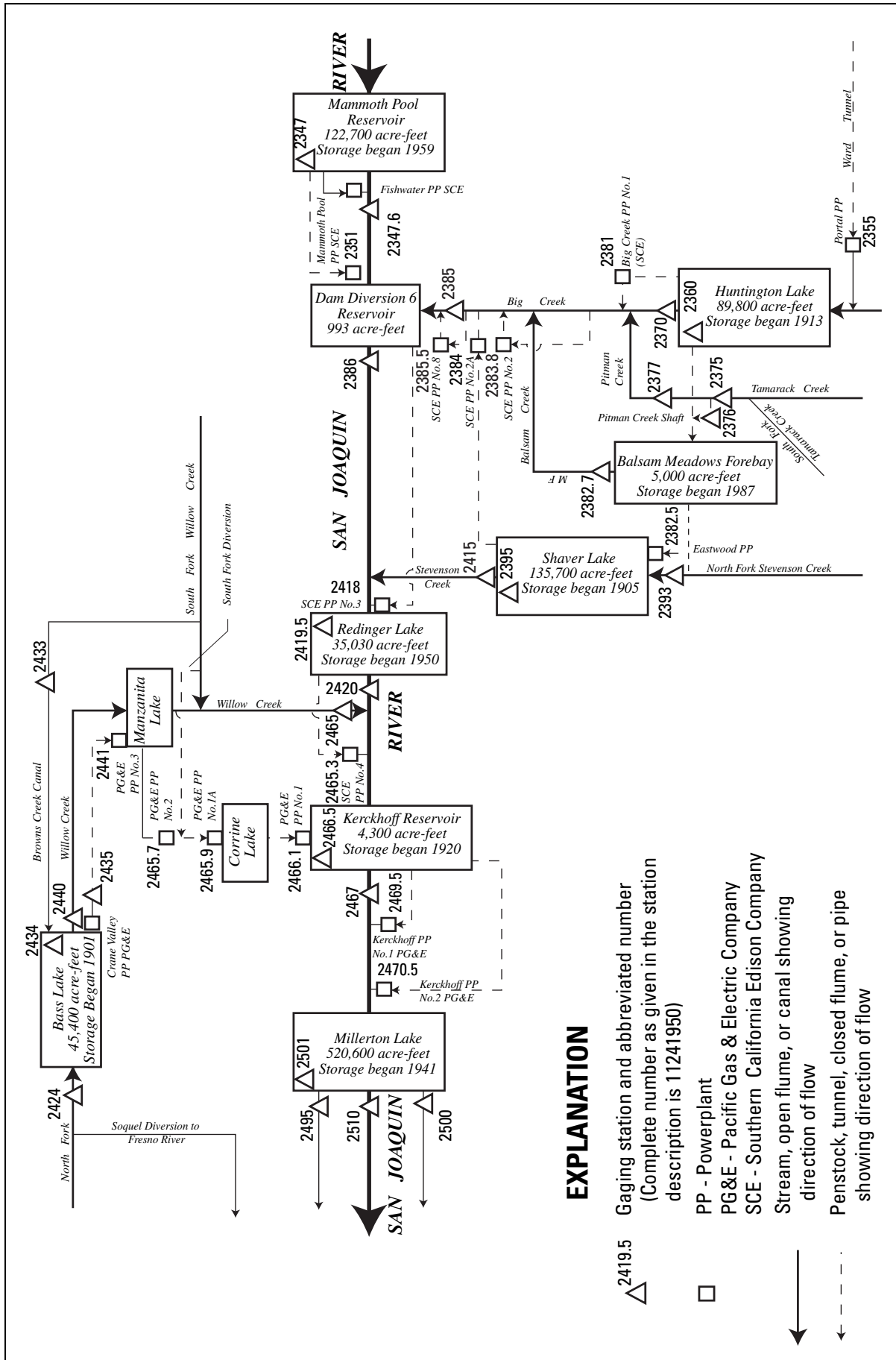
COOPERATION.—Records were collected by Southern California Edison Co., under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2086.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	0.24	0.26	---	---	---
2	---	---	---	---	---	---	---	0.24	0.24	---	---	---
3	---	---	---	---	---	---	---	0.24	0.24	---	---	---
4	---	---	---	---	---	---	---	0.24	0.24	---	---	---
5	---	---	---	---	---	---	---	0.24	0.25	---	---	---
6	---	---	---	---	---	---	---	0.24	0.27	---	---	---
7	---	---	---	---	---	---	---	0.24	0.27	---	---	---
8	---	---	---	---	---	---	---	0.24	0.27	---	---	---
9	---	---	---	---	---	---	---	0.24	0.27	---	---	---
10	---	---	---	---	---	---	---	0.24	0.26	---	---	---
11	---	---	---	---	---	---	---	0.27	0.24	---	---	---
12	---	---	---	---	---	---	---	0.27	0.24	---	---	---
13	---	---	---	---	---	---	---	0.27	0.24	---	---	---
14	---	---	---	---	---	---	---	0.27	0.25	---	---	---
15	---	---	---	---	---	---	e0.23	0.27	0.25	---	---	---
16	---	---	---	---	---	---	0.22	0.27	0.27	---	---	---
17	---	---	---	---	---	---	0.21	0.27	0.27	---	---	---
18	---	---	---	---	---	---	0.21	0.27	0.27	---	---	---
19	---	---	---	---	---	---	0.25	0.27	0.26	---	---	---
20	---	---	---	---	---	---	0.30	0.27	0.25	---	---	---
21	---	---	---	---	---	---	0.29	0.27	0.27	---	---	---
22	---	---	---	---	---	---	0.28	0.27	0.27	---	---	---
23	---	---	---	---	---	---	0.27	0.27	0.27	---	---	---
24	---	---	---	---	---	---	0.27	0.27	0.28	---	---	---
25	---	---	---	---	---	---	0.27	0.27	0.29	---	---	---
26	---	---	---	---	---	---	0.25	0.27	0.29	---	---	---
27	---	---	---	---	---	---	0.25	0.27	0.29	---	---	---
28	---	---	---	---	---	---	0.25	0.27	0.29	---	---	---
29	---	---	---	---	---	---	0.24	0.27	0.29	---	---	---
30	---	---	---	---	---	---	0.24	0.27	e0.29	---	---	---
31	---	---	---	---	---	---	---	0.27	---	---	---	---
TOTAL	---	---	---	---	---	---	---	8.07	7.94	---	---	---
MEAN	---	---	---	---	---	---	---	0.26	0.26	---	---	---
MAX	---	---	---	---	---	---	---	0.27	0.29	---	---	---
MIN	---	---	---	---	---	---	---	0.24	0.24	---	---	---
AC-FT	---	---	---	---	---	---	---	16	16	---	---	---

e Estimated.





**EXPLANATION**

- △ 2419.5 Gaging station and abbreviated number (Complete number as given in the station description is 11241950)
- PP - Powerplant  
PG&E - Pacific Gas & Electric Company  
SCE - Southern California Edison Company
- Stream, open flume, or canal showing direction of flow
- Penstock, tunnel, closed flume, or pipe showing direction of flow

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<sup>2</sup>.

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 Mammoth Pool through tunnel for power development and returned to river 8.5 mi downstream from dam. Records, excluding extremes, represent usable contents. 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, 119,907 acre-ft, June 8, elevation, 3,329.97 ft; minimum, 11,586 acre-ft, Feb. 13, elevation, 3,171.53 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34527	21933	15639	28217	18111	21035	52512	66993	115963	106358	72773	41585
2	34404	21651	15539	28790	16984	21048	51859	69358	116922	105570	71884	40419
3	34242	21315	15452	29212	15780	21469	51258	72757	117962	105126	70736	39871
4	34041	21010	15323	29285	14814	21755	51950	77384	118805	104724	69563	38280
5	33768	20659	15483	29118	13773	22069	53486	81830	119318	103319	68563	37012
6	32968	20345	16056	29133	13025	22438	55312	85182	119678	102509	67236	35773
7	31929	20015	17171	29290	12878	22847	56514	87455	119874	101613	66532	34331
8	31575	19716	17621	29300	12507	23690	58683	89809	119874	100740	65358	33073
9	31185	19629	17704	29008	12189	25041	59964	92618	118405	100186	64614	31842
10	30712	19235	17886	29097	11922	26919	61626	95429	116729	99329	63421	30499
11	30350	18950	18138	29757	12024	28448	62968	97092	114807	98861	62348	29526
12	30031	18727	18276	29731	11866	28371	64463	97640	112843	97341	61062	28919
13	29836	18462	18342	29589	11967	28769	66089	98336	111281	95944	59730	28186
14	29384	18288	18684	29463	11647	30047	66726	99507	110905	94689	58953	27501
15	28754	18012	18649	28977	11689	31913	66653	101215	110436	93608	57698	26939
16	28263	18273	18661	28381	11933	33322	65831	102709	110093	92523	56684	26804
17	27781	18253	18590	27878	12835	34555	64870	104102	109533	91518	55587	26909
18	27293	18195	18825	27268	13646	36008	63366	105540	109161	90172	54570	27030
19	26739	18031	18884	26603	14315	37498	61864	106481	108883	88836	53607	27162
20	26259	17978	19295	26060	14979	39324	60698	107070	108698	87813	52287	27313
21	25816	17909	19885	25469	14901	42034	59352	107253	108729	86676	51600	26954
22	25355	17467	20173	24830	14918	44434	57831	107458	108544	85500	51286	26879
23	25065	17225	20485	24139	14960	46921	56293	107867	108688	84177	50840	27025
24	24671	17080	21946	24317	15185	49120	55493	108195	108544	82420	50203	27182
25	24412	16871	24070	24257	16276	50708	55790	108605	108328	81045	49093	27349
26	24353	16660	25022	23509	18439	51320	57200	108719	108451	79361	48057	27516
27	24016	16368	25541	22852	19656	51355	59044	108976	108287	78290	46810	27465
28	23386	16123	25874	22213	20259	50840	62025	110675	107499	77049	45402	27608
29	23035	15924	26408	21573	20734	51070	64152	113012	107182	76148	44704	27792
30	22580	15729	26959	20767	---	51593	65534	113919	106999	75053	43799	27960
31	22213	---	27573	19656	---	51922	---	114818	---	73914	42731	---
MAX	34527	21933	27573	29757	20734	51922	66726	114818	119874	106358	72773	41585
MIN	22213	15729	15323	19656	11647	21035	51258	66993	106999	73914	42731	26804
a	3201.87	3185.15	3213.24	3195.78	3198.42	3253.76	3271.97	3325.23	3317.72	3282.14	3239.91	3214.00
b	-12477	-6484	+11844	-7917	+1078	+31188	+13612	+49284	-7819	-33085	-31183	-14771

CAL YR 2003 b +4214

WTR YR 2004 b -6730

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<sup>2</sup>.

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<sup>3</sup>/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<sup>3</sup>/s, Jan. 2, 1997, gage height, 32.00 ft, from floodmarks, from rating curve extended above 20,300 ft<sup>3</sup>/s; minimum daily, 0.3 ft<sup>3</sup>/s, Oct. 14, Dec. 5, 1959.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	14	11	14	13	13	14	16	14	44	38	e45
2	14	14	11	12	13	13	14	16	14	44	38	e41
3	14	14	11	12	12	13	14	16	14	44	36	37
4	14	14	11	12	12	13	14	16	15	44	36	37
5	14	14	11	12	12	13	14	16	15	44	36	36
6	14	14	11	12	12	13	14	16	e47	43	36	36
7	14	14	11	12	12	13	14	16	83	44	36	36
8	14	14	12	12	12	13	14	16	e24	44	36	36
9	14	14	12	12	12	13	14	16	15	44	36	36
10	14	14	12	11	12	13	14	16	14	44	36	36
11	14	14	12	12	12	13	14	16	14	44	36	35
12	14	14	12	12	12	13	14	16	14	e41	35	35
13	14	14	12	13	12	13	14	16	14	e35	35	35
14	14	14	12	13	12	13	14	15	14	e36	35	35
15	14	13	12	13	12	13	14	15	14	e38	35	35
16	14	11	13	13	12	13	14	15	14	e39	35	35
17	14	11	15	13	12	13	14	15	14	e37	34	35
18	14	11	15	13	12	13	14	15	14	e37	35	35
19	14	11	15	13	12	13	14	15	14	e37	35	35
20	14	11	15	13	12	13	14	15	14	e37	35	33
21	14	11	15	13	12	14	14	15	14	e37	33	21
22	14	11	15	13	12	14	14	15	14	e36	32	14
23	14	11	15	13	12	14	14	15	14	e36	32	14
24	14	11	15	13	12	14	14	15	14	e37	e36	14
25	14	11	15	13	12	14	14	15	14	e36	e47	14
26	14	11	16	13	13	14	14	14	14	e36	e44	14
27	14	11	16	13	13	14	14	14	14	e33	e45	14
28	14	11	16	13	13	14	14	14	14	e41	e44	14
29	14	11	16	13	13	14	14	14	14	e53	e44	14
30	14	11	16	13	---	14	16	14	29	38	e45	14
31	14	---	16	13	---	14	---	14	---	38	e44	---
TOTAL	434	374	417	392	354	414	422	472	550	1241	1160	871
MEAN	14.0	12.5	13.5	12.6	12.2	13.4	14.1	15.2	18.3	40.0	37.4	29.0
MAX	14	14	16	14	13	14	16	16	83	53	47	45
MIN	14	11	11	11	12	13	14	14	14	33	32	14
AC-FT	861	742	827	778	702	821	837	936	1090	2460	2300	1730
a	17240	13630	9560	31170	27550	82460	120900	104800	91540	54660	32550	18930

e Estimated.

a Diversion, in acre-feet, to Mammoth Pool Powerplant (station 11235100), provided by Southern California Edison Co.

## SAN JOAQUIN RIVER BASIN

## 11234760 SAN JOAQUIN RIVER ABOVE SHAKEFLAT CREEK, NEAR BIG CREEK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	24.1	13.0	15.0	89.2	62.6	89.4	190	1303	2003	875	72.7	24.1
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1960 - 2004	
ANNUAL TOTAL	54886		7101			
ANNUAL MEAN	150		19.4		398	
HIGHEST ANNUAL MEAN					2022	
LOWEST ANNUAL MEAN					13.2	
HIGHEST DAILY MEAN	5190	Jun 3	83	Jun 7	26000	Jan 3 1997
LOWEST DAILY MEAN	11	Jan 15	11	Nov 16	0.30	Oct 14 1959
ANNUAL SEVEN-DAY MINIMUM	11	Jan 15	11	Nov 16	0.57	Dec 1 1959
MAXIMUM PEAK FLOW			167	Jun 7	80000	Jan 2 1997
MAXIMUM PEAK STAGE			4.26	Jun 7	32.00	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	108900		14080		288000	
TOTAL DIVERSION (AC-FT) a	670200		605000			
10 PERCENT EXCEEDS	38		37		303	
50 PERCENT EXCEEDS	14		14		15	
90 PERCENT EXCEEDS	12		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" and October 1960 to September 1991 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. 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. Oct. 1, 1968, to Nov. 30, 1987, pressure-differential recorder recorded discharge through penstock.

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<sup>3</sup>/s, June 21, 1935; no flow at times in many years.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	705	0.00	103	170	157	208	437	217	1040	767	646	925
2	706	105	0.00	120	96	202	450	326	901	645	658	889
3	705	215	0.00	140	153	147	442	396	665	626	630	838
4	703	214	0.00	158	40	129	369	495	631	632	807	931
5	708	214	103	120	62	268	656	479	538	675	820	896
6	714	0.00	0.00	91	192	225	638	456	803	1130	817	777
7	715	142	103	128	101	146	525	328	544	961	619	768
8	682	0.00	0.00	122	142	345	532	318	1020	553	33	886
9	708	0.00	50	123	173	328	633	337	1520	400	185	969
10	703	0.00	50	111	136	488	646	381	1580	322	504	964
11	591	160	0.00	95	142	234	641	228	1640	363	539	959
12	726	0.00	101	135	186	331	604	323	1750	782	470	961
13	742	0.00	0.00	149	155	351	658	457	1600	926	484	954
14	594	133	103	144	146	328	531	656	1410	970	336	721
15	0.00	0.00	0.00	144	147	430	606	511	1390	957	342	639
16	91	0.00	103	144	154	519	441	531	1550	916	128	368
17	0.00	61	0.00	144	163	484	381	561	1260	638	382	437
18	0.00	0.00	103	66	240	702	300	299	848	729	321	438
19	0.00	6.1	0.00	99	185	563	264	606	457	1050	281	355
20	4.5	15	97	14	174	718	132	597	550	1010	331	13
21	116	81	78	95	214	708	0.00	504	1000	997	377	10
22	0.00	0.00	0.00	127	221	700	137	547	972	918	326	110
23	0.00	0.00	146	100	136	700	141	965	1080	749	548	10
24	0.00	91	144	0.00	224	587	234	1150	1090	713	686	625
25	0.00	0.00	7.6	136	128	644	0.00	1190	686	697	728	1060
26	0.00	27	147	94	133	486	277	1160	668	997	741	1620
27	117	101	104	13	124	501	227	886	626	1050	869	1610
28	0.00	0.00	153	120	198	471	324	860	626	1060	877	1620
29	0.00	0.00	140	19	210	538	236	594	869	461	909	1620
30	0.00	0.00	120	160	---	505	228	456	970	286	900	441
31	0.00	---	92	170	---	594	---	983	---	512	931	---
TOTAL	10030.50	1565.10	2047.60	3451.00	4532	13580	11690.00	17797	30284	23492	17225	23414
MEAN	324	52.2	66.1	111	156	438	390	574	1009	758	556	780
MAX	742	215	153	170	240	718	658	1190	1750	1130	931	1620
MIN	0.00	0.00	0.00	0.00	40	129	0.00	217	457	286	33	10
AC-FT	19900	3100	4060	6850	8990	26940	23190	35300	60070	46600	34170	46440

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2004, BY WATER YEAR (WY)

	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	327	259	267	250	252	296	516	848	931	836	669	510																																																																	
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1928 - 2004	
ANNUAL TOTAL	180004.90		159108.20			
ANNUAL MEAN	493		435		498	
HIGHEST ANNUAL MEAN					748	
LOWEST ANNUAL MEAN					196	
HIGHEST DAILY MEAN	1760		1750		2080	
LOWEST DAILY MEAN	0.00		0.00		0.00	
ANNUAL SEVEN-DAY MINIMUM	15		15		0.00	
ANNUAL RUNOFF (AC-FT)	357000		315600		360800	
10 PERCENT EXCEEDS	1210		962		1090	
50 PERCENT EXCEEDS	287		336		461	
90 PERCENT EXCEEDS	0.00		0.00		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<sup>2</sup>.

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, excluding 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, 88,579 acre-ft, June 18, elevation, 6,949.59 ft; minimum, 26,952 acre-ft, Feb. 17, elevation, 6,895.32 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81105	63801	41904	32501	28953	28204	49458	72495	87766	88036	87823	87409
2	80802	62901	41364	32527	28811	28065	50033	73625	88137	87509	88107	87495
3	81105	62114	40699	32509	28703	28106	50802	74310	88123	87679	87652	87281
4	81409	60992	40146	32394	28478	28212	51509	75918	87183	87567	87652	87622
5	82513	60035	39738	32207	28015	28361	52504	77486	87624	87226	87566	87894
6	83525	59025	39035	31799	28089	28444	53554	78757	88494	87510	87523	87736
7	84546	58155	38712	31754	28122	28353	54462	79586	87908	87738	87979	87595
8	85261	57384	38115	31579	27999	28636	55424	79804	86899	87638	87466	87311
9	86008	56441	37025	31447	28007	28886	56711	79626	86686	87638	87125	87240
10	86120	55611	36394	31509	27786	29543	58107	79749	86445	87667	87480	86970
11	86093	54902	35459	31377	27581	29916	59495	79395	86105	87225	87778	87140
12	86290	53748	34252	31377	27589	30164	60811	78690	86601	87168	88036	87452
13	86134	52731	33931	31316	27410	30508	62200	78432	87409	87395	88149	87965
14	85979	51599	33913	31167	27177	30862	63480	78175	87111	87593	88135	87652
15	84755	50645	33556	31053	27137	31342	64583	78323	86644	87679	88236	87111
16	83511	49745	33465	30810	27089	31905	65270	77755	87878	87851	87894	85937
17	82000	49061	33194	30862	27040	32456	66021	78093	88380	87807	87908	84224
18	80528	48698	33221	30766	27193	33447	66423	77339	88036	87552	87951	84420
19	79109	48294	32995	30560	27218	34215	66840	76493	88093	87297	87979	84015
20	77553	47967	33031	30146	27137	35346	67079	76948	87880	87636	87965	82291
21	76104	47716	33040	30077	27185	36700	67055	76626	87595	87908	88107	80679
22	74760	46874	32770	30043	27266	37960	67041	77177	87367	87878	88279	78974
23	73151	46017	32608	29814	27226	39213	67067	78242	87667	87367	87979	77311
24	71686	45781	32715	29661	27331	40327	67306	81848	88352	87225	87851	77406
25	70648	45441	32662	29653	27468	41955	67306	82956	88024	87126	87438	78514
26	69669	44849	32697	29407	27574	43302	68031	84084	87624	86999	86928	80857
27	68796	44459	32643	29195	27639	44650	68846	85261	87679	87438	86814	82388
28	67917	44010	32572	29162	27696	45643	70002	86715	87097	87937	87240	83804
29	66814	43332	32456	28844	27860	46551	70856	87652	87367	87666	87367	85656
30	65883	42735	32403	28895	---	47510	71738	87395	87794	87509	87381	85951
31	64820	---	32420	29011	---	48666	---	87552	---	87595	87466	---
MAX	86290	63801	41904	32527	28953	48666	71738	87652	88494	88036	88279	87965
MIN	64820	42735	32403	28844	27040	28065	49458	72495	86105	86999	86814	77311
a	6931.83	6912.48	6901.77	6897.83	6896.44	6918.06	6937.26	6948.87	6949.04	6948.90	6948.81	6947.74
b	-16657	-22085	-10315	-3409	-1151	+20806	+23072	+15814	+242	-199	-129	-1515

CAL YR 2003 b -11621

WTR YR 2004 b +4474

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<sup>2</sup>.

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<sup>3</sup>/s, June 23, 1925, gage height, 11.3 ft, present datum; minimum daily, 0.1 ft<sup>3</sup>/s, many days in 1931.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	3.7	3.1	e1.9	e1.5	e1.8	2.7	2.8	5.9	5.0	4.6	4.7
2	3.2	3.7	3.1	e1.8	e1.8	e1.8	2.7	2.8	5.9	5.0	4.6	4.7
3	2.4	3.6	3.1	e1.7	e1.7	e1.6	2.7	2.9	5.9	5.0	4.7	4.6
4	2.4	3.6	3.0	e1.5	e1.6	1.7	2.8	2.9	5.7	4.9	4.6	4.7
5	2.4	3.6	3.0	e1.5	e1.5	1.7	2.8	2.9	5.5	4.8	4.7	4.7
6	4.8	3.6	2.8	e1.5	e1.4	1.7	2.8	2.9	5.6	4.7	4.8	4.7
7	5.8	3.5	3.2	1.7	1.4	1.7	2.8	2.8	5.9	4.7	4.8	4.8
8	5.6	3.5	2.8	1.8	1.4	1.7	2.8	2.8	5.5	4.8	4.8	4.7
9	5.8	3.8	2.7	1.7	1.4	1.9	2.8	2.7	5.4	4.8	4.7	4.7
10	5.9	3.0	2.7	1.7	1.4	2.1	2.8	2.8	5.4	4.7	4.7	4.7
11	5.8	2.2	2.6	1.7	1.4	2.2	2.8	2.8	5.2	4.7	4.7	4.7
12	5.6	2.5	2.6	1.7	1.4	2.2	2.8	2.7	5.1	4.6	4.8	4.7
13	5.6	3.5	2.6	1.7	1.4	2.2	2.8	2.8	5.2	4.5	4.9	4.8
14	5.5	3.5	2.6	1.6	1.4	2.4	2.8	2.8	5.4	4.6	4.9	4.9
15	5.4	3.4	2.6	1.6	1.4	2.6	2.8	2.8	5.1	4.7	4.9	4.8
16	5.1	3.4	2.5	1.6	1.7	2.7	2.9	2.8	5.1	4.8	4.8	4.7
17	4.3	3.4	2.5	1.6	1.7	2.7	2.9	2.8	5.4	4.9	4.7	4.5
18	2.6	3.4	2.5	1.6	1.6	2.8	3.0	2.9	5.4	4.8	4.7	4.2
19	2.4	3.3	2.6	1.6	1.6	2.9	3.0	2.9	5.3	4.8	4.7	4.2
20	2.4	3.3	2.3	e1.5	1.6	2.9	3.1	2.9	5.3	4.7	4.8	3.9
21	2.4	3.3	1.7	e1.5	1.6	3.0	3.0	2.9	5.1	4.8	4.8	3.3
22	2.3	3.3	1.7	e1.5	1.6	3.1	2.9	2.9	5.1	4.8	4.8	3.3
23	2.3	3.2	1.6	e1.6	1.6	3.1	2.8	2.9	5.0	4.8	4.8	3.2
24	2.3	3.2	2.5	e1.6	1.6	3.0	2.8	2.7	5.1	4.7	4.8	3.1
25	2.3	3.2	2.5	e1.6	1.6	2.9	2.8	3.8	5.1	4.6	4.8	3.0
26	2.2	3.2	1.8	e1.6	1.7	3.0	2.8	5.2	5.0	4.6	4.7	3.0
27	2.2	3.2	e1.7	e1.6	e1.8	2.9	2.8	6.0	4.8	4.7	4.6	3.0
28	2.6	3.2	e1.6	e1.5	e1.6	2.8	2.9	7.2	4.8	4.7	4.6	3.7
29	3.7	3.2	e1.8	e1.4	e1.6	2.8	2.9	7.2	4.7	4.7	4.7	4.7
30	3.7	3.2	e1.6	e1.5	---	2.9	2.8	6.3	4.8	4.7	4.7	5.1
31	3.7	---	e1.5	e1.5	---	2.8	---	6.0	---	4.6	4.7	---
TOTAL	116.5	99.7	74.9	49.9	45.0	75.6	85.1	109.6	158.7	147.2	146.9	127.8
MEAN	3.76	3.32	2.42	1.61	1.55	2.44	2.84	3.54	5.29	4.75	4.74	4.26
MAX	5.9	3.8	3.2	1.9	1.8	3.1	3.1	7.2	5.9	5.0	4.9	5.1
MIN	2.2	2.2	1.5	1.4	1.4	1.6	2.7	2.7	4.7	4.5	4.6	3.0
AC-FT	231	198	149	99	89	150	169	217	315	292	291	253
a	20130	14220	12860	10470	10560	13080	19990	20870	21620	22330	18740	23220

e Estimated.

a Diversion, in acre-feet, to Big Creek Powerplant No. 1 (station 11238100), provided by Southern California Edison Co.

## SAN JOAQUIN RIVER BASIN

## 11237000 BIG CREEK BELOW HUNTINGTON LAKE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.61	1.61	1.62	1.43	1.42	1.78	2.84	8.80	8.83	9.69	2.24	1.78
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1925 - 2004	
ANNUAL TOTAL	1445.9		1236.9			
ANNUAL MEAN	3.96		3.38		3.26	
HIGHEST ANNUAL MEAN					45.9 1926	
LOWEST ANNUAL MEAN					0.35 1931	
HIGHEST DAILY MEAN	8.7	May 28	7.2	May 28	1160	May 23 1926
LOWEST DAILY MEAN	1.5	Dec 31	1.4	Jan 29	0.10	Jan 18 1931
ANNUAL SEVEN-DAY MINIMUM	1.8	Dec 25	1.4	Feb 6	0.10	Aug 21 1931
MAXIMUM PEAK FLOW			8.3 May 28		2040 Jun 23 1925	
MAXIMUM PEAK STAGE			2.69 May 28		11.30 Jun 23 1925	
ANNUAL RUNOFF (AC-FT)	2870		2450		2360	
TOTAL DIVERSION (AC-FT) a	212000		208100			
10 PERCENT EXCEEDS	5.5		5.1		4.5	
50 PERCENT EXCEEDS	3.7		3.0		1.8	
90 PERCENT EXCEEDS	2.5		1.6		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<sup>2</sup>.

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<sup>3</sup>/s, Jan. 2, 1997, gage height, 12.65 ft, from rating curve extended above 1,100 ft<sup>3</sup>/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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.22	0.25	0.62	4.2	2.5	4.3	94	146	39	4.0	0.26	0.13
2	0.22	0.24	0.57	2.3	2.5	4.3	70	159	36	4.4	0.27	0.13
3	0.23	0.30	0.53	1.3	2.5	4.3	74	169	32	4.8	0.28	0.13
4	0.23	0.30	0.55	1.3	2.4	4.3	91	169	29	4.0	0.27	0.13
5	0.22	0.31	1.9	1.3	2.4	4.3	112	154	26	3.1	0.24	0.13
6	0.22	0.31	2.3	1.3	2.4	4.3	121	134	23	2.6	0.23	0.13
7	0.22	0.35	2.8	1.3	2.4	5.0	119	120	21	2.2	0.23	0.13
8	0.21	0.38	1.9	1.3	2.4	6.8	135	114	20	2.0	0.22	0.13
9	0.21	1.5	1.1	1.4	2.4	8.8	145	109	19	1.8	0.21	0.13
10	0.21	0.96	1.0	1.4	2.4	12	153	103	19	1.6	0.20	0.13
11	0.21	0.64	0.95	1.7	2.3	18	153	84	17	1.4	0.20	0.13
12	0.21	0.55	0.94	1.8	2.3	21	153	77	15	1.3	0.19	0.13
13	0.21	0.60	0.91	1.9	2.3	23	144	78	14	1.1	0.19	0.13
14	0.21	0.55	0.96	2.0	2.3	26	130	80	13	0.99	0.19	0.13
15	0.21	0.59	1.0	2.1	2.4	35	121	76	12	0.89	0.19	0.12
16	0.21	0.62	1.1	2.1	3.8	51	110	71	11	0.82	0.17	0.10
17	0.21	0.59	1.1	2.1	4.7	58	93	70	9.9	0.77	0.14	0.11
18	0.20	0.61	1.0	2.1	4.5	81	77	64	9.3	0.68	0.14	0.12
19	0.20	0.64	1.1	2.2	4.5	81	71	58	8.6	0.64	0.14	0.13
20	0.20	0.64	1.8	2.2	4.5	87	72	54	8.1	0.57	0.14	0.13
21	0.20	0.60	1.6	2.2	4.5	99	82	51	7.3	0.53	0.14	0.14
22	0.20	0.46	1.3	2.2	4.3	106	93	47	6.5	0.48	0.14	0.14
23	0.20	0.41	1.2	2.2	4.3	104	99	46	5.9	0.42	0.14	0.13
24	0.20	0.47	2.0	2.2	4.3	106	119	46	5.4	0.38	0.14	0.13
25	0.20	0.50	2.8	2.3	4.3	96	142	46	5.1	0.34	0.15	0.13
26	0.20	0.47	1.9	2.3	4.3	78	158	46	4.7	0.30	0.14	0.13
27	0.20	0.46	1.6	2.3	4.4	65	174	43	4.3	0.27	0.14	0.13
28	0.19	0.55	1.7	2.3	4.4	76	171	77	3.8	0.25	0.14	0.13
29	0.19	0.67	1.6	2.3	4.3	94	150	58	3.5	0.24	0.14	0.13
30	0.19	0.68	1.4	2.3	---	104	137	46	3.9	0.24	0.14	0.13
31	0.21	---	1.3	2.4	---	105	---	42	---	0.26	0.14	---
TOTAL	6.44	16.20	42.53	62.3	97.0	1572.4	3563	2637	432.3	43.37	5.65	3.85
MEAN	0.21	0.54	1.37	2.01	3.34	50.7	119	85.1	14.4	1.40	0.18	0.13
MAX	0.23	1.5	2.8	4.2	4.7	106	174	169	39	4.8	0.28	0.14
MIN	0.19	0.24	0.53	1.3	2.3	4.3	70	42	3.5	0.24	0.14	0.10
AC-FT	13	32	84	124	192	3120	7070	5230	857	86	11	7.6

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2004, BY WATER YEAR (WY)

MEAN	1.81	5.45	10.3	11.6	14.0	28.4	94.2	198	115	19.9	2.31	1.32
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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1928 - 2004

ANNUAL TOTAL	13246.24	8482.04	
ANNUAL MEAN	36.3	23.2	42.1
HIGHEST ANNUAL MEAN			118
LOWEST ANNUAL MEAN			6.16
HIGHEST DAILY MEAN	300	May 24	2200
LOWEST DAILY MEAN	0.18	Sep 16	0.00
ANNUAL SEVEN-DAY MINIMUM	0.18	Sep 16	0.04
MAXIMUM PEAK FLOW			5500
MAXIMUM PEAK STAGE			12.65
ANNUAL RUNOFF (AC-FT)	26270	16820	30520
10 PERCENT EXCEEDS	101	97	130
50 PERCENT EXCEEDS	8.4	2.0	5.4
90 PERCENT EXCEEDS	0.21	0.14	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 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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.00	0.17	0.00	0.00	0.00	35	145	39	3.6	0.00	0.0
2	0.0	0.00	0.13	0.00	0.00	0.00	69	158	36	4.0	0.00	0.0
3	0.0	0.00	0.09	0.00	0.00	0.00	73	168	32	4.4	0.0	0.0
4	0.0	0.00	0.10	0.00	0.00	0.00	90	168	29	3.6	0.0	0.0
5	0.0	0.00	1.4	0.00	0.00	0.00	107	153	26	2.7	0.0	0.0
6	0.0	0.00	1.7	0.00	0.00	0.00	117	133	23	2.2	0.0	0.0
7	0.0	0.00	2.2	0.00	0.00	0.00	113	119	21	1.8	0.0	0.0
8	0.0	0.00	1.4	0.00	0.00	0.00	121	113	20	1.6	0.0	0.0
9	0.0	e0.98	0.25	0.00	0.00	0.00	123	108	19	1.4	0.0	0.0
10	0.0	e0.44	0.00	0.00	0.00	0.00	124	102	19	1.2	0.0	0.0
11	0.0	0.12	0.00	0.00	0.00	0.00	123	83	17	0.99	0.0	0.0
12	0.0	0.03	0.00	0.00	0.00	0.00	123	76	15	0.89	0.0	0.0
13	0.0	0.09	0.00	0.00	0.00	0.00	124	77	14	0.69	0.0	0.0
14	0.0	0.03	0.00	0.00	0.00	0.00	123	79	13	0.58	0.0	0.0
15	0.0	0.07	0.00	0.00	0.00	0.00	119	75	12	0.48	0.0	0.0
16	0.0	0.08	0.00	0.00	0.00	0.00	109	70	11	0.41	0.0	0.0
17	0.0	0.06	0.00	0.00	0.00	0.00	92	69	9.5	0.36	0.0	0.0
18	0.0	0.08	0.00	0.00	0.00	0.00	76	63	8.9	0.27	0.0	0.0
19	0.0	0.10	0.00	0.00	0.00	0.00	70	57	8.2	0.24	0.0	0.0
20	0.0	0.09	0.00	0.00	0.00	0.00	71	53	7.7	0.18	0.0	0.0
21	0.0	0.05	0.00	0.00	0.00	0.00	81	50	6.9	0.14	0.0	0.0
22	0.0	0.0	0.00	0.00	0.00	0.00	92	46	6.1	0.08	0.0	0.0
23	0.0	0.0	0.00	0.00	0.00	0.00	98	45	5.5	0.02	0.0	0.0
24	0.0	0.09	0.00	0.00	0.00	63	110	45	5.0	0.00	0.0	0.0
25	0.0	0.09	0.00	0.00	0.00	95	120	45	4.7	0.00	0.0	0.0
26	0.0	0.07	0.00	0.00	0.00	77	145	46	4.3	0.00	0.0	0.0
27	0.0	0.08	0.00	0.00	0.00	64	173	43	3.9	0.00	0.0	0.0
28	0.0	0.15	0.00	0.00	0.00	75	170	75	3.4	0.00	0.0	0.0
29	0.0	0.21	0.00	0.00	0.00	47	149	58	3.1	0.00	0.0	0.0
30	0.0	0.23	0.00	0.00	---	0.00	136	46	3.5	0.00	0.0	0.0
31	0.0	---	0.00	0.00	---	0.00	---	42	---	0.00	0.0	---
TOTAL	0.0	3.14	7.44	0.00	0.00	421.00	3276	2610	426.7	31.83	0.00	0.0
MEAN	0.00	0.10	0.24	0.00	0.00	13.6	109	84.2	14.2	1.03	0.00	0.00
MAX	0.00	0.98	2.2	0.00	0.00	95	173	168	39	4.4	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	35	42	3.1	0.00	0.00	0.00
AC-FT	0.00	6.2	15	0.00	0.00	835	6500	5180	846	63	0.00	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	0.41	1.93	1.81	3.92	6.92	23.1	86.9	139	57.6	8.76	1.19	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	0.00	0.00	0.00	0.00	0.00	0.00	40.7	53.3	9.14	0.83	0.00	0.00						
(WY)	1989	1989	1989	1987	1987	1992	1995	1997	1992	1994	1988	1988						

## SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1987 - 2004	
ANNUAL TOTAL	12605.35		6776.11			
ANNUAL MEAN	34.5		18.5		29.3	
HIGHEST ANNUAL MEAN					67.8	
LOWEST ANNUAL MEAN					13.5	
HIGHEST DAILY MEAN	299	May 24	173	Apr 27	888	May 16 1996
LOWEST DAILY MEAN	0.00	Mar 14	0.00	Oct 1	0.00	Nov 12 1986
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 25	0.00	Oct 1	0.00	Dec 5 1986
ANNUAL RUNOFF (AC-FT)	25000		13440		21190	
10 PERCENT EXCEEDS	100		80		99	
50 PERCENT EXCEEDS	6.8		0.00		1.8	
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<sup>2</sup>.

PERIOD OF RECORD.—October 1986 to December 1995, April to November 1996, March 1997 to current year.

GAGE.—Acoustic-velocity meter. When spill occurs, 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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.20	0.25	0.45	4.2	2.5	4.3	59	0.77	0.42	0.43	0.26	0.15
2	0.21	0.24	0.44	2.3	2.5	4.3	0.70	0.79	0.43	0.43	0.27	0.15
3	0.22	0.30	0.44	1.3	2.5	4.3	0.71	0.82	0.43	0.43	0.31	0.15
4	0.23	0.30	0.45	1.3	2.4	4.3	0.78	0.82	0.43	0.43	0.31	0.17
5	0.23	0.31	0.51	1.3	2.4	4.3	5.4	0.70	0.42	0.43	0.29	0.16
6	0.21	0.31	0.56	1.3	2.4	4.3	3.7	0.67	0.43	0.43	0.28	0.15
7	0.20	0.35	0.55	1.3	2.4	5.0	6.1	0.64	0.42	0.43	0.28	0.15
8	0.20	0.38	0.55	1.3	2.4	6.8	14	0.64	0.43	0.43	0.27	0.15
9	0.20	e0.52	0.85	1.4	2.4	8.8	22	0.62	0.43	0.42	0.25	0.15
10	0.20	e0.52	1.0	1.4	2.4	12	29	0.63	0.43	0.42	0.24	0.14
11	0.21	0.52	0.95	1.7	2.3	18	30	0.61	0.43	0.41	0.23	0.14
12	0.21	0.52	0.94	1.8	2.3	21	30	0.77	0.41	0.41	0.22	0.14
13	0.21	0.51	0.91	1.9	2.3	23	20	0.99	0.42	0.41	0.21	0.14
14	0.20	0.52	0.96	2.0	2.3	26	7.0	1.0	0.42	0.41	0.19	0.15
15	0.21	0.52	1.0	2.1	2.4	35	2.2	1.0	0.37	0.41	0.18	0.15
16	0.21	0.54	1.1	2.1	3.8	51	0.98	0.99	0.41	0.41	0.19	0.15
17	0.22	0.53	1.1	2.1	4.7	58	0.90	0.99	0.41	0.41	0.18	0.15
18	0.22	0.53	1.0	2.1	4.5	81	0.87	0.99	0.42	0.41	0.17	0.16
19	0.21	0.54	1.1	2.2	4.5	81	0.80	0.99	0.40	0.40	0.17	0.16
20	0.21	0.55	1.8	2.2	4.5	87	0.79	0.99	0.36	0.39	0.17	0.17
21	0.21	0.55	1.6	2.2	4.5	99	0.84	0.98	0.38	0.39	0.17	0.18
22	0.21	0.49	1.3	2.2	4.3	106	0.87	0.98	0.42	0.40	0.18	0.18
23	0.21	0.42	1.2	2.2	4.3	104	1.1	0.98	0.43	0.40	0.19	0.17
24	0.21	0.38	2.0	2.2	4.3	43	8.5	0.98	0.43	0.38	0.20	0.16
25	0.21	0.41	2.8	2.3	4.3	0.63	22	0.76	0.43	0.34	0.20	0.15
26	0.21	0.40	1.9	2.3	4.3	0.61	13	0.36	0.43	0.30	0.19	0.15
27	0.21	0.38	1.6	2.3	4.4	0.60	0.86	0.37	0.43	0.27	0.19	0.14
28	0.21	0.40	1.7	2.3	4.4	0.60	0.86	2.4	0.43	0.25	0.18	0.17
29	0.20	0.46	1.6	2.3	4.3	47	0.81	0.42	0.43	0.24	0.17	0.15
30	0.20	0.45	1.4	2.3	---	104	0.77	0.41	0.43	0.24	0.16	0.15
31	0.23	---	1.3	2.4	---	105	---	0.43	---	0.26	0.15	---
TOTAL	6.52	13.10	35.06	62.3	97.0	1149.84	284.54	25.49	12.56	11.82	6.65	4.63
MEAN	0.21	0.44	1.13	2.01	3.34	37.1	9.48	0.82	0.42	0.38	0.21	0.15
MAX	0.23	0.55	2.8	4.2	4.7	106	59	2.4	0.43	0.43	0.31	0.18
MIN	0.20	0.24	0.44	1.3	2.3	0.60	0.70	0.36	0.36	0.24	0.15	0.14
AC-FT	13	26	70	124	192	2280	564	51	25	23	13	9.2

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
MEAN	0.59	0.84	0.91	1.20	2.24	8.20	20.1	32.1	39.9	15.3	0.91	0.55							
MAX	1.61	1.74	1.50	2.17	8.31	37.1	126	265	506	132	6.17	2.92							
(WY)	1999	1990	1990	1990	2002	2004	1997	1995	1998	1998	1998	1998							
MIN	0.13	0.31	0.40	0.37	0.35	0.00	0.53	0.63	0.42	0.38	0.16	0.13							
(WY)	1989	1991	2002	2002	1991	1991	2003	2003	2004	2004	1994	1987							

## SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1987 - 2004	
ANNUAL TOTAL	609.85		1709.51			
ANNUAL MEAN	1.67		4.67		9.46	
HIGHEST ANNUAL MEAN					56.5	1998
LOWEST ANNUAL MEAN					0.79	1991
HIGHEST DAILY MEAN	89	Mar 15	106	Mar 22	762	May 16 1996
LOWEST DAILY MEAN	0.17	Sep 30	0.14	Sep 10	0.00	Feb 15 1991
ANNUAL SEVEN-DAY MINIMUM	0.18	Sep 24	0.14	Sep 7	0.00	Feb 15 1991
ANNUAL RUNOFF (AC-FT)	1210		3390		6850	
10 PERCENT EXCEEDS	0.76		4.5		2.9	
50 PERCENT EXCEEDS	0.50		0.52		0.98	
90 PERCENT EXCEEDS	0.22		0.18		0.22	

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<sup>3</sup>/s, May 24, 1993; no flow for many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	499	464	532	0.00	0.00	0.00	0.00	0.00	727	614	0.00	800
2	654	459	298	0.00	0.00	0.00	0.00	95	373	746	351	797
3	316	574	289	0.00	0.00	0.00	0.00	873	705	542	780	853
4	317	455	313	0.00	0.00	0.00	0.00	78	545	673	642	661
5	383	381	532	0.00	0.00	0.00	0.00	342	0.00	741	802	639
6	217	376	390	0.00	0.00	0.00	0.00	215	0.00	654	550	796
7	318	415	396	0.00	0.00	0.00	0.00	532	790	495	0.00	765
8	450	395	456	0.00	0.00	0.00	0.00	709	1300	0.00	0.00	793
9	463	228	184	0.00	0.00	0.00	0.00	1050	1540	0.00	0.00	813
10	435	457	210	0.00	0.00	0.00	0.00	587	1540	0.00	0.00	918
11	523	391	207	0.00	0.00	0.00	0.00	777	1520	354	0.00	694
12	568	467	218	0.00	0.00	0.00	0.00	784	1320	419	0.00	773
13	566	455	0.00	0.00	0.00	0.00	0.00	760	1130	437	0.00	576
14	431	499	0.00	0.00	0.00	0.00	0.00	1110	1300	339	0.00	647
15	440	250	0.00	0.00	0.00	0.00	0.00	668	1300	522	0.00	855
16	546	251	0.00	0.00	0.00	0.00	0.00	868	787	484	0.00	777
17	548	410	0.00	0.00	0.00	0.00	0.00	449	562	291	0.00	1160
18	606	502	0.00	0.00	0.00	0.00	0.00	643	920	388	0.00	394
19	608	438	0.00	0.00	0.00	0.00	0.00	884	56	775	0.00	587
20	596	412	0.00	0.00	0.00	0.00	0.00	802	522	486	68	940
21	702	313	0.00	0.00	0.00	0.00	0.00	807	822	486	10	344
22	501	443	0.00	0.00	0.00	0.00	0.00	629	974	484	343	445
23	496	451	0.00	0.00	0.00	0.00	0.00	661	463	582	615	487
24	556	293	0.00	0.00	0.00	0.00	0.00	446	659	534	571	6.6
25	565	252	0.00	0.00	0.00	0.00	0.00	790	649	293	719	0.00
26	615	220	0.00	0.00	0.00	0.00	0.00	397	726	644	615	501
27	537	350	0.00	0.00	0.00	0.00	0.00	0.00	565	487	794	780
28	437	389	0.00	0.00	0.00	0.00	0.00	0.00	774	488	629	700
29	458	475	0.00	0.00	0.00	0.00	0.00	196	417	559	938	282
30	465	460	0.00	0.00	---	0.00	0.00	776	579	0.00	708	98
31	578	---	0.00	0.00	---	0.00	---	775	---	0.00	776	---
TOTAL	15394	11925	4025.00	0.00	0.00	0.00	0.00	17703.00	23565.00	13517.00	9911.00	18881.60
MEAN	497	398	130	0.00	0.00	0.00	0.00	571	786	436	320	629
MAX	702	574	532	0.00	0.00	0.00	0.00	1110	1540	775	938	1160
MIN	217	220	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	30530	23650	7980	0.00	0.00	0.00	0.00	35110	46740	26810	19660	37450

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2004, BY WATER YEAR (WY)

	309	243	264	260	221	224	387	769	899	679	543	448
MEAN	309	243	264	260	221	224	387	769	899	679	543	448
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	0.00	0.00	21.4	0.00	0.00	0.00	0.00	159	270	156	181	81.7
(WY)	1988	1988	1991	2004	1996	2004	2004	1991	1990	1992	1992	1992

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1988 - 2004	
ANNUAL TOTAL	148091.79		114921.60			
ANNUAL MEAN	406		314		438	
HIGHEST ANNUAL MEAN					720	
LOWEST ANNUAL MEAN					141	
HIGHEST DAILY MEAN	1570	Jun 18	1540	Jun 9	1910	May 24 1993
LOWEST DAILY MEAN	0.00	Mar 13	0.00	Dec 13	0.00	Oct 1 1987
ANNUAL SEVEN-DAY MINIMUM	0.00	Dec 13	0.00	Dec 13	0.00	Oct 1 1987
ANNUAL RUNOFF (AC-FT)	293700		227900		317500	
10 PERCENT EXCEEDS	864		780		943	
50 PERCENT EXCEEDS	381		252		384	
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<sup>3</sup>/s, Feb. 4, 1989.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.82	0.73	0.78	0.63	0.62	0.62	0.66	0.68	1.2	1.2	1.2	1.2
2	0.61	0.73	0.77	0.62	0.62	0.62	0.65	0.67	1.2	1.2	1.2	1.2
3	0.62	0.74	0.78	0.61	0.62	0.62	0.65	0.66	1.3	1.3	1.2	1.3
4	0.60	0.73	0.93	0.61	0.62	0.62	0.66	0.64	1.4	1.2	1.3	1.2
5	0.61	0.71	1.2	0.61	0.62	0.63	0.66	0.65	1.3	1.3	1.3	1.2
6	0.63	0.71	1.2	0.61	0.62	0.63	0.66	0.64	1.2	1.2	1.3	1.3
7	0.61	0.71	1.5	0.63	0.62	0.63	0.66	0.64	1.5	1.3	1.3	1.3
8	0.62	0.73	0.94	0.62	0.61	0.63	0.67	0.63	1.2	1.3	1.3	1.3
9	0.61	0.73	0.53	0.63	0.61	0.64	0.68	0.62	1.4	1.3	1.3	1.2
10	0.64	0.74	0.57	0.61	0.61	0.64	0.67	0.62	1.4	1.4	1.3	1.3
11	0.66	0.73	0.57	0.61	0.62	0.64	0.67	0.63	1.2	1.3	1.3	1.2
12	0.65	0.74	0.59	0.61	0.61	0.64	0.66	0.62	1.4	1.3	1.3	1.3
13	0.63	0.74	0.61	0.62	0.62	0.64	0.66	0.64	1.3	1.3	1.2	1.3
14	0.73	0.76	0.61	0.61	0.61	0.64	0.64	0.62	1.2	1.2	1.3	1.2
15	0.67	0.76	0.62	0.62	0.59	0.67	0.64	0.65	1.3	1.2	1.3	1.3
16	0.65	0.76	0.62	0.62	0.63	0.67	0.64	0.64	1.4	1.2	1.3	1.3
17	0.65	0.78	0.62	0.62	0.62	0.68	0.62	0.63	1.6	1.2	1.3	1.3
18	0.63	0.78	0.62	0.62	0.62	0.69	0.61	0.61	1.3	1.2	1.3	1.3
19	0.64	0.81	0.62	0.61	0.61	0.69	0.62	0.62	1.4	1.3	1.3	1.3
20	0.64	0.78	0.63	0.60	0.61	0.70	0.60	0.64	1.2	1.2	1.3	1.3
21	0.60	0.78	0.62	0.61	0.62	0.71	0.61	0.64	1.2	1.4	1.3	1.3
22	0.60	0.79	0.62	0.62	0.62	0.71	0.60	0.64	1.3	1.2	1.3	1.3
23	0.69	0.79	0.63	0.62	0.62	0.71	0.60	0.64	1.3	1.2	1.2	1.2
24	0.66	0.79	0.69	0.62	0.61	0.71	0.61	0.87	1.3	1.2	1.2	1.2
25	0.58	0.78	0.66	0.62	0.63	0.69	0.61	1.2	1.3	1.2	1.3	1.2
26	0.55	0.78	0.63	0.62	0.62	0.69	0.63	1.2	1.3	1.2	1.2	1.3
27	0.70	0.78	0.62	0.62	0.62	0.66	0.68	1.2	1.2	1.2	1.3	1.2
28	0.72	0.79	0.62	0.62	0.61	0.65	0.67	1.3	1.2	1.2	1.5	1.3
29	0.73	0.84	0.63	0.62	0.61	0.66	0.67	1.4	1.2	1.2	1.4	1.2
30	0.72	0.81	0.63	0.62	---	0.67	0.68	1.4	1.2	1.2	1.3	1.2
31	0.81	---	0.62	0.62	---	0.67	---	1.3	---	1.2	1.3	---
TOTAL	20.28	22.83	22.28	19.13	17.87	20.47	19.34	24.54	38.9	38.5	39.9	37.7
MEAN	0.65	0.76	0.72	0.62	0.62	0.66	0.64	0.79	1.30	1.24	1.29	1.26
MAX	0.82	0.84	1.5	0.63	0.63	0.71	0.68	1.4	1.6	1.4	1.5	1.3
MIN	0.55	0.71	0.53	0.60	0.59	0.62	0.60	0.61	1.2	1.2	1.2	1.2
AC-FT	40	45	44	38	35	41	38	49	77	76	79	75

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2004, BY WATER YEAR (WY)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	0.80	0.74	0.78	0.77	0.77	0.88	0.96	0.82	1.25	1.28	1.28	1.29	1.29	1.29	1.29	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	1.50	1.50	1.50	1.50
(WY)	2001	2001	1992	2001	2001	1992	1992	1995	1995	1992	1992	1992	1992	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	1.11	1.11	1.11	1.11
(WY)	1998	1997	1998	1996	1996	1996	1996	1996	1998	2001	2001	2001	2001	2001	2001	2001

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1989 - 2004	
ANNUAL TOTAL	333.06		321.74			
ANNUAL MEAN	0.91		0.88		0.97	
HIGHEST ANNUAL MEAN					1.38	
LOWEST ANNUAL MEAN					0.81	
HIGHEST DAILY MEAN	1.5	Jun 25	1.6	Jun 17	3.4	Apr 2 1992
LOWEST DAILY MEAN	0.53	Dec 9	0.53	Dec 9	0.31	Feb 4 1989
ANNUAL SEVEN-DAY MINIMUM	0.56	May 14	0.59	Dec 9	0.51	Nov 1 1996
MAXIMUM PEAK FLOW			4.0		unknown	
MAXIMUM PEAK STAGE			1.13		unknown	
ANNUAL RUNOFF (AC-FT)	661		638		702	
10 PERCENT EXCEEDS	1.3		1.3		1.4	
50 PERCENT EXCEEDS	0.80		0.69		0.84	
90 PERCENT EXCEEDS	0.61		0.61		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<sup>2</sup>.

PERIOD OF RECORD.—May 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<sup>3</sup>/s, Jan. 2, 1997, gage height, 10.34 ft, from rating curve extended above 900 ft<sup>3</sup>/s; no flow several days in 1925 and 1931.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	3.3	2.3	4.1	1.7	4.3	2.3	2.3	2.5	2.8	2.7	2.6
2	2.4	3.2	2.0	3.9	2.6	3.0	2.3	2.3	2.4	2.8	2.7	2.6
3	4.6	3.3	1.9	2.7	2.5	2.7	2.3	2.4	2.4	2.8	2.7	2.6
4	2.5	3.3	1.8	2.1	2.2	2.5	2.3	2.4	2.5	2.9	2.7	2.8
5	2.2	3.2	2.0	2.0	2.1	2.4	2.3	2.4	2.5	2.9	2.7	2.8
6	2.2	3.1	1.8	1.9	2.0	2.4	2.2	2.4	2.5	2.9	2.6	2.8
7	3.3	3.1	2.1	1.9	2.0	2.4	2.2	2.4	2.5	2.9	2.6	2.8
8	5.9	3.2	2.3	1.9	2.0	2.3	2.2	2.5	2.5	2.8	2.5	2.8
9	4.6	3.2	2.2	1.9	1.9	2.2	2.2	2.5	2.5	2.9	2.5	2.8
10	2.4	3.0	2.0	1.9	1.9	2.2	2.2	2.5	2.5	2.9	2.4	2.7
11	2.4	3.0	2.2	1.9	1.9	2.1	2.2	2.5	2.4	2.9	2.5	2.7
12	2.4	3.0	1.8	1.9	1.9	2.1	2.3	2.5	2.5	2.9	2.4	2.7
13	2.4	3.0	1.7	1.9	1.9	1.9	2.3	2.5	2.5	2.9	2.4	2.6
14	187	3.0	2.1	1.9	1.9	1.8	2.3	2.5	2.6	2.8	2.4	2.7
15	3.0	3.3	1.8	1.9	1.9	1.8	2.3	2.5	2.6	2.8	2.7	2.8
16	2.5	3.1	1.7	1.8	2.3	96	2.2	2.5	2.6	2.7	2.5	2.8
17	2.4	2.6	1.7	1.8	2.1	2.0	2.3	2.5	2.6	2.7	2.6	2.8
18	2.4	9.4	1.7	1.8	2.4	1.9	2.2	2.5	2.6	2.5	2.6	2.7
19	2.4	20	1.7	1.8	2.2	1.8	2.2	2.6	2.6	2.6	2.6	2.7
20	16	17	1.8	1.8	2.1	1.8	2.2	2.6	2.6	2.6	2.6	2.7
21	34	6.3	1.8	1.8	2.1	1.8	2.3	2.6	2.7	2.6	2.6	2.7
22	10	2.3	1.7	1.8	2.5	1.8	2.5	2.6	2.7	2.6	2.6	2.7
23	3.3	2.3	1.8	1.8	2.4	1.8	2.4	2.6	2.7	2.7	2.6	2.9
24	3.3	2.4	3.4	1.8	2.3	1.8	2.4	2.6	2.7	2.7	2.6	3.0
25	3.3	2.4	3.2	1.7	5.8	1.9	2.4	2.7	2.8	2.7	2.6	2.9
26	3.2	2.4	2.2	1.7	8.9	2.0	2.4	2.6	2.8	2.7	2.6	2.9
27	3.1	2.4	1.9	1.7	5.8	22	2.4	2.6	2.8	2.7	2.6	2.8
28	3.1	2.4	1.8	1.7	3.8	21	2.4	2.8	2.8	2.7	2.6	2.8
29	3.1	2.4	1.8	1.7	3.1	22	2.4	2.5	2.8	2.7	2.6	3.0
30	3.1	2.2	2.4	1.7	---	1.8	2.4	2.5	2.8	2.7	2.6	2.8
31	3.2	---	1.9	1.7	---	2.0	---	2.5	---	2.7	2.6	---
TOTAL	328.1	126.8	62.5	61.9	78.2	219.5	69.0	77.9	78.0	85.5	80.0	83.0
MEAN	10.6	4.23	2.02	2.00	2.70	7.08	2.30	2.51	2.60	2.76	2.58	2.77
MAX	187	20	3.4	4.1	8.9	96	2.5	2.8	2.8	2.9	2.7	3.0
MIN	2.2	2.2	1.7	1.7	1.7	1.8	2.2	2.3	2.4	2.5	2.4	2.6
AC-FT	651	252	124	123	155	435	137	155	155	170	159	165
a	20100	14350	13660	10560	10860	16040	20700	21260	21890	22360	18970	23220
b	37630	25040	32240	27640	22760	28340	31680	43830	43220	49220	38680	49590

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 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.75	37.6	51.8	49.1	23.0	37.4	10.9	30.6	52.5	23.5	5.05	5.39
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	2.30	2.23	2.23	2.20	2.27	2.33
(WY)	1988	1988	1995	1989	1988	2002	2004	1987	1987	1987	1988	1987

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1987 - 2004	
ANNUAL TOTAL	1763.4		1350.4			
ANNUAL MEAN	4.83		3.69		28.0	
HIGHEST ANNUAL MEAN					171 1997	
LOWEST ANNUAL MEAN					2.34 1988	
HIGHEST DAILY MEAN	214	Sep 25	187	Oct 14	3540	Jan 2 1997
LOWEST DAILY MEAN	1.7	Dec 13	1.7	Dec 13	1.0	Dec 8 1994
ANNUAL SEVEN-DAY MINIMUM	1.7	Dec 16	1.7	Jan 25	1.1	Dec 4 1994
MAXIMUM PEAK FLOW			1260	Mar 16	7400	Jan 2 1997
MAXIMUM PEAK STAGE			5.22	Mar 16	10.34	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	3500		2680		20290	
TOTAL DIVERSION (AC-FT) a	217500		214000			
TOTAL DIVERSION (AC-FT) b	504300		429900		485300	
10 PERCENT EXCEEDS	4.0		3.2		11	
50 PERCENT EXCEEDS	2.7		2.5		3.4	
90 PERCENT EXCEEDS	2.4		1.8		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<sup>2</sup>.

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<sup>3</sup>/s, Jan. 2, 1997; minimum daily, 3.0 ft<sup>3</sup>/s, at times in several years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	3.5	3.6	3.5	3.5	e3.5	3.5	3.5	3.5	3.5	3.5	3.5
2	3.5	3.5	3.6	3.5	3.5	e3.5	3.5	3.5	3.5	3.5	3.5	3.5
3	3.5	3.5	3.6	3.5	3.5	e3.5	3.5	3.5	3.5	3.5	3.5	3.5
4	3.5	3.5	3.6	3.5	3.5	e3.5	3.5	3.5	3.5	3.5	3.5	3.5
5	3.5	3.5	3.6	3.5	3.5	e3.5	3.5	3.5	3.5	3.5	3.5	3.5
6	3.4	3.5	3.6	3.5	3.5	e3.5	3.5	3.5	3.5	3.5	3.5	3.5
7	3.5	3.5	3.6	3.5	3.5	e3.5	3.5	3.5	3.5	3.5	3.5	3.5
8	3.5	3.5	3.6	3.5	e3.6	e3.5	3.5	3.5	3.5	3.5	3.5	3.5
9	3.5	9.8	3.6	3.5	e3.5	e3.5	3.5	3.5	3.5	3.5	3.5	3.5
10	3.5	3.5	3.6	3.5	e3.5	e3.5	3.5	3.5	3.5	3.6	3.5	3.5
11	3.5	3.5	3.6	3.5	e3.5	3.5	3.5	3.5	3.5	3.6	3.5	3.5
12	3.5	3.6	3.6	3.5	e3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
13	3.5	3.5	3.6	3.5	e3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5
14	3.5	3.5	3.6	3.5	e3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
15	3.5	3.5	3.6	3.5	e3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
16	3.5	3.5	3.6	3.5	e3.6	10	3.5	3.5	3.5	3.5	3.5	3.5
17	3.5	3.5	3.6	3.5	e3.6	34	3.5	3.5	3.5	3.6	3.5	3.5
18	3.5	3.4	3.6	3.6	e3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
19	3.5	3.4	3.5	3.5	e3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5
20	3.5	3.4	3.6	3.5	e3.6	3.5	3.2	3.5	3.5	3.6	3.5	3.5
21	3.5	3.3	3.6	3.5	e3.6	3.5	3.5	3.5	3.5	3.6	3.5	3.5
22	3.5	3.4	3.6	3.5	e3.5	3.5	3.5	3.5	3.5	3.6	3.5	3.5
23	3.5	3.5	3.6	3.5	e3.5	3.5	3.5	3.5	3.5	3.6	3.5	3.5
24	3.5	3.5	3.6	3.5	e3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
25	3.5	3.6	3.5	3.5	e3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
26	3.5	3.6	3.5	3.5	e3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
27	3.5	3.6	3.5	3.5	e3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5
28	3.5	3.6	3.5	3.5	e3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
29	3.5	3.6	3.5	3.5	e3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
30	3.5	3.6	3.5	3.5	---	3.5	3.5	3.5	3.5	3.5	3.5	3.5
31	3.5	---	3.5	3.5	---	3.5	---	3.5	---	3.5	3.5	---
TOTAL	108.4	111.4	110.8	108.6	102.3	145.5	104.7	108.5	105.0	109.2	108.5	105.0
MEAN	3.50	3.71	3.57	3.50	3.53	4.69	3.49	3.50	3.50	3.52	3.50	3.50
MAX	3.5	9.8	3.6	3.6	3.6	34	3.5	3.5	3.5	3.6	3.5	3.5
MIN	3.4	3.3	3.5	3.5	3.5	3.5	3.2	3.5	3.5	3.5	3.5	3.5
AC-FT	215	221	220	215	203	289	208	215	208	217	215	208
a	55330	38830	43110	61360	53920	111600	153500	149400	134800	104400	70870	68030

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 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.03	3.86	19.9	554	244	181	148	1027	1643	445	30.7	4.74
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	3.50	3.29	3.30	3.29
(WY)	1993	1993	1993	1993	1993	1994	1994	1994	2004	1997	1997	1993

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1987 - 2004	
ANNUAL TOTAL	60019.1		1327.9			
ANNUAL MEAN	164		3.63		359	
HIGHEST ANNUAL MEAN					1202	
LOWEST ANNUAL MEAN					3.38	
HIGHEST DAILY MEAN	5030	Jun 3	34	Mar 17	32000	Jan 3 1997
LOWEST DAILY MEAN	3.3	May 27	3.2	Apr 20	3.0	Dec 4 1993
ANNUAL SEVEN-DAY MINIMUM	3.4	Apr 21	3.4	Nov 16	3.1	Oct 6 1992
MAXIMUM PEAK FLOW			1440	Mar 17	72500	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	119000		2630		260000	
TOTAL DIVERSION (AC-FT) a	1168000		1045000		11440000	
10 PERCENT EXCEEDS	180		3.6		745	
50 PERCENT EXCEEDS	3.5		3.5		3.5	
90 PERCENT EXCEEDS	3.5		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<sup>2</sup>.

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<sup>3</sup>/s, May 16, 1996, gage height, 9.58 ft; minimum daily, 1.6 ft<sup>3</sup>/s, Feb. 14, 1991.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	3.9	4.0	e6.7	5.3	5.9	38	167	5.4	5.7	4.4	5.2
2	3.6	3.9	3.7	e6.9	e5.7	6.0	85	153	5.0	5.8	4.4	4.9
3	3.8	4.1	3.8	e6.6	e5.8	5.9	84	10	5.0	5.5	4.9	5.1
4	5.5	3.9	3.7	6.8	5.4	5.9	103	9.4	4.9	5.4	5.0	4.7
5	3.6	3.8	4.1	6.3	e5.3	5.9	129	8.6	5.1	5.5	5.0	4.7
6	3.7	3.8	4.0	6.2	5.2	6.2	137	9.9	5.3	5.7	5.1	4.8
7	3.6	3.8	5.1	6.2	5.2	7.1	129	7.3	5.7	5.6	4.5	4.8
8	3.8	4.1	4.0	6.2	e5.2	8.3	145	6.9	6.1	5.0	4.3	4.9
9	3.8	5.5	4.1	6.2	e5.2	9.3	150	6.6	6.5	4.6	4.2	4.9
10	3.6	4.0	4.3	6.2	e5.2	10	152	6.3	6.5	4.5	4.0	5.0
11	3.8	3.9	4.3	6.2	5.0	10	152	5.9	6.4	4.9	4.0	4.7
12	3.8	3.9	4.6	6.2	4.9	10	153	6.0	6.1	5.4	4.0	4.7
13	3.8	4.0	18	6.2	4.9	11	153	6.1	5.6	5.3	4.0	4.7
14	3.7	4.0	23	6.2	4.8	11	152	7.5	5.8	5.3	4.0	4.7
15	3.8	4.2	20	6.1	4.9	13	148	7.0	6.0	5.4	4.0	4.9
16	3.8	4.2	9.8	6.0	6.0	14	138	6.9	5.2	5.3	4.0	4.8
17	3.8	3.9	6.3	6.0	6.2	15	123	6.7	5.1	5.0	4.0	5.3
18	3.9	4.0	6.3	6.0	6.3	15	105	6.5	5.1	5.1	4.0	4.3
19	3.8	4.0	6.4	5.9	5.9	16	98	6.6	4.7	5.6	4.0	4.5
20	3.9	3.9	7.3	5.8	5.7	16	94	6.5	4.7	5.2	4.0	4.9
21	3.9	3.9	6.9	5.7	5.5	17	99	6.3	5.2	5.2	4.0	5.0
22	3.7	3.9	6.5	5.7	5.6	18	111	6.1	5.0	5.2	4.1	4.8
23	4.0	4.0	6.9	5.2	5.5	18	117	6.0	4.8	5.3	4.7	4.8
24	3.9	3.7	11	5.2	5.4	69	128	5.6	5.1	5.1	5.0	4.3
25	3.8	3.7	10	5.1	9.1	110	139	5.7	5.9	4.9	5.2	4.2
26	3.8	3.8	7.4	e5.1	9.1	92	167	5.7	5.8	5.1	5.4	4.2
27	3.8	3.8	7.8	5.1	e6.9	76	118	5.5	5.5	5.2	5.0	4.7
28	3.7	3.7	7.2	5.0	e6.2	86	72	7.2	5.7	5.1	4.9	4.8
29	3.8	3.9	6.6	5.1	5.9	67	169	6.0	5.8	5.0	5.0	4.5
30	3.8	3.8	6.6	5.3	---	17	149	5.7	5.4	4.3	5.1	4.6
31	3.9	---	6.5	5.3	---	17	---	5.4	---	4.3	5.0	---
TOTAL	119.3	119.0	230.2	182.7	167.3	788.5	3737	515.9	164.4	160.5	139.2	142.4
MEAN	3.85	3.97	7.43	5.89	5.77	25.4	125	16.6	5.48	5.18	4.49	4.75
MAX	5.5	5.5	23	6.9	9.1	110	169	16.7	6.5	5.8	5.4	5.3
MIN	3.6	3.7	3.7	5.0	4.8	5.9	38	5.4	4.7	4.3	4.0	4.2
AC-FT	237	236	457	362	332	1560	7410	1020	326	318	276	282

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2004, BY WATER YEAR (WY)

MEAN	5.52	7.15	6.75	11.1	10.3	16.0	35.9	28.7	22.5	8.46	5.94	5.70
MAX	14.7	22.1	14.1	71.8	52.2	40.7	125	108	178	36.2	11.3	11.5
(WY)	2001	1998	1992	1997	1996	1995	2004	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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1989 - 2004	
ANNUAL TOTAL	5689.7		6466.4			
ANNUAL MEAN	15.6		17.7		14.1	
HIGHEST ANNUAL MEAN					34.7	
LOWEST ANNUAL MEAN					5.57	
HIGHEST DAILY MEAN	131		May 7		1750	
LOWEST DAILY MEAN	3.6		Oct 2		1.6	
ANNUAL SEVEN-DAY MINIMUM	3.7		Oct 5		2.0	
MAXIMUM PEAK FLOW			253		3220	
MAXIMUM PEAK STAGE			4.65		9.58	
ANNUAL RUNOFF (AC-FT)	11290		12830		10210	
10 PERCENT EXCEEDS	62		68		26	
50 PERCENT EXCEEDS	5.8		5.3		6.3	
90 PERCENT EXCEEDS	3.9		3.9		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<sup>2</sup>.

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, excluding 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, 127,389 acre-ft, Nov. 21, 22, elevation, 5,366.33 ft; minimum, 87,707 acre-ft, May 7, elevation, 5,346.30 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124640	124640	125001	113996	100004	93624	89035	88053	96684	117025	115120	111867
2	124894	124640	124430	113631	99945	93227	88871	87998	96740	117437	115120	111948
3	124451	124935	123949	113387	99599	93038	88798	89200	97602	117210	115303	112737
4	124260	124955	123485	112961	99312	92774	88816	88706	98618	117332	115467	112658
5	124260	124999	123613	112473	98964	92531	89126	88580	98215	117272	115772	112495
6	124451	124978	123256	111989	98676	92325	89456	88216	97890	117744	116161	112717
7	125083	124978	122793	111564	98464	92083	89751	88434	99022	117951	115487	112616
8	125696	125168	122292	111140	98215	91692	90137	88743	100719	117189	114914	112717
9	126096	125486	122062	110697	97927	91468	90467	89182	103228	116386	114260	112596
10	126034	125591	122041	110394	97372	91394	90799	89586	105705	115732	113693	112799
11	125886	125675	121998	109932	96894	91226	91077	89862	108009	115670	113042	112717
12	125842	125716	121935	109450	96550	91002	91283	90523	109392	115732	112495	112840
13	125632	125865	121166	108971	96054	90835	91301	91226	110717	115732	111806	112799
14	125252	125993	120665	108428	95710	90743	91414	92196	112009	115712	111162	112981
15	124955	125929	119937	107849	95426	90725	91301	92474	113591	115978	110557	113407
16	124576	125993	119379	107313	95368	90505	91172	93019	113936	116037	109772	113348
17	124387	125739	118924	106954	94987	90357	91134	93264	114384	115792	109029	113895
18	124199	126288	118363	106577	94929	90248	91022	93491	115160	115609	108428	113469
19	123926	126688	117849	105923	94700	90081	90948	93945	114485	116099	107849	113387
20	123695	126987	117332	105331	94341	89972	90910	94341	114914	116263	107253	113956
21	123674	127389	117005	104857	94114	89898	90781	94797	115896	116345	106536	113651
22	123442	127178	116572	104402	93963	89695	90505	95063	116633	116408	106954	113570
23	123547	127093	116161	103912	93775	89568	90302	95234	116715	116715	107352	113570
24	123547	126775	116386	103501	93510	89530	89916	94910	116900	116715	108207	112779
25	123506	126416	116263	103169	94020	89420	89622	95426	117005	116408	108789	111989
26	123947	126098	116018	102740	94190	89200	89291	95710	117147	116695	109270	111766
27	124303	125780	115650	102213	94114	89420	88979	95007	117005	116880	109711	111828
28	124260	125506	115160	101747	93906	89677	88598	94398	117065	117025	109691	111948
29	124324	125316	114691	101300	93736	89530	88434	94398	117025	117457	110254	111404
30	124367	125063	114302	100835	---	89309	88379	95197	117065	116695	110797	110900
31	124492	---	114057	100526	---	89144	---	95883	---	115792	111282	---
MAX	126096	127389	125001	113996	100004	93624	91414	95883	117147	117951	116161	113956
MIN	123442	124640	114057	100526	93510	89144	88379	87998	96684	115609	106536	110900
a	5364.96	5365.23	5359.92	5353.11	5349.56	5347.09	5346.67	5350.69	5361.39	5360.77	5358.55	5358.36
b	-63	+571	-11006	-13531	-6790	-4592	-765	+7504	+21182	-1273	-4510	-382

CAL YR 2003 b +527  
WTR YR 2004 b -13655

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<sup>2</sup>.

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, acoustic-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<sup>3</sup>/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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	3.4	2.6	2.8	2.6	2.9	3.6	3.5	3.5	3.6	3.6	3.5
2	3.5	3.4	2.6	2.7	2.7	2.9	3.6	3.5	3.5	3.6	3.5	3.5
3	3.5	3.5	2.6	2.7	2.7	2.9	3.6	3.5	3.5	3.6	3.5	3.5
4	3.5	3.5	2.6	2.7	2.7	2.9	3.6	3.5	3.5	3.6	3.5	3.5
5	3.5	3.5	2.6	2.7	2.7	2.9	3.6	3.5	3.5	3.6	3.5	3.5
6	3.5	3.5	2.6	2.7	2.7	2.9	3.6	3.5	3.5	3.6	3.5	3.5
7	3.5	3.5	2.8	2.7	2.7	2.9	3.6	3.5	3.5	3.6	3.5	3.5
8	3.5	3.6	2.6	2.7	2.7	2.9	3.6	3.5	3.5	3.6	3.5	3.5
9	3.5	3.8	2.6	2.8	2.7	2.9	3.6	3.5	3.5	3.6	3.5	3.5
10	3.5	3.6	2.7	2.7	2.6	2.9	3.6	3.5	3.5	3.6	3.5	3.5
11	3.5	3.6	2.7	2.7	2.6	2.9	3.6	3.5	3.5	3.6	3.5	3.5
12	3.5	3.6	2.6	2.7	2.6	2.8	3.6	3.5	3.5	3.6	3.5	3.5
13	3.5	3.6	2.6	2.7	2.6	2.8	3.6	3.5	3.5	3.6	3.5	3.5
14	3.5	3.6	2.7	2.7	2.6	2.8	3.6	3.5	3.5	3.6	3.5	3.5
15	3.4	3.7	2.7	2.7	2.6	2.8	3.6	3.5	3.5	3.5	3.5	3.5
16	3.4	3.6	2.7	2.7	2.8	2.8	3.6	3.5	3.6	3.5	3.5	3.5
17	3.4	3.3	2.6	2.7	2.8	2.8	3.7	3.5	3.6	3.5	3.5	3.5
18	3.4	2.6	2.6	2.7	3.0	2.8	3.7	3.5	3.6	3.5	3.5	3.5
19	3.4	2.6	2.6	2.7	2.9	2.8	3.6	3.5	3.6	3.5	3.5	3.5
20	3.4	2.6	2.7	2.7	2.8	2.7	3.6	3.5	3.6	3.5	3.5	3.5
21	3.4	2.6	2.7	2.6	2.7	2.7	3.6	3.5	3.6	3.5	3.4	3.5
22	3.4	2.6	2.6	2.6	2.8	2.7	3.6	3.5	3.6	3.5	3.4	3.5
23	3.4	2.6	2.7	2.6	2.9	2.7	3.6	3.5	3.6	3.5	3.5	3.5
24	3.4	2.6	3.5	2.6	2.8	2.6	3.6	3.5	3.6	3.5	3.5	3.5
25	3.4	2.6	3.6	2.6	3.9	2.6	3.6	3.5	3.6	3.5	3.5	3.5
26	3.4	2.6	2.9	2.6	4.3	3.2	3.6	3.5	3.6	3.5	3.5	3.5
27	3.4	2.6	2.8	2.6	3.3	3.1	3.5	3.5	3.6	3.5	3.5	3.5
28	3.4	2.6	2.7	2.6	3.0	2.7	3.5	3.7	3.6	3.5	3.5	3.5
29	3.4	2.6	2.7	2.6	2.9	2.9	3.5	3.6	3.6	3.5	3.5	3.5
30	3.4	2.6	2.7	2.6	---	3.5	3.5	3.6	3.6	3.6	3.5	3.5
31	3.4	---	2.7	2.6	---	3.5	---	3.5	---	3.6	3.5	---
TOTAL	106.8	94.1	84.4	82.8	82.7	89.2	107.8	108.9	106.5	110.1	108.4	105.0
MEAN	3.45	3.14	2.72	2.67	2.85	2.88	3.59	3.51	3.55	3.55	3.50	3.50
MAX	3.5	3.8	3.6	2.8	4.3	3.5	3.7	3.7	3.6	3.6	3.6	3.5
MIN	3.4	2.6	2.6	2.6	2.6	2.6	3.5	3.5	3.5	3.5	3.4	3.5
AC-FT	212	187	167	164	164	177	214	216	211	218	215	208
a	17460	10550	18280	16240	11350	12040	10400	22410	21140	26610	19530	25980

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 - 2004, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	11.6	3.30	2.76	16.7	24.4	37.7	39.8	67.8	107	70.0	13.0	3.56						
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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1987 - 2004

ANNUAL TOTAL	1247.8	1186.7	
ANNUAL MEAN	3.42	3.24	33.2
HIGHEST ANNUAL MEAN			156
LOWEST ANNUAL MEAN			3.04
HIGHEST DAILY MEAN	30	Aug 14	688
LOWEST DAILY MEAN	2.6	Feb 3	1.2
ANNUAL SEVEN-DAY MINIMUM	2.6	Feb 3	1.9
MAXIMUM PEAK FLOW			816
MAXIMUM PEAK STAGE			7.64
ANNUAL RUNOFF (AC-FT)	2480	2350	24020
TOTAL DIVERSION (AC-FT) a	263900	212000	240300
10 PERCENT EXCEEDS	3.8	3.6	8.6
50 PERCENT EXCEEDS	3.5	3.5	3.4
90 PERCENT EXCEEDS	2.6	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<sup>2</sup>.

PERIOD OF RECORD.—November 1950 to current year. Prior to October 1965, monthend contents only, published in WSP 1930.

GAGE.—Water-stage recorder. Elevation of gage is 1,413.5 ft above NGVD of 1929, top of dam (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, 25,579 acre-ft, July 13, elevation, 1,401.83 ft; minimum, 11,775 acre-ft, Apr. 3, elevation, 1,366.76 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25033	12556	25323	25200	20076	17586	12462	24667	24056	23936	24363	24425
2	24654	12375	24929	25060	20836	17817	11903	24605	24176	23865	24282	24614
3	24225	12264	25141	24694	20907	16195	11775	24105	24443	23896	24924	23355
4	23737	12375	24997	24748	20349	17524	11903	24667	24915	23720	24775	24091
5	23566	12465	24614	24979	20274	19559	12052	24479	25291	24131	24654	24069
6	23949	12810	24363	24924	20150	20661	12475	24229	25461	24171	24439	24078
7	24025	13016	24573	23856	19571	20311	13168	24551	25502	24264	24096	24038
8	23945	13629	24780	21388	19109	19875	12516	24712	25227	25346	24198	24667
9	23772	14062	25092	19093	18659	19486	13275	24322	24834	24802	24105	24870
10	24416	15008	24816	17179	18996	18964	13441	24861	24591	24807	24412	24537
11	23985	16067	24546	15040	19450	19535	12848	25064	23535	24834	24672	24929
12	24376	17063	24242	15051	19731	19316	12992	24802	23640	24775	24924	23958
13	24171	17985	24951	15281	20026	18675	14037	24780	24202	25579	25182	24185
14	24202	19037	24875	15135	19961	18305	14196	24807	23892	24618	24924	24385
15	24902	20258	24479	15183	19862	18305	14920	24793	24802	24430	24627	24082
16	25114	20523	24269	15402	19608	18364	16259	24614	25132	24264	24631	23724
17	24096	21354	24216	15391	19352	18218	17082	24430	24645	24211	24587	23830
18	23014	21202	23971	15292	18892	18230	18647	23976	25146	24645	24176	24291
19	21992	21059	24390	15568	18888	18171	19474	24390	24631	24403	24118	23869
20	20899	20949	24712	15720	17938	17985	20002	24470	24042	22949	23931	23632
21	20455	20798	24861	15620	17129	17899	20844	24694	23539	23337	24519	24304
22	18420	21988	24875	17879	17244	18044	22120	24578	24189	24118	24511	24256
23	16569	22676	25250	20249	17086	17915	23658	24296	25101	24856	24452	23843
24	15091	23224	24685	21456	16432	18388	24511	24457	25415	25141	23923	22815
25	13369	23803	24122	22698	16703	19109	24861	24399	24861	24712	23936	22340
26	13016	24479	24149	22702	18317	19170	24902	24390	23566	24658	24560	21770
27	12577	24956	24145	22082	18242	17105	24296	24185	24331	24162	24600	23036
28	12597	25351	24296	21732	18270	15161	25087	24466	24654	23945	24452	24078
29	12688	25227	24551	20656	17864	14094	25114	24457	24870	23667	24282	24829
30	12848	25200	24708	19752	---	13427	24573	24198	24264	24042	23812	24269
31	12739	---	24573	19555	---	12780	---	24211	---	24466	24051	---
MAX	25114	25351	25323	25200	20907	20661	25114	25064	25502	25579	25182	24929
MIN	12577	12264	23971	15040	16432	12780	11775	23976	23535	22949	23812	21770
a	1369.65	1401.00	1399.61	1387.88	1383.65	1369.77	1399.61	1398.80	1398.92	1399.37	1398.44	1398.93
b	-11853	+12461	-627	-5018	-1691	-5084	+11793	-362	+53	+202	-415	+218

CAL YR 2003 b +761

WTR YR 2004 b -323

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<sup>2</sup>.

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<sup>3</sup>/s, Jan. 2, 1997, gage height, 65.17 ft, from floodmarks, from rating curve extended above 7,000 ft<sup>3</sup>/s, on basis of computed flow over dam; no flow Sept. 25, 1951.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	24	38	23	24	21	24	e22	e22	22	22	22
2	22	24	37	23	24	21	24	e22	e22	22	22	22
3	22	24	37	22	24	21	24	e22	e22	22	22	23
4	29	32	37	22	24	21	24	e22	e22	22	22	22
5	23	24	37	22	24	21	24	e22	e22	22	22	22
6	23	23	37	22	24	21	24	e22	e22	22	22	22
7	23	23	37	22	24	22	24	e22	e22	22	22	22
8	23	23	37	22	24	22	24	e22	e22	22	22	22
9	23	23	32	22	24	22	24	e22	e22	22	22	22
10	26	23	21	21	24	21	24	e22	e22	22	22	22
11	34	23	21	21	24	21	24	e22	e22	22	22	22
12	34	22	21	24	24	22	24	e22	e22	22	23	24
13	34	22	21	24	25	21	24	e22	e22	22	23	26
14	34	22	21	25	25	21	24	e22	e22	22	23	25
15	34	25	22	24	25	21	24	e22	e22	22	22	22
16	35	22	22	24	25	21	25	e22	e22	22	22	22
17	34	27	22	25	25	21	25	e22	e22	22	22	22
18	34	22	22	24	25	24	25	e22	e22	22	25	22
19	34	22	22	25	25	21	25	e22	e22	22	26	22
20	34	22	22	25	25	21	24	e22	e22	22	26	22
21	34	22	22	25	25	21	22	e22	e22	24	26	39
22	34	22	22	25	25	21	e22	e22	e22	22	26	32
23	27	22	22	24	25	21	e22	e22	e22	22	26	22
24	21	27	23	24	25	21	e22	e22	22	22	26	22
25	23	37	22	23	25	21	e22	e22	22	22	26	22
26	24	37	22	22	23	21	e22	e22	22	22	35	22
27	24	37	22	22	21	21	e22	e22	22	22	35	22
28	24	37	22	22	21	21	e22	e22	22	22	34	22
29	24	37	22	22	21	24	e22	e22	22	22	34	22
30	24	37	22	24	---	24	e22	e22	22	22	29	22
31	24	---	22	24	---	24	---	e22	---	22	22	---
TOTAL	860	787	809	719	699	667	704	682	660	684	773	697
MEAN	27.7	26.2	26.1	23.2	24.1	21.5	23.5	22.0	22.0	22.1	24.9	23.2
MAX	35	37	38	25	25	24	25	22	22	24	35	39
MIN	21	22	21	21	21	21	22	22	22	22	22	22
AC-FT	1710	1560	1600	1430	1390	1320	1400	1350	1310	1360	1530	1380
a	66130	26930	44720	70390	64030	121800	142500	147800	130000	102000	69650	59850

e Estimated.

a Diversion, in acre-feet, to Big Creek Powerplant No. 4 (station 11246530), provided by Southern California Edison Co.

## SAN JOAQUIN RIVER BASIN

## 11242000 SAN JOAQUIN RIVER ABOVE WILLOW CREEK, NEAR AUBERRY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	21.6	21.1	103	150	112	148	385	1541	2114	847	69.6	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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1951 - 2004	
ANNUAL TOTAL	60769		8741			
ANNUAL MEAN	166		23.9		456	
HIGHEST ANNUAL MEAN					2409	
LOWEST ANNUAL MEAN					11.4	
HIGHEST DAILY MEAN	5350	Jun 4	39	Sep 21	47700	Dec 23 1955
LOWEST DAILY MEAN	21	Apr 10	21	Oct 24	0.00	Sep 25 1951
ANNUAL SEVEN-DAY MINIMUM	21	Dec 10	21	Feb 27	0.38	Oct 17 1982
MAXIMUM PEAK FLOW			53	Oct 4	99200	Jan 2 1997
MAXIMUM PEAK STAGE			4.58	Oct 4	65.17	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	120500		17340		330500	
TOTAL DIVERSION (AC-FT) a	1191000		1046000			
10 PERCENT EXCEEDS	37		28		917	
50 PERCENT EXCEEDS	23		22		21	
90 PERCENT EXCEEDS	22		22		5.5	

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<sup>2</sup>.

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 fair except estimated daily discharges, which are poor. No storage upstream from station. Madera Irrigation District has water rights to divert up to 50 ft<sup>3</sup>/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<sup>3</sup>/s, Jan. 13, 1980, gage height, 7.41 ft, from rating curve extended above 1,100 ft<sup>3</sup>/s, on basis of a step-backwater survey; minimum daily, 0.27 ft<sup>3</sup>/s, Oct. 4, 1987.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 24	1045	124	3.80

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	3.2	4.1	30	7.7	16	43	50	16	5.3	2.3	1.5
2	2.4	3.2	4.5	64	17	15	37	53	15	5.4	2.3	1.4
3	2.5	3.9	4.2	48	33	15	37	54	15	5.5	2.3	1.4
4	2.5	3.6	4.0	30	11	14	38	55	14	4.7	2.3	1.5
5	2.5	3.6	11	22	9.0	14	41	54	13	4.3	2.2	1.4
6	2.4	3.7	13	17	9.0	16	44	49	12	4.1	2.1	1.4
7	2.4	3.6	27	15	8.6	19	44	45	11	4.0	2.1	1.4
8	2.4	5.1	10	13	e8.5	23	47	43	11	3.9	2.0	1.3
9	2.4	18	7.5	12	e8.4	28	48	42	12	3.9	2.0	1.3
10	2.4	6.1	9.9	11	e8.3	33	51	39	11	3.8	1.9	1.3
11	2.5	4.5	9.5	10	e8.2	32	51	34	11	3.7	1.9	1.4
12	2.3	4.2	6.5	9.5	e8.1	33	52	32	9.9	3.6	1.8	1.3
13	2.3	4.1	7.6	9.0	e8.0	34	51	32	9.6	3.4	1.8	1.3
14	2.3	4.1	10	9.0	7.9	37	48	31	9.2	3.3	1.8	1.3
15	2.3	5.7	7.2	9.0	8.0	42	44	30	8.9	3.3	1.8	1.4
16	2.3	5.4	6.6	8.9	16	44	41	29	8.4	3.2	1.8	1.3
17	2.3	5.1	6.5	8.6	18	45	40	28	7.9	3.1	1.7	1.3
18	2.2	5.1	6.5	8.6	19	47	37	27	7.7	3.0	1.7	1.3
19	2.2	4.7	6.8	e8.5	18	48	36	26	7.6	3.0	1.7	1.5
20	2.3	4.5	14	e8.4	16	50	35	25	7.4	3.0	1.6	1.8
21	2.3	4.3	13	e8.3	14	52	35	24	7.1	2.9	1.6	1.8
22	2.3	4.2	9.2	e8.2	14	53	35	23	6.8	2.8	1.7	1.6
23	2.3	4.3	9.8	e8.1	12	52	35	22	6.5	2.7	1.8	1.4
24	2.3	4.1	48	e8.0	12	51	38	21	6.3	2.7	1.9	1.4
25	2.2	4.1	37	e7.9	25	49	43	21	6.3	2.6	1.9	1.4
26	2.2	4.1	17	e7.8	37	51	48	21	6.1	2.4	1.7	1.3
27	2.2	4.0	e16	8.0	25	41	53	19	6.0	2.4	1.7	1.3
28	2.2	4.0	e11	7.9	19	39	54	26	5.8	2.3	1.6	1.3
29	2.2	4.1	e16	7.8	16	40	51	22	5.6	2.4	1.5	1.3
30	2.3	4.1	e29	7.9	---	41	49	19	5.4	2.3	1.5	1.4
31	2.7	---	e10	7.9	---	41	---	18	---	2.3	1.5	---
TOTAL	72.4	142.7	392.4	439.3	421.7	1115	1306	1014	279.5	105.3	57.5	42.0
MEAN	2.34	4.76	12.7	14.2	14.5	36.0	43.5	32.7	9.32	3.40	1.85	1.40
MAX	2.7	18	48	64	37	53	54	55	16	5.5	2.3	1.8
MIN	2.2	3.2	4.0	7.8	7.7	14	35	18	5.4	2.3	1.5	1.3
AC-FT	144	283	778	871	836	2210	2590	2010	554	209	114	83

e Estimated.

## SAN JOAQUIN RIVER BASIN

## 11242400 NORTH FORK WILLOW CREEK NEAR SUGAR PINE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.47	9.38	14.7	29.6	29.2	40.2	51.0	76.7	49.2	16.7	5.71	4.18
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1965 - 2004	
ANNUAL TOTAL	7517.4		5387.8			
ANNUAL MEAN	20.6		14.7		27.6	
HIGHEST ANNUAL MEAN					82.7 1983	
LOWEST ANNUAL MEAN					1.57 1977	
HIGHEST DAILY MEAN	110	Mar 15	64	Jan 2	1600	Jan 2 1997
LOWEST DAILY MEAN	2.2	Sep 28	1.3	Sep 8	0.27	Oct 4 1987
ANNUAL SEVEN-DAY MINIMUM	2.2	Oct 23	1.3	Sep 8	0.29	Oct 11 1977
MAXIMUM PEAK FLOW			124	Dec 24	2750	Jan 13 1980
MAXIMUM PEAK STAGE			3.80	Dec 24	7.41	Jan 13 1980
ANNUAL RUNOFF (AC-FT)	14910		10690		19960	
10 PERCENT EXCEEDS	51		43		76	
50 PERCENT EXCEEDS	13		7.9		8.5	
90 PERCENT EXCEEDS	2.6		1.7		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<sup>3</sup>/s, Mar. 8, 1989; no flow at times in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	20	17	43	76	42	9.4	0.00	0.00	0.00
2	0.00	0.00	0.00	24	19	42	81	37	8.9	0.00	0.00	0.00
3	0.00	0.02	0.33	21	20	41	83	33	8.5	0.00	0.00	0.00
4	0.00	0.00	0.03	19	18	39	85	32	8.0	0.00	0.00	0.00
5	0.00	0.00	0.30	19	18	37	76	30	7.7	0.00	0.00	0.00
6	0.00	0.00	1.5	19	20	40	62	28	7.2	0.00	0.00	0.00
7	0.00	0.00	38	20	20	48	67	27	6.7	0.00	0.00	0.00
8	0.00	0.00	27	20	18	60	75	25	6.6	0.00	0.00	0.00
9	0.00	0.09	14	22	18	73	70	24	6.9	0.00	0.00	0.00
10	0.00	0.00	14	22	18	73	71	23	7.4	0.00	0.00	0.00
11	0.00	0.00	13	24	19	77	69	22	6.9	0.00	0.00	0.00
12	0.00	0.07	10	25	20	77	66	21	6.4	0.00	0.00	0.00
13	0.00	0.00	13	25	19	77	64	20	5.8	0.00	0.00	0.00
14	0.00	0.00	19	26	18	79	59	19	5.3	0.00	0.00	0.00
15	0.00	0.16	13	26	18	80	54	18	2.4	0.00	0.00	0.00
16	0.00	1.4	11	25	27	80	51	16	0.00	0.00	0.00	0.00
17	0.00	0.00	11	24	44	80	52	14	0.00	0.00	0.00	0.00
18	0.00	1.2	12	25	42	80	47	14	0.00	0.00	0.00	0.00
19	0.00	0.00	14	23	39	79	48	14	0.00	0.00	0.00	0.00
20	0.00	0.00	30	22	34	78	45	14	0.00	0.00	0.00	0.00
21	0.00	0.00	32	21	30	79	43	13	0.00	0.00	0.00	0.00
22	0.00	0.00	20	20	31	79	41	13	0.00	0.00	0.00	0.00
23	0.00	0.97	18	20	30	79	39	13	0.00	0.00	0.00	0.00
24	0.00	0.12	40	20	28	79	39	12	0.00	0.00	0.00	0.00
25	0.00	0.01	54	19	37	77	41	12	0.00	0.00	0.00	0.0
26	0.00	0.00	45	18	53	79	43	12	0.00	0.00	0.00	0.0
27	0.00	0.00	30	18	53	80	46	11	0.00	0.00	0.00	0.0
28	0.00	0.00	25	18	45	79	46	16	0.00	0.00	0.00	0.0
29	0.00	0.00	24	17	44	78	46	14	0.00	0.00	0.00	0.0
30	0.00	0.00	26	18	---	78	40	12	0.00	0.00	0.00	0.0
31	0.00	---	23	18	---	78	---	10	---	0.00	0.00	---
TOTAL	0.00	4.04	578.16	658	817	2148	1725	611	104.10	0.00	0.00	0.00
MEAN	0.00	0.13	18.7	21.2	28.2	69.3	57.5	19.7	3.47	0.00	0.00	0.00
MAX	0.00	1.4	54	26	53	80	85	42	9.4	0.00	0.00	0.00
MIN	0.00	0.00	0.00	17	17	37	39	10	0.00	0.00	0.00	0.00
AC-FT	0.00	8.0	1150	1310	1620	4260	3420	1210	206	0.00	0.00	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

MEAN	1.37	4.40	10.4	19.2	30.9	48.5	54.3	40.1	18.2	5.71	1.52	0.71
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	0.00	0.00	0.88	3.01	0.64	0.45	0.54	0.27	0.00	0.00	0.00	0.00
(WY)	1989	1996	1998	1991	1998	1998	1998	1998	1998	1998	1987	1987

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1987 - 2004	
ANNUAL TOTAL	8883.47		6645.30			
ANNUAL MEAN	24.3		18.2		19.5	
HIGHEST ANNUAL MEAN					39.0	
LOWEST ANNUAL MEAN					1.58	
HIGHEST DAILY MEAN	81	May 11	85	Apr 4	86	Mar 8 1989
LOWEST DAILY MEAN	0.00	Jul 22	0.00	Oct 1	0.00	Jul 3 1987
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 22	0.00	Oct 1	0.00	Jul 3 1987
ANNUAL RUNOFF (AC-FT)	17620		13180		14140	
10 PERCENT EXCEEDS	67		61		70	
50 PERCENT EXCEEDS	20		7.3		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<sup>2</sup>.

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<sup>3</sup>/s from North Fork Willow Creek through Soquel Ditch into Nelder Creek (Fresno River Basin) from October through July each year. Records, excluding 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, 41,400 acre-ft, June 22–24, elevation, 3,372.89 ft; minimum, 21,800 acre-ft, Nov. 25, 26, elevation, 3,352.81 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31200	23200	21900	26200	23700	29100	30700	37400	40900	41300	40900	36800
2	30900	22900	21900	26500	23900	29300	31000	37700	40900	41300	40900	36500
3	31100	22700	21900	26600	24000	29400	31200	37900	40900	41200	40800	36200
4	31300	22400	21900	26700	24100	29300	31500	38100	41000	41200	40800	35800
5	31000	22200	22000	26800	24200	29300	31700	38300	41000	41200	40800	35500
6	30700	22000	22100	26900	24300	29300	32000	38500	41000	41200	40700	35200
7	30400	22000	22500	26800	24400	29300	32300	38700	41000	41200	40700	34900
8	30100	22100	22600	26700	24400	29300	32600	38800	41000	41200	40700	34700
9	29800	22200	22700	26600	24500	29300	32900	39000	41100	41200	40700	34400
10	29500	22200	22800	26400	24600	29300	33100	39100	41100	41200	40700	34100
11	29200	22200	23000	26300	24700	29300	33500	39200	41100	41200	40600	33800
12	28900	22200	23000	26200	24700	29300	33700	39400	41100	41100	40600	33500
13	28600	22200	23100	26100	24800	29300	34000	39500	41100	41100	40600	33200
14	28300	22200	23300	25900	24900	29300	34300	39600	41200	41200	40600	32900
15	28100	22300	23300	25800	25000	29300	34600	39700	41200	41200	40500	32600
16	27800	22300	23400	25600	25100	29300	34800	39800	41300	41200	40500	32300
17	27500	22400	23400	25500	25300	29300	35000	39800	41300	41200	40500	32000
18	27200	22400	23500	25400	25600	29300	35200	39900	41300	41100	40300	31700
19	26900	22400	23500	25200	25700	29300	35500	40000	41300	41100	40000	31500
20	26600	22400	23700	25000	25900	29300	35500	40100	41300	41100	39700	31200
21	26300	22400	23800	24900	26000	29300	35500	40100	41300	41100	39400	30900
22	26000	22400	23900	24700	26300	29300	35600	40200	41400	41100	39300	30600
23	25700	22400	24000	24600	26400	29300	35800	40300	41400	41000	39300	30400
24	25500	22400	24500	24400	26600	29700	35900	40300	41300	41000	39100	30100
25	25200	21900	24900	24200	27300	30200	36100	40400	41300	41000	38800	29800
26	24900	21900	25100	24100	28100	30300	36300	40500	41300	41000	38500	29500
27	24600	21900	25200	23900	28400	30300	36600	40500	41300	40900	38300	29200
28	24300	21900	25300	23700	28700	30400	36800	40600	41300	40900	38000	29000
29	24000	21900	25500	23600	28900	30400	37000	40700	41300	40900	37700	28700
30	23700	21900	25700	23500	---	30400	37200	40800	41300	40900	37400	28400
31	23400	---	25800	23600	---	30500	---	40800	---	40900	37100	---
MAX	31300	23200	25800	26900	28900	30500	37200	40800	41400	41300	40900	36800
MIN	23400	21900	21900	23500	23700	29100	30700	37400	40900	40900	37100	28400
a	3354.73	3352.86	3357.50	3354.93	3360.81	3362.49	3369.09	3372.38	3372.82	3372.46	3368.94	3360.35
b	-8400	-1500	+3900	-2200	+5300	+1600	+6700	+3600	+500	-400	-3800	-8700

CAL YR 2003 b +3300

WTR YR 2004 b -3400

a Elevation, in feet, at end of month.  
b change in contents, in acre-feet.

## 11243500 PACIFIC GAS &amp; 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<sup>3</sup>/s, June 23, 24, 1965; no flow at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	143	0.00	0.03	1.8	1.0	108	2.2	1.2	1.4	0.00	142
2	0.00	143	0.00	0.09	2.7	1.0	0.52	1.9	1.2	2.2	0.00	142
3	0.00	131	0.00	0.13	1.7	79	1.2	2.0	1.1	2.1	0.00	142
4	3.0	119	0.00	0.19	0.64	123	3.2	2.3	1.1	1.4	0.00	141
5	12	119	0.00	0.25	1.4	121	1.4	2.4	1.4	0.99	0.00	141
6	2.0	55	0.00	0.34	1.7	137	1.4	2.5	2.4	1.5	0.00	141
7	1.9	0.00	0.00	77	1.7	146	1.4	2.5	2.9	1.5	0.00	141
8	1.9	0.00	0.00	123	1.8	147	1.4	2.5	0.32	1.5	0.00	141
9	68	0.00	0.00	123	1.8	147	1.4	2.5	0.21	1.5	0.00	141
10	149	0.00	0.00	124	1.7	147	1.4	2.5	0.21	1.5	0.00	142
11	148	0.00	0.00	124	1.5	146	1.4	2.5	0.49	1.2	0.00	142
12	148	0.00	0.00	124	1.5	146	1.4	2.5	1.4	0.31	0.00	142
13	149	0.00	0.00	124	1.5	146	1.4	2.5	1.4	0.22	0.00	142
14	149	0.00	0.00	124	1.5	146	1.4	2.5	1.4	0.15	0.00	143
15	149	0.00	0.00	124	1.1	146	1.4	2.5	1.4	0.10	0.00	143
16	150	0.00	0.00	124	0.99	146	1.4	2.5	1.4	0.02	0.00	143
17	150	0.00	0.00	124	0.99	146	1.4	2.5	1.4	0.00	0.44	143
18	150	0.00	0.00	124	1.3	146	1.4	2.5	1.4	0.00	68	143
19	151	0.00	0.00	124	0.99	145	57	2.5	1.4	0.00	142	143
20	150	0.00	0.00	124	0.99	145	119	2.3	1.4	0.00	143	140
21	148	0.00	0.00	124	0.99	145	119	0.96	1.4	0.00	143	141
22	147	0.00	0.00	124	0.99	145	85	1.2	1.4	0.00	105	143
23	145	0.00	0.00	124	0.99	132	0.44	1.4	1.4	0.00	0.00	143
24	144	0.00	0.00	124	1.0	132	0.96	1.4	1.4	0.00	0.00	143
25	143	0.00	0.00	125	1.0	143	4.2	1.4	1.4	0.00	73	143
26	144	0.00	0.00	125	1.0	143	0.87	1.4	1.4	0.00	142	144
27	144	0.00	0.00	125	1.0	143	0.87	1.4	1.4	0.00	141	145
28	141	0.00	0.00	125	1.0	143	0.87	1.4	1.4	0.00	143	145
29	141	0.00	0.00	125	1.0	143	1.1	1.2	1.4	0.00	144	144
30	142	0.00	0.00	53	---	143	1.5	1.2	1.4	0.00	143	143
31	142	---	0.00	0.46	---	143	---	1.2	---	0.00	143	---
TOTAL	3312.80	710.00	0.00	2862.49	38.27	4062.0	523.33	62.26	39.13	17.59	1530.44	4272
MEAN	107	23.7	0.00	92.3	1.32	131	17.4	2.01	1.30	0.57	49.4	142
MAX	151	143	0.00	125	2.7	147	119	2.5	2.9	2.2	144	145
MIN	0.00	0.00	0.00	0.03	0.64	1.0	0.44	0.96	0.21	0.00	0.00	140
AC-FT	6570	1410	0.00	5680	76	8060	1040	123	78	35	3040	8470
a	5330	1210	0.00	4600	0.00	6570	490	0.00	0.00	0.00	2550	7120
b	8500	1120	182	5450	169	6900	133	0.00	0.00	0.00	3010	7910
c	9360	1320	0.00	2440	0.00	8050	149	0.00	0.00	0.00	3060	8690
d	9270	1740	1220	7010	1960	10530	1690	906	772	184	3300	8500

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.

## SAN JOAQUIN RIVER BASIN

## 11243500 PACIFIC GAS &amp; ELECTRIC CO. CONDUIT NO. 3 NEAR BASS LAKE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	71.2	43.4	54.8	59.6	68.2	76.6	59.9	61.6	60.0	79.2	97.5	88.7
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	0.00	0.00	0.00	0.19	0.08	0.12	0.12	0.09	0.06	0.52	9.43	0.23
(WY)	1988	1968	2004	1954	1977	1947	1947	1977	1942	1977	1977	1996

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1941 - 2004	
ANNUAL TOTAL	17843.90		17430.31			
ANNUAL MEAN	48.9		47.6		68.5	
HIGHEST ANNUAL MEAN					128 1983	
LOWEST ANNUAL MEAN					14.4 1977	
HIGHEST DAILY MEAN	152	May 24	151	Oct 19	167	Jun 23 1965
LOWEST DAILY MEAN	0.00	Jul 14	0.00	Oct 1	0.00	Nov 6 1940
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 14	0.00	Nov 7	0.00	Feb 8 1941
ANNUAL RUNOFF (AC-FT)	35390		34570		49600	
TOTAL DIVERSION (AC-FT) a	28470		27840		45390	
TOTAL DIVERSION (AC-FT) b	38280		33370		45960	
TOTAL DIVERSION (AC-FT) c	43650		33080		52520	
TOTAL DIVERSION (AC-FT) d	52160		47080		60980	
10 PERCENT EXCEEDS	150		144		151	
50 PERCENT EXCEEDS	1.7		1.4		63	
90 PERCENT EXCEEDS	0.00		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<sup>2</sup>.

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<sup>3</sup>/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<sup>3</sup>/s, Jan. 2, 1997, gage height, 9.10 ft; minimum daily, 0.01 ft<sup>3</sup>/s, Dec. 4, 1989.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	80	2.3	3.3	2.2	2.7	2.1	2.7	2.0	2.0	2.2	2.2
2	153	80	2.3	3.6	2.3	2.7	2.1	2.4	2.0	2.2	2.1	2.3
3	153	82	2.2	3.0	2.4	2.5	2.1	2.2	2.0	2.2	2.0	2.3
4	152	83	2.2	2.6	2.3	2.4	2.1	2.2	2.0	2.2	2.0	2.4
5	152	83	2.3	2.6	2.3	2.3	2.1	2.2	2.0	2.2	2.0	2.4
6	153	85	2.4	2.4	2.3	2.3	2.1	2.2	2.1	2.2	2.0	2.4
7	153	90	2.9	2.4	2.3	2.3	2.1	2.3	2.1	2.2	2.0	2.6
8	153	90	2.3	2.3	2.3	2.3	2.1	2.3	2.1	2.2	2.1	2.8
9	124	92	2.3	2.3	2.2	2.2	2.1	2.3	2.2	2.2	2.2	2.8
10	80	93	2.5	2.3	2.2	2.3	2.2	2.1	2.2	2.2	2.1	2.8
11	80	93	2.5	2.3	2.2	2.3	2.2	2.0	2.2	2.3	2.1	2.8
12	80	64	2.3	2.2	2.2	2.4	2.1	1.9	2.1	2.3	2.1	2.7
13	80	2.0	2.3	2.2	2.2	2.4	2.4	2.0	2.1	2.3	2.1	2.7
14	80	2.0	2.7	2.2	2.2	2.3	2.5	2.0	2.1	2.3	2.1	2.6
15	80	2.2	2.4	2.2	2.2	2.2	2.7	2.0	2.1	2.3	2.1	2.5
16	80	2.1	2.3	2.2	2.3	2.0	3.0	2.0	2.1	2.3	2.1	2.4
17	80	2.1	2.3	2.2	2.3	2.0	3.4	1.9	2.1	2.3	2.1	2.4
18	80	2.0	2.3	2.2	2.3	2.0	3.5	2.0	2.1	2.2	2.0	2.4
19	80	2.1	2.4	2.2	2.3	2.0	4.1	2.0	2.1	2.2	2.0	2.4
20	80	2.1	2.4	2.2	2.3	2.0	4.3	2.0	2.1	2.2	2.0	2.4
21	80	2.2	2.4	2.1	2.3	2.0	4.0	2.0	2.1	2.2	2.0	2.4
22	80	2.3	2.3	2.1	2.5	2.0	3.6	2.1	2.0	2.2	2.0	2.3
23	80	2.3	2.3	2.1	2.5	2.0	2.6	2.1	2.0	2.2	2.0	2.2
24	80	2.3	3.3	2.1	2.4	2.0	2.5	2.1	2.0	2.2	79	2.1
25	80	2.2	3.2	2.1	4.6	2.0	2.7	2.1	2.0	2.2	53	2.1
26	80	2.2	2.6	2.1	5.3	2.1	2.7	2.1	2.0	2.2	2.0	2.1
27	80	2.3	2.4	2.1	3.5	2.0	2.7	2.1	1.9	2.2	2.2	2.1
28	80	2.3	2.4	2.1	2.8	2.0	2.7	2.2	1.9	2.2	2.2	2.1
29	80	2.3	2.4	2.1	2.6	2.0	2.8	2.1	1.9	2.2	2.2	2.1
30	80	2.3	2.7	2.1	---	1.9	2.7	2.1	2.0	2.2	2.2	2.1
31	80	---	2.5	2.1	---	1.9	---	2.1	---	2.2	24	---
TOTAL	3106	1054.3	76.1	72.0	73.8	67.5	80.3	65.8	61.6	68.7	214.2	71.9
MEAN	100	35.1	2.45	2.32	2.54	2.18	2.68	2.12	2.05	2.22	6.91	2.40
MAX	153	93	3.3	3.6	5.3	2.7	4.3	2.7	2.2	2.3	79	2.8
MIN	80	2.0	2.2	2.1	2.2	1.9	2.1	1.9	1.9	2.0	2.0	2.1
AC-FT	6160	2090	151	143	146	134	159	131	122	136	425	143

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004, BY WATER YEAR (WY)

MEAN	4.82	4.48	6.98	22.8	26.5	33.6	19.0	29.1	23.5	4.87	3.98	5.16
MAX	100	54.6	106	524	380	387	272	317	244	73.6	66.4	103
(WY)	2004	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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1941 - 2004

ANNUAL TOTAL	8458.90	5012.2	
ANNUAL MEAN	23.2	13.7	15.3
HIGHEST ANNUAL MEAN			92.4
LOWEST ANNUAL MEAN			0.26
HIGHEST DAILY MEAN	160	Sep 23	2880
LOWEST DAILY MEAN	0.98	Jan 9	0.01
ANNUAL SEVEN-DAY MINIMUM	0.98	Jan 14	2.0
MAXIMUM PEAK FLOW			153
MAXIMUM PEAK STAGE		2.85	Oct 1
ANNUAL RUNOFF (AC-FT)	16780	9940	11110
10 PERCENT EXCEEDS	89	80	21
50 PERCENT EXCEEDS	1.7	2.2	0.89
90 PERCENT EXCEEDS	1.2	2.0	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<sup>2</sup>.

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<sup>3</sup>/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<sup>3</sup>/s, Dec. 23, 1955, gage height, 28.5 ft, from floodmarks, from rating curve extended above 4,700 ft<sup>3</sup>/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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.48	1.6	57	7.9	38	37	17	5.3	1.5	3.1	0.26
2	0.00	0.59	1.5	80	10	43	37	18	4.8	1.6	3.2	0.97
3	0.00	0.86	1.7	33	17	35	34	11	4.6	1.7	3.2	2.0
4	0.04	1.1	4.1	18	13	31	33	10	4.3	1.5	3.3	2.0
5	0.21	11	5.1	14	11	28	32	9.4	4.0	1.2	3.2	1.1
6	0.26	104	28	12	11	26	32	8.9	3.9	1.0	3.0	1.1
7	0.28	23	115	12	11	27	30	8.6	3.8	0.97	2.9	1.1
8	0.26	3.9	38	13	11	31	29	8.4	3.7	0.89	2.7	1.3
9	0.23	6.7	15	12	10	42	29	8.4	3.8	0.85	2.2	1.3
10	0.20	26	15	12	9.8	55	27	8.3	4.1	0.84	2.0	1.2
11	0.21	15	10	11	9.5	59	25	8.2	3.9	0.80	2.0	1.2
12	0.24	5.3	6.9	11	9.5	47	23	8.2	3.7	0.71	1.8	1.2
13	0.28	2.3	5.5	10	9.3	47	22	7.9	3.4	0.66	1.4	1.2
14	0.28	1.9	8.8	9.8	9.0	50	21	7.5	3.3	5.5	0.58	1.2
15	0.28	2.8	8.2	9.8	8.9	63	20	7.1	3.2	6.1	0.45	1.4
16	0.27	4.7	6.1	9.5	9.8	78	20	6.9	3.0	5.8	0.37	1.5
17	0.24	2.8	5.2	9.2	22	76	21	6.7	2.8	5.7	0.33	1.5
18	0.24	2.5	5.0	9.2	19	74	21	6.6	2.6	5.6	0.39	1.8
19	0.24	2.3	4.9	9.0	22	79	21	6.7	2.8	5.2	0.21	2.0
20	0.24	2.0	6.2	8.8	17	74	22	6.6	2.7	5.2	0.12	2.3
21	0.24	1.8	9.9	8.6	16	77	20	6.4	2.6	5.1	0.01	3.8
22	0.24	1.6	7.7	8.4	20	78	19	6.3	2.4	4.9	0.00	3.1
23	0.24	1.5	6.4	8.2	24	131	17	6.2	2.2	4.6	0.00	3.5
24	0.24	1.5	28	8.1	25	60	29	6.0	2.0	4.2	0.00	3.2
25	0.24	1.5	249	8.1	70	52	31	6.0	1.9	4.0	0.00	2.9
26	0.31	1.5	45	7.9	649	77	30	6.0	1.9	3.6	0.01	2.7
27	0.31	1.5	17	7.9	160	55	27	5.8	1.7	3.5	0.24	2.8
28	0.28	1.5	13	8.0	57	43	24	6.3	1.7	3.5	0.29	2.7
29	0.27	1.5	12	8.0	41	40	15	8.2	1.6	3.3	0.29	2.7
30	0.25	1.6	20	7.9	---	39	12	6.6	1.5	3.2	0.21	3.2
31	0.33	---	16	8.0	---	36	---	5.9	---	3.1	0.14	---
TOTAL	6.95	234.73	715.8	449.4	1309.7	1691	760	250.1	93.2	96.32	37.64	58.23
MEAN	0.22	7.82	23.1	14.5	45.2	54.5	25.3	8.07	3.11	3.11	1.21	1.94
MAX	0.33	104	249	80	649	131	37	18	5.3	6.1	3.3	3.8
MIN	0.00	0.48	1.5	7.9	7.9	26	12	5.8	1.5	0.66	0.00	0.26
AC-FT	14	466	1420	891	2600	3350	1510	496	185	191	75	115



## 11246500 WILLOW CREEK AT MOUTH, NEAR AUBERRY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.38	16.6	53.3	117	130	143	136	145	59.1	10.1	2.61	2.74
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	0.00	0.54	1.13	2.13	1.89	2.63	2.36	3.61	1.93	0.00	0.00	0.00
(WY)	1956	1978	1991	1991	1991	1977	1977	1977	1961	1961	1959	1960

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1952 - 2004	
ANNUAL TOTAL	10659.18		5703.07			
ANNUAL MEAN	29.2		15.6		66.5	
HIGHEST ANNUAL MEAN					344 1983	
LOWEST ANNUAL MEAN					1.71 1977	
HIGHEST DAILY MEAN	410	Mar 15	649	Feb 26	7500	Dec 23 1955
LOWEST DAILY MEAN	0.00	Sep 26	0.00	Oct 1	0.00	Sep 4 1955
ANNUAL SEVEN-DAY MINIMUM	0.01	Sep 26	0.02	Aug 20	0.00	Sep 4 1955
MAXIMUM PEAK FLOW			1330	Feb 26	15700	Dec 23 1955
MAXIMUM PEAK STAGE			10.46	Feb 26	31.65	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	21140		11310		48150	
10 PERCENT EXCEEDS	105		37		157	
50 PERCENT EXCEEDS	12		5.6		8.2	
90 PERCENT EXCEEDS	0.26		0.28		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<sup>2</sup>.

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, 4,080 acre-ft, June 26, elevation, 984.63 ft; minimum, 3,460 acre-ft, Feb. 1, elevation, 980.49 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3760	3700	3710	3600	3460	3620	3670	3660	3910	3800	3670	3720
2	3810	3670	3710	3880	3700	3600	3830	3600	3930	3910	3540	3950
3	3540	3740	3890	3670	3530	3620	3620	3640	3880	3530	3720	3990
4	3620	3620	3770	3690	3680	3810	3660	3560	3950	3550	3800	3860
5	3830	3750	3610	3970	3570	3820	3600	3570	4020	3530	3620	3690
6	3550	3770	3760	3650	3840	3760	3690	3880	4010	3710	3590	3830
7	3630	3810	3830	3790	3740	3810	3660	3640	3900	3700	3590	3980
8	3790	3940	3470	3940	3690	3650	3760	3660	3910	3890	3670	3860
9	3700	3820	3770	3600	3540	3790	3760	3660	3830	3700	3620	3860
10	3730	3700	3640	3730	3640	3880	3830	3600	3820	3750	3760	3840
11	3760	3790	3630	3490	3750	3780	3670	3960	3990	3710	3690	3740
12	3640	3850	3560	3470	3610	3890	3740	4060	3590	3900	3630	3810
13	3700	3740	3620	3840	3710	3750	3940	3670	3600	3880	3620	3750
14	3640	3770	3770	3740	3730	3700	3860	4050	3570	3800	3750	3670
15	3610	3800	3800	3790	3570	3830	3660	3920	4070	3740	3750	3740
16	3640	3850	3760	3560	3670	3920	3740	3790	4020	3700	3570	3790
17	3880	3900	3680	3610	3640	3940	3620	3810	3890	3840	3590	3590
18	3790	3920	3830	3870	3650	3870	3660	3840	3720	3640	3820	3880
19	3680	4020	3680	3830	3980	3630	3770	3850	3660	3960	3670	4020
20	3790	3850	3870	3690	3770	3800	3620	3790	3770	4050	3720	4050
21	3810	3890	3720	3970	3760	3750	3660	3920	3840	3690	3780	3570
22	3930	3840	3590	3910	3780	3720	3610	3920	3710	3700	3690	3650
23	4000	3870	3670	3990	3770	4030	3700	3840	3860	3770	3690	3650
24	3780	3880	3640	3880	3580	3870	3750	3870	3900	3930	3870	3610
25	3670	3880	3690	3680	3800	3850	3590	3970	4060	3780	3660	3800
26	3630	3930	3690	3740	3680	3840	3800	3980	4080	3930	3850	3900
27	3870	3820	3630	3660	3860	3760	3610	3970	3640	3820	3600	3500
28	3880	3680	3700	3820	3680	3610	3820	3970	3690	3690	3660	3750
29	3700	3820	3730	3630	3530	3740	3860	4060	3960	3830	3740	3880
30	3880	3800	3710	3530	---	3620	3740	3620	3900	3640	3820	3770
31	3970	---	3530	3500	---	3750	---	3910	---	3780	3830	---
MAX	4000	4020	3890	3990	3980	4030	3940	4060	4080	4050	3870	4050
MIN	3540	3620	3470	3470	3460	3600	3590	3560	3570	3530	3540	3500
a	983.93	982.78	980.97	980.76	981.00	982.49	982.38	983.53	983.48	982.68	983.00	982.61
b	230	-170	-270	-30	30	220	-10	170	10	-120	50	-60

CAL YR 2003 b -50

WTR YR 2004 b 30

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<sup>2</sup>.

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<sup>3</sup>/s, Jan. 3, 1997, gage height, 35.62 ft; minimum daily, 16 ft<sup>3</sup>/s, May 9–18, 1987, Sept. 29, 30, 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	38	41	34	35	33	32	39	31	31	30	30
2	39	38	40	34	35	33	31	32	31	31	30	30
3	39	37	40	34	35	33	31	32	31	31	30	30
4	38	37	39	34	36	33	31	32	31	30	31	30
5	38	36	33	34	34	33	31	32	31	31	30	30
6	39	36	32	34	35	35	31	32	31	30	30	30
7	38	37	33	34	36	35	31	31	31	30	30	30
8	38	37	33	34	36	35	31	31	31	31	30	30
9	39	38	31	34	35	35	31	31	31	31	30	30
10	39	37	32	33	34	35	32	31	31	30	30	30
11	39	36	32	33	35	35	32	31	31	30	30	30
12	39	37	33	33	34	35	31	32	31	30	30	29
13	38	119	33	513	34	35	31	31	30	30	35	30
14	38	44	34	36	35	34	31	31	30	30	30	30
15	38	44	35	36	35	34	31	32	30	30	30	30
16	38	44	33	35	34	34	31	31	31	30	30	30
17	37	44	34	34	34	34	31	31	31	30	30	30
18	39	44	34	35	34	34	31	31	31	30	30	30
19	38	44	34	35	34	34	31	31	31	30	30	30
20	38	44	34	35	35	34	31	31	30	30	30	30
21	39	43	34	35	35	34	41	31	31	30	30	30
22	39	43	34	37	35	33	32	31	31	30	30	30
23	38	43	33	36	34	34	31	32	30	30	30	30
24	39	43	34	36	34	34	31	31	31	30	30	30
25	38	43	35	36	34	34	31	31	31	31	30	30
26	37	43	34	35	35	33	32	31	31	31	30	30
27	38	43	34	35	34	31	32	31	31	31	31	30
28	39	42	34	168	34	32	31	32	30	30	30	30
29	38	41	34	36	33	32	32	31	30	36	30	31
30	38	41	34	35	---	31	31	31	31	31	30	31
31	38	---	33	35	---	31	---	31	---	30	30	---
TOTAL	1189	1296	1063	1688	1003	1042	947	978	923	946	937	901
MEAN	38.4	43.2	34.3	54.5	34.6	33.6	31.6	31.5	30.8	30.5	30.2	30.0
MAX	39	119	41	513	36	35	41	39	31	36	35	31
MIN	37	36	31	33	33	31	31	31	30	30	30	29
AC-FT	2360	2570	2110	3350	1990	2070	1880	1940	1830	1880	1860	1790
a	0.00	11730	4520	0.00	0.00	15	99	160	17630	119	0.00	13
b	69560	12580	39280	70770	64600	130000	132800	130200	103200	99080	75740	70160

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.

## SAN JOAQUIN RIVER BASIN

## 11246700 SAN JOAQUIN RIVER NEAR AUBERRY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	38.1	64.9	33.5	206	39.1	83.8	76.8	377	769	529	36.1	32.5
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1987 - 2004	
ANNUAL TOTAL	28587		12913			
ANNUAL MEAN	78.3		35.3		191	
HIGHEST ANNUAL MEAN					1263	
LOWEST ANNUAL MEAN					18.2	
HIGHEST DAILY MEAN	2290	Jun 3	513	Jan 13	35200	Jan 3 1997
LOWEST DAILY MEAN	31	Dec 9	29	Sep 12	16	May 9 1987
ANNUAL SEVEN-DAY MINIMUM	32	Dec 5	30	Sep 6	16	May 9 1987
MAXIMUM PEAK FLOW			8410	Jan 13	80600	Jan 3 1997
MAXIMUM PEAK STAGE			13.92	Jan 13	35.62	Jan 3 1997
ANNUAL RUNOFF (AC-FT)	56700		25610		138400	
10 PERCENT EXCEEDS	40		39		42	
50 PERCENT EXCEEDS	37		32		32	
90 PERCENT EXCEEDS	34		30		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 coefficient, 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<sup>3</sup>/s, July 2, 3, 1973, May 21, 1983; no flow for many days in each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193	0.00	0.00	0.00	0.00	0.00	362	507	499	930	803	331
2	174	0.00	0.00	0.00	0.00	0.00	537	490	568	797	775	352
3	193	0.00	0.00	0.00	0.00	0.00	713	534	542	698	440	353
4	193	0.00	0.00	0.00	0.00	0.00	644	579	530	644	282	352
5	231	0.00	0.00	0.00	0.00	0.00	650	583	524	684	277	296
6	172	0.00	0.00	0.00	0.00	0.00	764	589	524	809	340	252
7	228	0.00	0.00	0.00	0.00	0.00	857	583	784	786	361	228
8	227	0.00	0.00	0.00	0.00	0.00	842	558	809	757	318	215
9	225	0.00	0.00	0.00	0.00	0.00	796	503	813	812	298	212
10	224	0.00	0.00	0.00	0.00	0.00	761	508	902	826	298	66
11	223	0.00	0.00	0.00	0.00	312	745	509	949	826	307	0.00
12	223	0.00	0.00	0.00	0.00	384	714	481	985	756	315	0.00
13	222	0.00	0.00	0.00	0.00	322	532	487	1030	684	315	0.00
14	222	0.00	0.00	0.00	0.00	114	509	497	998	712	325	0.00
15	234	0.00	0.00	0.00	0.00	388	448	497	984	766	265	0.00
16	280	0.00	0.00	0.00	0.00	226	440	435	991	819	228	0.00
17	325	0.00	0.00	0.00	0.00	129	410	407	922	822	227	0.00
18	300	0.00	0.00	0.00	0.00	455	401	461	915	800	248	0.00
19	294	0.00	0.00	0.00	0.00	415	384	444	919	681	272	0.00
20	339	0.00	0.00	0.00	0.00	391	417	422	891	742	308	0.00
21	394	0.00	0.00	0.00	0.00	426	456	399	844	876	301	0.00
22	336	0.00	0.00	0.00	0.00	443	425	400	776	902	290	0.00
23	247	0.00	0.00	0.00	0.00	452	423	411	904	905	289	0.00
24	67	0.00	0.00	0.00	0.00	453	423	448	996	906	316	0.00
25	0.00	0.00	0.00	0.00	0.00	406	423	499	1010	919	258	0.00
26	0.00	0.00	0.00	0.00	0.00	354	488	482	968	844	252	0.00
27	0.00	0.00	0.00	0.00	0.00	341	514	455	838	898	325	0.00
28	0.00	0.00	0.00	0.00	0.00	338	487	431	867	961	333	0.00
29	0.00	0.00	0.00	0.00	0.00	397	480	328	923	942	321	0.00
30	0.00	0.00	0.00	0.00	---	371	497	329	946	926	320	0.00
31	0.00	---	0.00	0.00	---	339	---	404	---	870	319	---
TOTAL	5766.00	0.00	0.00	0.00	0.00	7456.00	16542	14660	25151	25300	10326	2657.00
MEAN	186	0.00	0.00	0.00	0.00	241	551	473	838	816	333	88.6
MAX	394	0.00	0.00	0.00	0.00	455	857	589	1030	961	803	353
MIN	0.00	0.00	0.00	0.00	0.00	0.00	362	328	499	644	227	0.00
AC-FT	11440	0.00	0.00	0.00	0.00	14790	32810	29080	49890	50180	20480	5270

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2004, BY WATER YEAR (WY)

	MEAN	17.8	7.95	27.3	100	300	363	517	799	970	713	342
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13.8	356	76.7	0.00
(WY)	1950	1949	1949	1949	1949	1952	1964	1961	1977	1981	1977	1959

SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1949 - 2004
ANNUAL TOTAL	127217.00	107858.00	
ANNUAL MEAN	349	295	358
HIGHEST ANNUAL MEAN			736
LOWEST ANNUAL MEAN			43.8
HIGHEST DAILY MEAN	1170	Jul 11	1030
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
ANNUAL RUNOFF (AC-FT)	252300	213900	259300
10 PERCENT EXCEEDS	969	823	1050
50 PERCENT EXCEEDS	193	240	154
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<sup>3</sup>/s, June 25, 1982; no flow for many days in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1130	513	203	220	260	329	1030	1140	3240	2210	1680	1440
2	1200	453	204	129	261	284	934	1250	3640	2010	2100	1410
3	1060	411	205	0.00	262	154	791	1440	3790	1840	2290	1260
4	897	352	205	0.00	264	0.00	867	1560	3450	2050	2400	1010
5	874	353	206	0.00	265	167	1120	1630	3090	2530	2500	1030
6	972	265	201	0.00	266	286	1310	1590	3120	3060	2230	1230
7	1100	201	198	0.00	267	287	1410	1440	3260	3390	1800	1310
8	1160	202	199	0.00	268	357	1280	1210	3270	3440	1700	1360
9	1110	202	200	0.00	268	430	1030	1290	3190	3300	1850	1380
10	982	254	201	0.00	269	505	951	1460	3150	2920	2010	1250
11	862	290	202	0.00	270	547	1010	1440	2950	2890	2110	1070
12	826	238	203	0.00	373	547	1170	1400	2770	3010	2060	1100
13	926	200	204	0.00	440	547	1400	1400	2840	3080	1890	1220
14	1000	200	85	0.00	435	675	1500	1290	3100	3130	1560	1250
15	1010	200	0.00	0.00	549	813	1410	1090	3120	2850	1520	1310
16	1010	200	0.00	112	576	879	1210	1170	3570	2230	1820	1270
17	955	200	121	246	552	954	1020	1370	3390	1880	1880	1060
18	814	200	209	103	495	998	1030	1500	2850	1970	1680	806
19	815	200	209	0.00	394	944	1110	1600	2370	2120	1490	875
20	894	200	87	167	305	841	1120	1650	2240	2220	1250	1060
21	820	200	0.00	251	274	886	1100	1800	2340	2370	1030	1130
22	754	200	0.00	251	275	1090	1070	1960	2340	2390	1090	1210
23	761	200	0.00	251	320	1200	989	2140	2300	2150	1210	1200
24	669	200	0.00	251	308	1200	906	2600	2290	1880	1270	1020
25	600	200	0.00	251	277	1170	963	2920	2240	1920	1310	790
26	600	200	0.00	252	365	879	1200	3000	1980	2210	1330	799
27	765	200	0.00	253	426	746	1440	3000	1960	2290	1180	1060
28	886	201	0.00	85	422	834	1560	2830	2200	2190	970	1230
29	926	201	127	0.00	422	926	1510	2520	2400	2090	1020	1230
30	956	202	219	140	---	978	1340	2400	2400	1840	1280	1190
31	748	---	219	259	---	1000	---	2750	---	1630	1430	---
TOTAL	28082	7338	3907.00	3221.00	10128	21453.00	34781	55840	84850	75090	50940	34560
MEAN	906	245	126	104	349	692	1159	1801	2828	2422	1643	1152
MAX	1200	513	219	259	576	1200	1560	3000	3790	3440	2500	1440
MIN	600	200	0.00	0.00	260	0.00	791	1090	1960	1630	970	790
AC-FT	55700	14550	7750	6390	20090	42550	68990	110800	168300	148900	101000	68550

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2004, BY WATER YEAR (WY)

MEAN	865	315	95.6	219	1169	1191	1372	1739	2716	2956	2544	1496
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	0.00	0.00	0.00	0.00	0.00	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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1949 - 2004	
ANNUAL TOTAL	530254.00		410190.00			
ANNUAL MEAN	1453		1121		1400	
HIGHEST ANNUAL MEAN					2356	
LOWEST ANNUAL MEAN					270	
HIGHEST DAILY MEAN	5240	Jun 6	3790	Jun 3	5330	Jun 25 1982
LOWEST DAILY MEAN	0.00	Jan 2	0.00	Dec 15	0.00	Jul 5 1949
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 2	0.00	Dec 21	0.00	Sep 11 1949
ANNUAL RUNOFF (AC-FT)	1052000		813600		1014000	
10 PERCENT EXCEEDS	3430		2510		3520	
50 PERCENT EXCEEDS	862		1000		993	
90 PERCENT EXCEEDS	200		163		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<sup>2</sup>.

PERIOD OF RECORD.—October 1941 to current year. Monthend contents only for some periods, published in WSP 1315-A.

GAGE.—Water-stage recorder. Datum 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, 485,500 acre-ft, May 18, elevation, 570.72 ft; minimum, 181,400 acre-ft, Sept. 30, elevation, 487.73 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 2003 TO SEPTEMBER 2004  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	214600	211900	219200	254400	321300	368400	443000	474400	461000	356200	247400	191800
2	213900	212500	220600	256800	322900	370700	445400	476000	457200	353300	243200	190500
3	213800	213400	221000	258800	325800	374100	447900	477600	452700	352200	239500	190200
4	213600	214300	222200	260400	328400	374900	449100	477600	448600	347700	236700	189900
5	211900	214700	223100	261800	330800	374700	450200	477900	445300	344600	233500	190400
6	210400	215200	224300	264300	332400	375400	450400	478200	441900	340100	230800	190100
7	208700	214900	225400	266800	334100	377700	449700	478600	438400	334800	228200	190200
8	206400	216100	226700	271200	335800	380500	449400	479000	434800	328500	225700	189700
9	204600	216700	227400	276100	337800	382800	449700	479700	431800	323700	223200	189600
10	203300	216700	229000	279200	338700	385200	450800	479300	428300	320700	220400	190600
11	203300	216400	230500	283200	339400	385800	452600	479100	426300	313800	217600	190800
12	202400	216400	231500	285100	340000	388900	453700	480200	424500	309500	214900	191400
13	201800	216400	231900	286600	340400	392100	453600	481400	421000	304700	212900	191000
14	201800	216400	233000	289000	341500	394700	454000	481800	417800	301200	211000	190500
15	201100	216400	234900	291700	342100	395800	454800	482800	412600	297100	209900	189800
16	200700	216300	236400	293800	342700	398400	455500	484100	407500	293900	208600	189600
17	201400	216200	237600	295700	343400	401200	457000	484800	403700	291200	207000	189100
18	202700	216200	238400	297800	344400	403200	457800	485500	400900	288700	205600	187500
19	204000	216100	238900	300300	344800	406100	458900	485200	396700	286300	204200	187200
20	204900	216200	239300	302500	346800	408600	460200	485300	392000	284600	204100	185700
21	205800	216100	240400	304200	349000	410800	461000	485200	390800	280900	202700	186400
22	207000	216300	241400	304000	350600	413200	462400	484200	387200	276700	201200	185900
23	208600	216200	242400	303600	352100	415100	463300	483000	382700	272900	199500	185700
24	210800	216100	244300	303300	354000	416700	465200	481000	378700	270200	198100	186400
25	212800	216100	247100	303500	355900	418300	467400	478100	375600	268100	197400	186100
26	212700	216100	248500	305300	360300	422000	469000	475200	373600	265600	195700	186800
27	212600	216500	249700	308000	362400	425900	470900	472200	370500	262500	195500	185700
28	212500	217000	250700	310300	364300	430400	470600	469800	367500	259400	195900	183500
29	212000	217600	251600	313900	366300	433800	471100	467600	362800	255500	195200	181800
30	211200	218400	252200	317000	---	437100	472500	466900	359300	252600	194400	181400
31	211000	---	253200	319100	---	440300	---	464300	---	250000	193100	---
MAX	214600	218400	253200	319100	366300	440300	472500	485500	461000	356200	247400	191800
MIN	200700	211900	219200	254400	321300	368400	443000	464300	359300	250000	193100	181400
a	498.42	500.94	512.15	531.14	543.36	560.85	567.94	566.16	541.62	511.15	492.02	487.73
b	-4000	7400	34800	65900	47200	74000	32200	-8200	-105000	-109300	-56900	-11700

CAL YR 2003 b -53700  
WTR YR 2004 b -33600

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<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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<sup>3</sup>/s, Dec. 11, 1937, gage height, 23.8 ft, site and datum then in use; minimum daily, 54 ft<sup>3</sup>/s, Sept. 15, 1924. Maximum discharge since construction of Friant Dam in 1941, 60,300 ft<sup>3</sup>/s, Jan. 3, 1997, gage height, 22.97 ft (provided by U.S. Bureau of Reclamation); minimum daily, 11 ft<sup>3</sup>/s, Jan. 8, 1977.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	190	143	120	103	92	105	172	189	231	202	195	194
2	190	142	120	102	97	113	173	187	229	202	196	194
3	192	134	119	100	96	104	175	186	227	200	199	194
4	191	113	116	101	98	104	175	185	223	197	200	194
5	191	115	117	99	96	104	167	185	221	196	200	196
6	190	115	118	99	93	103	167	184	219	196	200	195
7	191	117	117	100	94	106	166	179	218	197	199	196
8	191	116	95	99	95	104	167	177	219	195	199	196
9	191	116	80	101	94	106	167	177	215	196	199	196
10	194	116	100	99	94	106	168	178	216	194	195	194
11	191	115	102	100	95	136	169	180	218	194	195	196
12	191	116	105	97	92	155	171	161	219	193	194	196
13	189	116	106	97	93	144	172	147	221	192	195	197
14	178	120	109	97	84	131	171	201	220	203	194	197
15	164	119	104	95	97	128	173	200	216	214	194	196
16	164	118	103	97	97	144	185	200	218	213	194	197
17	165	119	101	97	99	161	201	175	219	211	194	312
18	162	119	101	97	98	164	200	182	219	212	194	271
19	164	121	102	98	104	163	199	196	217	212	194	197
20	165	120	102	97	106	165	200	195	217	212	194	197
21	169	120	102	98	106	164	198	195	218	211	194	173
22	167	120	103	95	108	164	197	194	216	209	194	155
23	168	120	102	95	104	164	197	194	215	202	194	155
24	169	120	105	95	104	165	195	194	214	192	193	162
25	170	120	103	95	107	163	194	195	215	192	211	149
26	172	120	102	93	106	166	196	204	214	195	238	149
27	171	120	100	94	88	165	198	229	215	198	235	151
28	172	120	100	89	102	164	195	231	217	198	236	152
29	173	120	102	89	103	163	195	230	210	197	237	152
30	172	120	102	90	---	171	191	230	206	196	221	154
31	154	---	103	95	---	173	---	230	---	195	196	---
TOTAL	5501	3610	3261	3003	2842	4368	5494	5990	6542	6216	6273	5657
MEAN	177	120	105	96.9	98.0	141	183	193	218	201	202	189
MAX	194	143	120	103	108	173	201	231	231	214	238	312
MIN	154	113	80	89	84	103	166	147	206	192	193	149
AC-FT	10910	7160	6470	5960	5640	8660	10900	11880	12980	12330	12440	11220



## 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 - 2004, BY WATER YEAR (WY)

MEAN	344	255	387	711	1028	1159	1645	1792	1616	996	565	449
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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1941 - 2004

ANNUAL TOTAL	60936	58757	
ANNUAL MEAN	167	161	910
HIGHEST ANNUAL MEAN			4385 1983
LOWEST ANNUAL MEAN			66.9 1971
HIGHEST DAILY MEAN	921 Jun 8	312 Sep 17	36800 Jan 3 1997
LOWEST DAILY MEAN	80 Dec 9	80 Dec 9	11 Jan 8 1977
ANNUAL SEVEN-DAY MINIMUM	95 Mar 8	92 Jan 26	20 Jan 22 1990
MAXIMUM PEAK FLOW		437 Sep 18	60300 Jan 3 1997
MAXIMUM PEAK STAGE		3.44 Sep 18	22.97 Jan 3 1997
ANNUAL RUNOFF (AC-FT)	120900	116500	659600
10 PERCENT EXCEEDS	237	215	2780
50 PERCENT EXCEEDS	152	171	153
90 PERCENT EXCEEDS	101	98	54

## 11251000 SAN JOAQUIN RIVER BELOW FRIANT, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—May 2004 to September 2004.

SPECIFIC CONDUCTANCE: May 2004 to September 2004.

WATER TEMPERATURE: May 2004 to September 2004.

INSTRUMENTATION.—Water-quality monitor since May 2004.

REMARKS.—Specific conductance and water temperature records rated good for May 7 to June 9 and rated excellent for June 10 to Sept. 30.

EXTREMES FOR PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: Maximum recorded, 80 microsiemens, June 2, 2004; minimum recorded, 39 microsiemens, Sept. 25, 26, 29, 30, 2004.

WATER TEMPERATURE: Maximum recorded, 14.0°C, many days July to September 2004; minimum recorded, 8.5°C, several days in May 2004.

EXTREMES FOR CURRENT YEAR.—

SPECIFIC CONDUCTANCE: Maximum recorded, 80 microsiemens, June 2; minimum recorded, 39 microsiemens, Sept. 25, 26, 29, 30.

WATER TEMPERATURE: Maximum recorded, 14.0°C, many days July to September; minimum recorded, 8.5°C, several days in May.

## SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

## WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	---	---	50	50	47	46	47	44	43	42
2	---	---	---	---	80	50	47	46	46	45	43	42
3	---	---	---	---	50	50	47	46	47	45	44	42
4	---	---	---	---	50	50	48	46	47	45	43	41
5	---	---	---	---	50	50	48	46	47	44	42	41
6	---	---	---	---	60	50	49	46	46	44	42	41
7	---	---	---	---	60	50	48	45	45	44	42	41
8	---	---	50	50	50	50	47	45	45	44	60	41
9	---	---	50	50	50	45	48	45	46	44	42	41
10	---	---	50	50	48	45	47	45	46	44	42	41
11	---	---	50	50	48	45	48	45	45	44	41	40
12	---	---	60	50	49	46	48	45	46	44	41	40
13	---	---	50	50	47	45	47	46	46	44	41	40
14	---	---	50	50	47	46	49	46	46	44	41	40
15	---	---	50	50	48	45	49	45	46	43	42	40
16	---	---	50	50	48	46	60	45	45	43	42	40
17	---	---	50	50	47	46	51	46	45	44	41	40
18	---	---	60	50	48	46	50	47	46	44	52	41
19	---	---	50	50	48	45	59	45	45	43	52	45
20	---	---	50	50	48	45	50	46	45	43	50	40
21	---	---	50	50	48	45	47	45	44	43	45	40
22	---	---	50	50	48	46	47	45	44	42	43	40
23	---	---	50	50	49	45	47	45	54	43	42	40
24	---	---	50	50	47	46	47	45	51	43	46	40
25	---	---	50	50	47	45	47	45	45	42	43	39
26	---	---	50	50	47	46	47	45	44	42	42	39
27	---	---	50	50	47	45	47	46	44	42	44	40
28	---	---	50	50	47	45	50	46	45	43	45	41
29	---	---	50	50	47	45	48	46	44	42	45	39
30	---	---	50	50	47	46	47	45	61	42	41	39
31	---	---	50	50	---	---	47	45	45	42	---	---
MONTH	---	---	---	---	80	45	60	45	61	42	60	39

## 11251000 SAN JOAQUIN RIVER BELOW FRIANT, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	13.0	9.0	13.0	9.5	13.5	10.0	13.5	10.5
2	---	---	---	---	13.0	9.0	13.0	9.5	14.0	10.0	14.0	10.5
3	---	---	---	---	13.0	9.0	13.5	9.5	13.5	10.0	13.5	10.0
4	---	---	---	---	13.0	9.0	13.5	9.5	14.0	10.0	13.5	10.0
5	---	---	---	---	13.0	9.0	13.5	9.5	13.5	10.0	13.5	10.0
6	---	---	---	---	13.0	9.5	13.5	9.5	13.5	10.0	14.0	10.5
7	---	---	---	---	13.0	9.0	13.5	10.0	13.5	9.5	13.5	10.5
8	---	---	11.5	9.0	12.5	9.0	13.5	9.5	13.5	10.0	14.0	10.5
9	---	---	12.0	8.5	12.0	9.0	13.0	9.5	14.0	10.0	14.0	10.5
10	---	---	12.0	8.5	12.5	9.0	13.5	9.5	14.0	10.0	13.5	10.5
11	---	---	11.5	8.5	12.5	9.0	13.5	9.5	14.0	10.0	14.0	10.5
12	---	---	13.5	8.5	12.5	9.0	14.0	9.5	13.5	10.0	13.5	10.0
13	---	---	13.0	8.5	13.0	9.0	14.0	9.5	14.0	10.0	13.5	10.0
14	---	---	12.5	8.5	13.0	9.5	13.5	9.5	13.5	10.0	13.5	10.0
15	---	---	12.0	8.5	12.5	9.5	13.5	9.5	13.5	10.0	13.0	10.5
16	---	---	12.0	8.5	13.5	9.5	13.5	10.0	14.0	10.0	13.5	10.5
17	---	---	13.0	9.0	13.0	9.5	13.5	10.0	14.0	10.0	12.0	10.5
18	---	---	12.0	9.0	12.0	9.5	13.0	10.0	14.0	10.0	11.5	10.0
19	---	---	13.5	8.5	13.5	9.5	14.0	10.0	13.5	10.0	12.0	10.0
20	---	---	12.5	8.5	13.0	9.5	14.0	10.0	14.0	10.0	12.5	9.5
21	---	---	12.5	8.5	13.0	9.5	14.0	9.5	13.5	10.0	13.0	9.5
22	---	---	12.5	9.0	13.0	9.5	13.5	9.5	12.5	10.0	13.0	10.0
23	---	---	12.5	8.5	13.5	9.5	13.5	10.0	13.0	10.0	13.0	10.0
24	---	---	12.5	8.5	13.0	9.5	13.5	9.5	14.0	10.0	13.5	10.0
25	---	---	12.5	9.0	13.0	9.0	13.5	9.5	13.5	10.5	13.5	10.0
26	---	---	13.0	9.0	13.0	9.5	13.5	9.5	13.5	10.0	13.5	10.0
27	---	---	12.0	9.0	13.0	9.5	14.0	9.5	13.5	10.0	13.5	10.0
28	---	---	12.5	9.5	13.0	9.5	14.0	10.0	13.5	10.0	13.0	10.0
29	---	---	12.5	9.0	13.0	9.5	14.0	10.0	13.0	10.0	13.0	10.0
30	---	---	12.5	9.0	13.5	9.5	14.0	10.0	14.0	10.5	13.0	10.0
31	---	---	13.0	9.0	---	---	14.0	10.0	14.0	10.5	---	---
MONTH	---	---	---	---	13.5	9.0	14.0	9.5	14.0	9.5	14.0	9.5

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Depth at sample location, feet (81903)	pH, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf 25 degC (00095)	Temperature, deg C (00010)	Location in X-sect. looking dwnstrm ft from l bank (00009)
MAY						
12...*	1400	2.81	6.8	48	11.5	26.0
12...*	1401	2.70	6.9	48	12.5	43.0
12...*	1402	2.82	6.9	49	13.0	64.5
12...*	1403	2.84	7.3	49	13.0	77.5
12...*	1404	2.40	7.6	49	13.0	87.5
12...*	1405	2.41	7.8	50	13.5	97.5
12...*	1406	2.52	7.9	50	13.5	105
12...*	1407	2.31	8.0	50	13.5	110
12...*	1408	2.01	8.0	50	13.5	115
12...*	1409	1.64	8.0	50	13.5	123
12...*	1410	1.16	8.1	50	14.0	130

\* Instantaneous discharge at time of cross-sectional measurement: May 12, 167 ft<sup>3</sup>/s.

## 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<sup>2</sup>.

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<sup>3</sup>/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<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 25	1945	205	2.14

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## 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	0.18	0.18	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	1.0	0.22	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.66	0.24	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.25	0.22	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.12	0.20	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.06	0.19	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.05	0.20	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.07	0.20	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.06	0.15	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.06	0.08	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.04	0.05	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.07	0.05	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.07	0.04	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.06	0.10	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.06	0.25	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.07	0.34	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.07	0.45	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.01	0.07	0.56	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.06	0.63	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.04	0.61	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.03	0.47	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.04	0.44	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.05	0.41	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.06	0.30	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	37	0.10	0.01	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	23	0.18	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	3.7	0.20	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.95	0.24	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.31	0.17	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.15	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.16	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	64.97	4.50	6.59	0.00	0.00	0.00	0.00	0.00
MEAN	0.00	0.00	0.00	0.00	2.24	0.15	0.22	0.00	0.00	0.00	0.00	0.00
MAX	0.00	0.00	0.00	0.00	37	1.0	0.63	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	129	8.9	13	0.00	0.00	0.00	0.00	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2004, BY WATER YEAR (WY)

MEAN	0.09	0.32	1.28	6.29	10.0	12.5	4.56	2.52	1.05	0.38	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1967	1967	1969	1975	1976	1989	1972	1972	1968	1968	1968	1968

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1967 - 2004

ANNUAL TOTAL	190.95	76.06	
ANNUAL MEAN	0.52	0.21	3.24
HIGHEST ANNUAL MEAN			18.9
LOWEST ANNUAL MEAN			0.00
HIGHEST DAILY MEAN	59	May 3	37
LOWEST DAILY MEAN	0.00	Jun 27	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 27	0.00
MAXIMUM PEAK FLOW			205
MAXIMUM PEAK STAGE			2.14
ANNUAL RUNOFF (AC-FT)	379	151	2350
10 PERCENT EXCEEDS	0.63	0.10	5.9
50 PERCENT EXCEEDS	0.00	0.00	0.06
90 PERCENT EXCEEDS	0.00	0.00	0.00

## 11253500 JAMES BYPASS NEAR SAN JOAQUIN, CA

LOCATION.—Lat 36°39'09", long 120°10'49", 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<sup>3</sup>/s, June 7, 1969; no flow for all or most of each year.

EXTREMES FOR CURRENT YEAR.—No flow for 2004 water year.

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	49.2	129	198	312	313	469	654	794	509	229	32.7	23.3
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1948	1948	1948	1948	1948	1948	1948	1954	1953	1948	1948	1949

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1948 - 2004a	
ANNUAL TOTAL	0.00		0.0			
ANNUAL MEAN	0.00		0.00		287	
HIGHEST ANNUAL MEAN					3189 1983	
LOWEST ANNUAL MEAN					0.00 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		207600	
10 PERCENT EXCEEDS	0.00		0.00		436	
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<sup>2</sup>.

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<sup>3</sup>/s, June 20, 1941, gage height, 13.75 ft, site and datum then in use; no flow for several days in December 1999, January 2000, and January 2004.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	280	195	16	0.05	222	263	186	268	615	681	569	296
2	307	200	7.7	0.06	258	280	197	244	609	701	544	313
3	278	195	6.5	0.00	273	286	194	216	618	698	522	318
4	260	180	5.6	0.00	277	290	193	218	623	677	495	296
5	267	172	5.6	0.00	285	297	195	262	619	667	488	250
6	258	172	5.3	0.19	294	262	225	321	611	662	460	220
7	248	169	5.2	1.7	301	231	259	387	615	665	436	229
8	254	167	7.0	2.0	307	208	268	415	569	665	445	262
9	261	160	2.6	2.0	302	197	278	378	503	668	464	276
10	259	e160	2.5	1.8	304	205	279	347	458	674	564	278
11	273	e160	2.1	1.8	333	213	295	318	421	674	637	274
12	285	155	1.5	1.6	352	224	325	280	412	668	649	259
13	284	156	1.3	1.3	359	213	367	274	413	655	646	232
14	283	159	1.3	0.69	368	248	415	274	453	652	589	213
15	275	163	1.1	32	394	289	407	265	520	653	540	203
16	270	168	0.96	106	420	313	377	270	564	622	529	197
17	265	180	1.3	127	420	337	321	280	609	527	542	196
18	260	189	1.7	167	393	331	281	279	651	497	536	196
19	263	175	1.2	203	350	285	214	278	648	541	455	197
20	253	165	0.79	195	329	241	155	268	639	567	343	198
21	231	217	0.61	166	323	214	132	255	626	544	230	197
22	212	444	0.48	139	325	198	130	252	586	504	156	198
23	204	520	0.40	132	309	210	126	302	571	457	124	195
24	205	452	0.37	116	294	223	120	363	549	410	120	191
25	205	219	0.53	128	295	197	118	435	498	406	147	179
26	204	111	0.51	157	266	172	116	511	436	447	176	171
27	203	68	0.24	186	229	134	149	576	410	524	177	171
28	202	46	0.14	185	206	122	203	639	479	602	155	170
29	198	32	0.06	185	227	113	247	650	553	646	147	169
30	198	23	0.13	195	---	106	267	658	632	659	175	167
31	199	---	0.04	202	---	141	---	647	---	622	246	---
TOTAL	7644	5572	80.76	2634.19	9015	7043	7039	11130	16510	18635	12306	6711
MEAN	247	186	2.61	85.0	311	227	235	359	550	601	397	224
MAX	307	520	16	203	420	337	415	658	651	701	649	318
MIN	198	23	0.04	0.00	206	106	116	216	410	406	120	167
AC-FT	15160	11050	160	5220	17880	13970	13960	22080	32750	36960	24410	13310

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004, BY WATER YEAR (WY)

MEAN	201	271	590	998	1452	1325	1462	2112	2137	746	331	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	2.61	14.3	52.7	73.8	162	200	244	327	12.1	9.87
(WY)	1941	1950	2004	2000	1950	1948	1948	1951	1948	1949	1940	1940

## SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1940 - 2004
ANNUAL TOTAL	102577.76	104319.95	
ANNUAL MEAN	281	285	1019
HIGHEST ANNUAL MEAN			3546
LOWEST ANNUAL MEAN			188
HIGHEST DAILY MEAN	665	701	11700
LOWEST DAILY MEAN	0.04	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.24	0.04	0.00
MAXIMUM PEAK FLOW		707	11700
MAXIMUM PEAK STAGE		6.03	13.75
ANNUAL RUNOFF (AC-FT)	203500	206900	738000
10 PERCENT EXCEEDS	572	612	3350
50 PERCENT EXCEEDS	244	258	301
90 PERCENT EXCEEDS	36	2.6	77

e Estimated.

## 11255575 PANOCHÉ 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<sup>2</sup>.

## 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<sup>3</sup>/s, Feb. 3, 1998, gage height, 13.46 ft, from rating curve extended above 1,500 ft<sup>3</sup>/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<sup>3</sup>/s, or maximum. No peak greater than 150 ft<sup>3</sup>/s occurred outside of period of published record during this water year:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 26	0900	82	5.87

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
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	---	---	---
2	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
3	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
4	---	---	0.00	0.00	0.00	0.00	0.00	0.02	0.00	---	---	---
5	---	---	0.00	0.00	0.00	0.00	0.03	0.18	0.00	---	---	---
6	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
7	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
8	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
9	---	---	0.00	0.00	0.00	0.00	e0.03	0.00	0.01	---	---	---
10	---	---	0.00	0.00	0.00	0.00	e0.08	0.00	0.00	---	---	---
11	---	---	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	---	---	---
12	---	---	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	---	---	---
13	---	---	0.00	0.00	0.01	0.00	0.00	0.00	0.00	---	---	---
14	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
15	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
16	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
17	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
18	---	---	0.00	0.00	0.03	0.00	0.00	0.00	0.00	---	---	---
19	---	---	0.00	0.00	0.00	0.10	0.00	0.00	0.00	---	---	---
20	---	---	0.00	0.00	0.00	0.01	0.00	0.01	0.00	---	---	---
21	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
22	---	---	0.00	0.00	0.00	0.00	0.03	0.00	0.00	---	---	---
23	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
24	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
25	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
26	---	---	0.00	0.00	31	0.00	0.00	0.00	0.00	---	---	---
27	---	---	0.00	0.00	2.1	0.00	0.00	0.00	0.00	---	---	---
28	---	---	0.00	0.00	0.12	0.00	0.00	0.00	0.00	---	---	---
29	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.01	---	---	---
30	---	---	0.00	0.00	---	0.00	0.00	0.00	0.05	---	---	---
31	---	---	0.00	0.00	---	0.00	---	0.01	---	---	---	---
TOTAL	---	---	0.00	0.00	33.26	0.11	0.17	0.22	0.07	---	---	---
MEAN	---	---	0.00	0.00	1.15	0.00	0.01	0.01	0.00	---	---	---
MAX	---	---	0.00	0.00	31	0.10	0.08	0.18	0.05	---	---	---
MIN	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
AC-FT	---	---	0.00	0.00	66	0.2	0.3	0.4	0.1	---	---	---

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2004, BY WATER YEAR (WY)

MEAN	---	---	0.29	0.40	45.3	3.87	1.60	0.65	0.63	---	---	---
MAX	---	---	1.96	2.59	316	23.2	10.9	4.26	1.81	---	---	---
(WY)	---	---	2003	1998	1998	2001	1998	1998	1999	---	---	---
MIN	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	---	---	---
(WY)	---	---	1998	2000	2001	2002	2000	2000	2004	---	---	---

e Estimated.

## 1125575 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 0.93 ft<sup>3</sup>/s during current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, unfltrd field, std units (00400)	Specific conductance, uS/cm 25 degC (00095)	Temperature, deg C (00010)	Noncarbon hardness, wat flt field, mg/L as CaCO <sub>3</sub> (00904)
FEB 26...	1110	63	3100	748	11.0	103	8.1	2770	11.0	850

Date	Time	Hardness, water, mg/L as CaCO <sub>3</sub> (00900)	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 CaCO <sub>3</sub> (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)
FEB 26...	990	230	101	10.3	4	302	40	144	173	1	

Date	Time	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 26...	94.0	.6	29.4	1320	2170	3.20	2350	13.7	15.5	

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)	Suspnd. sediment, sieve diameter percent <.063mm (70331)	Suspnd. sediment, sieve diameter percent <.125mm (70332)	Suspnd. sediment, sieve diameter percent <.25mm (70333)	Suspnd. sediment, sieve diameter percent <.5 mm (70334)
FEB 26...	1050	67	9.5	5820	1050	95	96	97	100



1125575 PANOCHE CREEK AT INTERSTATE 5, NEAR SILVER CREEK, CA—Continued

PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Number of sampling points, count (00063)	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Bed sediment, dry svd sve dia <.063mm (80164)	Bed sediment, dry svd sve dia <.125mm (80165)	Bed sediment, dry svd sve dia <.25mm (80166)
JUL							
16...	1317	1	.93	25.0	4	11	26
16...	1318	1	.93	25.0	2	7	26
16...	1319	1	.93	25.0	2	7	22
16...	1320	1	.93	25.0	4	15	41
16...	1321	1	.93	25.0	6	18	55
16...	1322	1	.93	25.0	16	26	35
16...	1323	1	.93	25.0	17	35	51
16...	1324	1	.93	25.0	32	52	79
16...	1325	1	.93	25.0	22	38	58

Date	Bed sediment, dry svd sve dia <.5 mm (80167)	Bed sediment, dry svd sve dia <1 mm (80168)	Bed sediment, dry svd sve dia <2 mm (80169)	Bed sediment, dry svd sve dia <4 mm (80170)	Bed sediment, dry svd sve dia <8 mm (80171)	Bed sediment, dry svd sve dia <16 mm (80172)	Bed sediment, dry svd sve dia <32 mm (80173)
JUL							
16...	57	85	96	99	100	--	--
16...	65	84	93	98	100	--	--
16...	62	83	94	99	100	--	--
16...	69	81	87	91	95	98	100
16...	87	93	97	100	--	--	--
16...	47	67	94	99	100	--	--
16...	67	89	100	--	--	--	--
16...	91	98	99	100	--	--	--
16...	76	94	100	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF BEDLOAD, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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								
26...	1309	1000	1150	.250	0	1300	1317	20
26...	1329	1000	1150	.250	0	1320	1337	20

Date	Horizontal width of vertical, feet (04121)	Compstd samples in x-sec of bedload measmnt number (04118)	Verticals in com-posite sample, number (04119)	Number of sam-pling points, count (00063)	Loca- tion in X-sect. looking dwnstrm 1 bank (00009)	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Bedload sedimnt dschrge average unit cmposit t/d/ft (04122)
FEB								
26...	1.0	2	26	26	6.00	38	9.5	.29
26...	1.0	2	26	26	6.00	38	9.5	.21

Date	Bedload sedi- ment dis- charge, tons/d (80225)	Bedload sedi- ment, sieve diametr percent <.063mm (80226)	Bedload sedi- ment, sieve diametr percent <.125mm (80227)	Bedload sedi- ment, sieve diametr percent <.25mm (80228)	Bedload sedi- ment, sieve diametr percent <.5 mm (80229)	Bedload sedi- ment, sieve diametr percent <1 mm (80230)	Bedload sedi- ment, sieve diametr percent <2 mm (80231)	Bedload sedi- ment, sieve diametr percent <4 mm (80232)
FEB								
26...	6.5	1	3	4	28	92	99	100
26...	6.5	--	3	34	95	99	100	--

## 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. 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<sup>3</sup>/s, Feb. 20, 1986; minimum daily, 24 ft<sup>3</sup>/s, Sept. 6, 1992.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	141	115	224	202	482	185	153	136	113	138	69
2	86	150	118	235	200	446	179	181	129	130	167	75
3	93	152	108	239	231	440	190	200	123	147	176	71
4	103	175	105	245	261	444	199	200	124	155	152	84
5	109	179	98	246	254	444	200	171	119	163	130	106
6	107	172	94	249	237	430	194	132	133	154	130	136
7	114	181	91	252	225	424	178	124	157	141	126	116
8	125	168	88	258	221	423	175	126	178	137	127	92
9	128	162	85	259	219	416	161	141	188	137	146	112
10	130	170	84	250	216	395	152	151	186	e153	160	105
11	136	176	83	241	200	354	165	176	159	e161	141	90
12	134	163	78	235	185	327	180	171	143	e190	119	101
13	138	159	77	231	178	322	156	122	161	174	135	104
14	132	162	77	224	184	316	127	114	164	149	154	94
15	115	161	77	221	193	314	132	104	154	143	144	98
16	108	168	77	221	205	300	140	103	149	145	167	96
17	97	175	81	218	240	271	159	110	158	171	164	89
18	91	172	84	205	269	268	189	129	158	198	153	86
19	95	161	79	202	328	277	205	138	172	200	147	90
20	111	170	85	197	387	286	198	120	160	191	144	109
21	116	180	93	189	407	293	168	95	162	164	143	104
22	126	190	102	187	399	298	141	84	155	169	157	79
23	133	165	e101	191	383	298	116	101	139	182	147	72
24	128	150	e130	193	384	289	108	102	122	181	142	69
25	131	146	154	188	409	272	109	86	123	149	130	64
26	131	139	179	182	448	278	109	78	161	121	104	70
27	140	129	193	172	471	289	103	95	162	109	89	68
28	135	125	193	180	520	290	94	104	137	108	94	63
29	124	120	195	202	540	277	108	117	136	106	96	63
30	121	116	202	194	---	259	122	121	116	112	90	66
31	121	---	210	199	---	229	---	131	---	125	70	---
TOTAL	3627	4777	3536	6729	8596	10451	4642	3980	4464	4678	4182	2641
MEAN	117	159	114	217	296	337	155	128	149	151	135	88.0
MAX	140	190	210	259	540	482	205	200	188	200	176	136
MIN	69	116	77	172	178	229	94	78	116	106	70	63
AC-FT	7190	9480	7010	13350	17050	20730	9210	7890	8850	9280	8290	5240

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2004, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
MEAN	149	171	145	169	282	357	240	197	202	220	227	149								
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1986 - 2004	
ANNUAL TOTAL	58699		62303			
ANNUAL MEAN	161		170		209	
HIGHEST ANNUAL MEAN					289	
LOWEST ANNUAL MEAN					96.6	
HIGHEST DAILY MEAN	492	Mar 17	540	Feb 29	810	Feb 20 1986
LOWEST DAILY MEAN	49	Sep 17	63	Sep 28	24	Sep 6 1992
ANNUAL SEVEN-DAY MINIMUM	64	Sep 16	66	Sep 24	31	Dec 25 1992
MAXIMUM PEAK FLOW			552	Feb 29	unknown	Feb 20 1986
MAXIMUM PEAK STAGE			69.08	Feb 29	unknown	Feb 20 1986
ANNUAL RUNOFF (AC-FT)	116400		123600		151100	
10 PERCENT EXCEEDS	284		277		361	
50 PERCENT EXCEEDS	134		152		185	
90 PERCENT EXCEEDS	82		90		85	

e Estimated.

## 11261100 SALT SLOUGH AT HIGHWAY 165, NEAR STEVINSON, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1985–94, 1995 to current year.

CHEMICAL DATA: Water years 1985–88, 1993–94, 2001.

SPECIFIC CONDUCTANCE: Water years 1985–94, 1995 to current year.

WATER TEMPERATURE: Water years 1985–94, 1995 to current year.

SEDIMENT DATA: Water years 1983–88, 1993–94.

PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: September 1985 to September 1994, October 1995 to current year.

WATER TEMPERATURE: September 1985 to September 1994, October 1995 to current year.

INSTRUMENTATION.—Water-quality monitor.

REMARKS.—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. Specific conductance records rated excellent except for Oct. 1–10, Nov. 3–19, Dec. 9–22, Dec. 25 to Jan. 21, Feb. 26 to Mar. 7, Apr. 12–22, May 19 to June 10, July 2–9, 13–19, Aug. 23 to Sept. 8, Sept. 29, 30, which are rated good; Jan. 22–28, Mar. 8–15, Apr. 23–30, June 11–22, July 20–31, which are rated fair; and Jan. 29 to Feb. 14, Mar. 16 to Apr. 5, May 1–6, Aug. 1–4, which are rated poor. Water-temperature records rated excellent. Interruption in record 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, 2,110 microsiemens Dec. 12; minimum recorded, 881 microsiemens, July 5.

WATER TEMPERATURE: Maximum recorded, 30.5°C, July 26, 27; minimum recorded, 7.0°C, Jan. 5, 6.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1270	1220	1280	1220	1560	1470	1550	1520	1620	1600	1550	1530
2	1270	1080	1220	1190	1560	1490	1550	1480	1630	1620	1530	1480
3	1100	1040	1220	1200	1840	1490	1500	1470	1630	1600	1480	1420
4	1100	1030	1230	1190	1820	1630	1500	1480	1600	1540	1430	1390
5	1110	1080	1200	1190	1870	1790	1500	1490	1540	1500	1400	1360
6	1100	1080	1210	1200	1930	1860	1530	1500	1550	1500	1420	1380
7	1110	1090	1230	1210	1940	1900	1560	1530	1640	1550	1400	1360
8	1120	1110	1260	1230	1990	1900	1560	1500	1670	1620	1380	1360
9	1120	1080	1300	1260	2010	1940	1500	1450	1710	1670	1440	1380
10	1090	1050	1320	1300	2020	1990	1460	1400	1710	1650	1540	1420
11	1060	1050	1320	1290	2040	1960	1410	1390	1770	1710	1630	1520
12	1060	1030	1290	1270	2110	2030	1390	1360	1770	1710	1640	1590
13	1060	994	1320	1280	2100	2030	1370	1350	1750	1690	1590	1520
14	1070	992	1360	1320	2080	2040	1380	1370	1720	1670	1650	1540
15	1100	1070	1370	1350	2080	2040	1380	1350	---	---	1660	1640
16	1140	1060	1370	1370	2090	2030	1350	1310	---	---	1770	1650
17	1230	1130	1380	1370	2080	2010	1400	1310	---	---	1810	1740
18	1410	1180	1390	1370	2010	1920	1440	1390	---	---	1760	1620
19	1480	1310	1400	1340	2030	1960	1450	1420	---	---	1630	1540
20	1310	1250	1340	1230	2060	1980	1470	1430	1420	1340	1570	1510
21	1270	1230	1230	1200	2010	1840	1480	1440	1510	1420	1550	1480
22	1260	1190	1230	1180	1920	1830	1470	1410	1590	1510	1520	1470
23	1210	1180	1350	1220	---	---	1470	1410	1610	1550	1490	1450
24	1270	1210	1360	1340	---	---	1530	1450	1560	1540	1510	1440
25	1370	1240	1340	1300	1640	1570	1550	1530	1560	1470	1530	1450
26	1370	1240	1310	1280	1610	1550	1570	1540	1550	1500	1480	1410
27	1240	1210	1350	1310	1560	1540	1590	1570	1500	1420	1440	1410
28	1250	1190	1380	1330	1550	1520	1590	1560	1510	1480	1520	1420
29	1290	1250	1450	1370	1530	1520	1560	1500	1550	1510	1570	1460
30	1300	1240	1510	1450	1550	1520	1570	1530	---	---	1580	1530
31	1300	1280	---	---	1530	1500	1600	1570	---	---	1740	1560
MONTH	1480	992	1510	1180	---	---	1600	1310	---	---	1810	1360

## 11261100 SALT SLOUGH AT HIGHWAY 165, NEAR STEVINSON, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1780	1710	1480	1290	1170	1130	1110	1060	1050	1010	1560	1330
2	1720	1680	1300	1240	1140	1090	1080	1010	1010	944	1500	1300
3	1720	1620	1240	1180	1150	1120	1010	929	973	938	1340	1300
4	1630	1590	1250	1190	1160	1120	929	892	1010	970	1320	1160
5	1690	1530	1320	1230	1190	1130	922	881	1040	984	1160	1040
6	1630	1490	1450	1320	1190	1160	952	884	1040	1000	1040	952
7	1630	1570	1420	1350	1160	1080	1010	952	1070	1000	1050	930
8	1570	1500	1380	1280	1080	1010	1040	1000	1070	1040	1180	1050
9	1600	1530	1280	1200	1040	1020	1050	1020	1050	970	1160	1050
10	1670	1490	1260	1110	1060	1020	---	---	970	942	1110	1050
11	1490	1380	1120	1040	1150	1060	---	---	1020	960	1240	1090
12	1380	1310	1110	1030	1190	1150	---	---	1080	1020	1150	1070
13	1340	1300	1280	1110	1170	1130	1010	934	1090	1000	1070	1030
14	1470	1340	1290	1240	1130	1080	1050	1010	1000	963	1080	1030
15	1530	1470	1350	1260	1120	1080	1050	1030	996	977	1080	1060
16	1490	1430	1320	1270	1150	1110	1040	1010	977	915	1130	1060
17	1430	1390	1320	1190	1130	1080	1020	981	927	912	1130	1100
18	1390	1310	1190	1040	1110	1090	984	955	966	914	1130	1110
19	1310	1240	1100	1020	1090	1050	989	959	968	924	1110	1080
20	1260	1230	1220	1100	1060	1030	991	954	952	919	1080	1020
21	1360	1260	1380	1220	1080	1050	991	976	1020	952	1060	1010
22	1480	1360	1440	1360	1080	1050	978	950	1000	967	1090	1060
23	1720	1450	1380	1200	1100	1030	950	937	1010	974	1140	1090
24	1720	1610	1200	1170	1120	1030	971	935	1010	987	1160	1120
25	1640	1580	1310	1170	1090	1050	1020	971	1060	991	1200	1160
26	1690	1580	1430	1310	1050	978	1060	1020	1160	1060	1200	1160
27	1650	1550	1400	1320	987	954	1130	1060	1240	1160	1160	1140
28	1810	1640	1320	1190	1030	986	1140	1120	1260	1220	1160	1140
29	1740	1550	1190	1130	1030	992	1140	1110	1230	1170	1350	1160
30	1550	1460	1210	1170	1060	994	1130	1100	1190	1120	1360	1280
31	---	---	1190	1130	---	---	1100	1050	1330	1120	---	---
MONTH	1810	1230	1480	1020	1190	954	---	---	1330	912	1560	930

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	1	24.0	20.0	15.0	13.0	13.0	11.0	9.5	9.5	10.5	9.5	13.0
2	23.0	19.5	14.5	12.0	14.0	11.5	10.5	9.0	10.5	10.0	14.0	12.0
3	23.0	19.0	14.5	12.5	12.5	12.0	9.5	8.5	11.0	9.5	14.0	12.5
4	23.0	19.5	14.0	12.0	13.0	12.0	8.5	7.5	11.5	10.5	14.0	12.0
5	23.0	19.5	14.0	12.0	14.0	12.5	8.5	7.0	11.5	10.0	15.0	13.0
6	23.5	19.5	14.5	13.0	14.0	13.0	8.0	7.0	12.0	10.0	16.0	14.0
7	23.5	20.0	15.0	14.0	15.0	13.0	9.0	7.5	12.5	10.5	17.0	15.0
8	23.5	20.0	15.0	14.0	13.0	11.0	10.0	8.5	12.0	10.0	18.0	16.0
9	22.5	19.5	15.5	13.5	11.5	10.0	10.5	9.5	12.0	10.0	19.0	17.0
10	21.0	17.0	15.5	14.0	13.0	10.0	10.5	10.0	12.0	10.0	19.5	17.5
11	19.5	16.0	15.0	13.5	13.5	11.5	11.0	9.5	12.5	10.0	19.5	17.0
12	20.0	16.5	14.0	12.5	12.0	10.0	10.5	10.5	13.0	10.5	19.5	17.5
13	19.5	16.0	15.0	13.0	13.0	11.0	10.5	10.0	12.0	11.0	19.5	17.5
14	20.0	16.0	15.0	13.0	13.5	12.0	10.5	10.0	13.5	10.5	20.5	18.0
15	20.0	16.5	14.5	13.5	12.0	10.0	10.5	9.5	14.0	12.0	20.5	18.5
16	20.5	16.5	14.5	12.5	11.5	8.5	10.5	10.0	13.5	13.0	20.5	18.5
17	21.0	17.0	15.0	13.5	11.0	9.0	10.5	10.0	14.0	12.5	21.0	18.5
18	21.5	17.0	15.0	13.0	11.0	9.0	10.5	10.0	14.5	13.0	21.5	19.0
19	21.5	17.5	14.5	13.0	10.5	9.5	10.5	10.5	13.5	12.0	21.5	19.5
20	21.0	18.0	14.5	12.5	11.5	10.0	10.5	10.0	13.0	12.5	21.5	19.0
21	21.5	18.0	13.5	12.0	12.5	11.5	11.5	9.5	13.5	12.5	21.5	19.0
22	21.5	18.5	12.0	10.0	12.5	11.5	11.0	9.5	13.5	13.0	21.5	19.0
23	20.5	18.0	10.5	8.5	---	11.5	10.5	9.0	14.5	12.5	21.0	18.5
24	20.5	17.5	9.5	8.5	12.0	---	10.5	9.5	15.0	13.5	20.0	18.0
25	20.0	17.5	10.0	7.5	12.0	10.0	11.5	10.0	14.5	12.5	18.5	17.5
26	20.0	17.0	10.5	8.0	10.5	9.0	10.5	9.5	13.0	12.0	18.0	16.0
27	20.0	17.5	10.5	8.5	9.5	8.0	10.5	10.0	12.5	11.0	18.0	15.5
28	20.0	17.0	11.0	10.0	8.5	7.5	11.5	10.0	13.0	11.0	19.0	16.0
29	19.5	16.5	11.5	10.0	8.5	8.0	12.0	10.5	13.0	12.0	20.5	17.5
30	17.0	14.0	11.0	10.5	9.5	8.0	12.0	10.5	---	---	19.5	17.5
31	15.0	13.5	---	---	10.0	9.0	11.5	10.0	---	---	18.5	16.0
MONTH	24.0	13.5	15.5	7.5	---	---	12.0	7.0	15.0	9.5	21.5	12.0

## 11261100 SALT SLOUGH AT HIGHWAY 165, NEAR STEVINSON, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17.5	15.0	24.0	19.5	27.5	22.5	26.5	21.0	27.0	22.5	28.5	22.5
2	17.5	13.5	25.0	21.0	28.0	23.0	27.5	22.5	26.0	22.0	27.0	23.0
3	19.0	15.0	26.5	22.0	27.5	23.0	28.0	23.5	26.5	22.0	24.0	19.0
4	20.0	17.0	27.0	23.5	27.5	22.0	28.0	23.0	27.5	23.0	24.5	18.5
5	20.0	17.0	26.0	22.0	27.0	22.0	29.0	24.5	28.0	23.0	26.0	20.5
6	19.5	16.5	24.5	21.0	26.5	22.5	29.5	25.0	26.5	22.5	26.5	22.0
7	20.5	16.5	25.0	20.0	26.0	22.0	28.5	25.0	28.0	22.5	27.5	22.5
8	21.5	17.5	24.5	20.0	24.0	20.0	27.5	23.0	29.0	24.0	28.0	22.5
9	22.5	18.0	24.0	20.0	23.5	19.0	27.0	22.5	28.0	24.5	27.0	23.0
10	22.5	19.0	22.5	19.0	24.5	19.5	---	---	28.0	24.0	27.0	23.0
11	23.0	19.0	21.5	18.0	26.0	20.5	---	---	28.5	24.5	26.5	22.0
12	23.0	19.5	21.5	18.0	25.5	21.0	28.5	---	28.5	25.0	26.5	22.5
13	22.0	19.0	24.0	18.5	26.5	22.0	28.5	24.5	28.0	24.0	25.0	21.0
14	21.5	17.5	25.0	20.0	26.0	22.5	28.5	24.0	27.5	24.0	23.5	20.5
15	20.0	17.5	25.5	20.5	27.0	23.0	28.0	23.5	26.5	23.0	23.5	19.5
16	20.0	16.0	25.0	20.0	29.0	24.0	28.0	24.5	26.5	22.5	25.5	20.5
17	19.0	17.0	24.0	19.0	27.0	23.0	28.5	24.5	27.0	23.0	26.0	22.0
18	18.0	15.5	23.5	19.0	26.5	22.0	28.5	25.0	28.0	23.5	23.0	20.0
19	19.5	15.5	24.0	19.0	26.5	21.5	28.5	25.0	28.5	24.5	20.0	17.5
20	20.5	17.5	24.5	20.0	27.0	22.0	29.0	25.0	27.5	23.5	20.0	16.0
21	21.5	17.5	24.5	19.0	27.0	22.5	29.5	25.0	27.0	24.0	21.0	16.5
22	19.5	16.5	25.5	19.0	27.0	22.5	29.5	25.5	25.0	22.5	22.5	17.5
23	22.0	16.0	24.5	19.0	27.0	22.5	29.5	25.5	25.5	22.0	23.5	18.5
24	23.5	18.0	23.5	19.0	27.0	22.5	29.0	25.0	26.5	22.5	24.5	19.0
25	25.0	19.5	25.0	18.5	27.0	22.0	29.5	25.0	26.5	22.5	25.0	19.5
26	26.0	21.0	26.5	19.5	27.0	22.5	30.5	25.5	26.5	22.5	24.5	19.5
27	26.5	21.5	26.5	21.0	27.0	22.5	30.5	25.5	27.0	21.5	24.5	19.5
28	24.5	20.0	24.5	21.0	28.0	23.5	29.5	25.0	27.5	22.0	23.5	19.0
29	21.5	16.5	24.0	19.0	27.0	23.0	28.5	23.5	27.5	23.5	23.0	18.0
30	23.0	17.5	26.0	19.5	26.5	22.0	28.5	23.5	27.5	23.0	22.0	18.0
31	---	---	27.0	21.5	---	---	28.0	23.0	28.5	22.0	---	---
MONTH	26.5	13.5	27.0	18.0	29.0	19.0	---	---	29.0	21.5	28.5	16.0

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DATE	TIME	Depth at sample location, feet (81903)	Specif. conductance, uS/cm 25 degC (00095)	Temperature, deg C (00010)	Location in X-sect. looking dwnstrm ft from l bank (00009)
APR					
05...	1527	1.68	1710	19.2	3.70
05...	1529	2.62	1720	19.2	11.1
05...	1530	2.50	1720	19.2	18.5
05...	1531	2.40	1720	19.2	25.9
05...	1532	2.40	1720	19.2	33.3
05...	1533	2.32	1720	19.2	40.7
05...	1534	2.30	1720	19.3	48.1
05...	1535	2.54	1720	19.3	55.5
05...	1536	2.68	1720	19.3	62.9
05...	1537	1.48	1720	19.3	70.3
SEP					
08...	1413	1.32	1130	26.1	3.45
08...	1414	1.62	1130	26.1	10.3
08...	1415	1.52	1130	26.1	17.2
08...	1416	1.14	1130	26.1	24.1
08...	1417	1.12	1130	26.1	31.1
08...	1418	1.17	1130	26.2	38.0
08...	1419	1.22	1130	26.2	44.9
08...	1420	1.32	1130	26.2	51.8
08...	1421	1.61	1130	26.2	58.6
08...	1422	1.00	1130	26.3	65.5

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 5, 200 ft<sup>3</sup>/s; Sept. 8, 91 ft<sup>3</sup>/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<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—March 1937 to September 1971, 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. 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. Oct. 1, 1985, to Sept. 30, 1989, at datum 3.23 ft 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<sup>3</sup>/s, Mar. 18, 1986, maximum gage height, 67.65 ft, Mar. 18, 1986, datum then in use; minimum daily, 10 ft<sup>3</sup>/s, Nov. 8, 1959, Oct. 30 to Nov. 1, 1960.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	129	136	259	218	1820	257	165	169	137	138	88
2	83	140	134	277	220	1300	217	184	172	140	150	91
3	90	147	132	307	234	1120	215	198	166	151	169	91
4	95	153	132	417	274	1100	220	210	166	165	165	98
5	103	165	124	412	313	1020	221	197	164	173	151	106
6	104	167	124	371	345	902	219	168	163	178	139	128
7	104	172	119	344	321	816	207	150	173	172	140	141
8	109	177	110	341	284	755	195	151	181	164	136	120
9	115	169	105	336	266	712	191	159	187	155	142	112
10	116	168	105	321	258	670	178	168	198	e160	155	116
11	117	175	109	295	247	609	169	183	188	e169	154	104
12	129	172	107	274	232	544	182	202	169	e180	141	99
13	126	166	106	261	216	501	181	171	e166	186	136	104
14	126	167	110	253	213	481	164	145	e176	168	152	102
15	116	172	116	243	220	461	147	140	182	159	152	103
16	109	176	119	242	229	444	152	128	168	155	153	102
17	101	177	128	240	250	423	168	124	170	160	162	95
18	96	182	136	232	300	398	182	130	172	180	158	92
19	96	177	132	221	342	389	201	144	180	190	153	93
20	101	173	132	217	488	389	211	149	182	199	156	103
21	107	180	139	210	648	387	205	144	175	187	156	118
22	112	190	146	205	649	379	184	126	180	173	163	110
23	120	187	145	206	604	374	167	128	175	181	166	95
24	123	170	154	210	572	369	147	140	158	186	155	90
25	122	162	171	211	588	351	145	135	146	177	153	80
26	126	160	187	205	679	338	141	123	164	154	143	80
27	130	152	210	199	863	340	144	131	182	140	119	87
28	133	145	221	196	1580	345	139	139	178	128	114	84
29	124	144	234	207	2190	338	143	157	164	126	115	79
30	115	139	242	215	---	322	153	164	154	127	115	83
31	115	---	244	212	---	299	---	160	---	132	99	---
TOTAL	3435	4953	4509	8139	13843	18696	5445	4813	5168	5052	4500	2994
MEAN	111	165	145	263	477	603	182	155	172	163	145	99.8
MAX	133	190	244	417	2190	1820	257	210	198	199	169	141
MIN	72	129	105	196	213	299	139	123	146	126	99	79
AC-FT	6810	9820	8940	16140	27460	37080	10800	9550	10250	10020	8930	5940

e Estimated.

## 11261500 SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	215	208	214	295	882	1882	1334	389	357	270	279	243
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	165	145	201	233	329	182	149	144	158	145	82.6
(WY)	2003	2004	2004	1989	2003	2002	2004	2003	2003	2003	2004	2003

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1986 - 2004	
ANNUAL TOTAL	70784		81547			
ANNUAL MEAN	194		223		545	
HIGHEST ANNUAL MEAN					2273	
LOWEST ANNUAL MEAN					209	
HIGHEST DAILY MEAN	567	Mar 18	2190	Feb 29	18100	Mar 18 1986
LOWEST DAILY MEAN	61	Sep 18	72	Oct 1	59	Oct 10 2002
ANNUAL SEVEN-DAY MINIMUM	70	Sep 16	83	Sep 24	70	Sep 16 2003
MAXIMUM PEAK FLOW			2240	Feb 29	unknown	Mar 18 1986
MAXIMUM PEAK STAGE			65.61	Feb 29	a67.65	Mar 18 1986
ANNUAL RUNOFF (AC-FT)	140400		161700		394800	
10 PERCENT EXCEEDS	367		370		529	
50 PERCENT EXCEEDS	158		166		247	
90 PERCENT EXCEEDS	101		106		129	

a Datum then in use.

## 11261500 SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1989, 2002 to current year.

SPECIFIC CONDUCTANCE: Water years 1989, 2002 to current year.

WATER TEMPERATURE: Water years 1989, 2002 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.—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 records rated excellent except for Mar. 27–31, July 24 to Aug. 5, which are rated good. 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, 2,500 microsiemens, May 22; minimum recorded, 470 microsiemens, Feb. 28.

WATER TEMPERATURE: Maximum recorded, 31.0°C, July 26, 27; minimum recorded, 7.0°C, Nov. 25, Dec. 28, Jan. 5, 6.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1600	1330	1520	1460	1930	1810	1500	1470	1850	1830	951	716
2	1600	1350	1460	1360	1960	1870	1560	1490	1880	1840	1060	951
3	1350	1280	1400	1360	1970	1860	1490	1250	1840	1660	1060	1020
4	1280	1260	1390	1350	2020	1820	1250	1140	1660	1450	1050	1020
5	1260	1240	1350	1230	2100	1830	1190	1120	1580	1500	1100	1050
6	1270	1240	1340	1260	2090	2020	1260	1190	1660	1580	1220	1100
7	1280	1270	1410	1340	2180	2070	1330	1260	1700	1660	1280	1220
8	1280	1260	1500	1390	2250	2150	1370	1330	1720	1680	1310	1280
9	1260	1230	1530	1490	2270	2210	1440	1370	1770	1700	1380	1310
10	1250	1190	1550	1480	2270	2210	1550	1440	1820	1750	1480	1380
11	1240	1200	1480	1460	2280	2200	1640	1550	1950	1750	1610	1480
12	1210	1190	1540	1450	2370	2230	1650	1640	2010	1900	1690	1610
13	1260	1210	1600	1480	2410	2280	1680	1650	2050	2010	1690	1640
14	1260	1190	1560	1520	2310	2150	1740	1670	2040	1960	1680	1620
15	1420	1240	1540	1470	2150	2060	1760	1730	2000	1930	1740	1680
16	1480	1390	1530	1490	2080	1990	1770	1710	1950	1900	1880	1730
17	1650	1480	1500	1460	1990	1780	1750	1700	1910	1630	1970	1880
18	1770	1650	1510	1460	1820	1670	1850	1750	1630	1570	2020	1970
19	1780	1730	1510	1470	1780	1670	1870	1840	1660	1460	2000	1880
20	1780	1510	1540	1480	1840	1780	1870	1840	1470	1400	1880	1840
21	1510	1450	1500	1390	1860	1780	1920	1870	1410	1110	1840	1810
22	1480	1400	1430	1350	1780	1730	1920	1880	1360	1160	1840	1800
23	1400	1330	1570	1370	1900	1750	1880	1800	1440	1350	1840	1800
24	1430	1350	1720	1550	1940	1620	1840	1800	1430	1400	1870	1800
25	1500	1430	1700	1640	1640	1600	1880	1810	1410	1350	1950	1870
26	1590	1440	1710	1630	1640	1590	1910	1880	1350	1310	1920	1820
27	1520	1420	1810	1680	1630	1520	1960	1910	1320	821	1820	1740
28	1420	1380	1810	1750	1560	1510	1970	1930	821	470	1880	1750
29	1580	1400	1830	1730	1520	1470	1930	1800	716	474	1950	1860
30	1580	1530	1910	1780	1560	1490	1890	1820	---	---	2020	1930
31	1630	1520	---	---	1570	1500	1900	1850	---	---	2130	1950
MONTH	1780	1190	1910	1230	2410	1470	1970	1120	2050	470	2130	716



## 11261500 SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	2400	2130	1890	1630	1600	1430	1580	1470	1180	1140	2020	1740
2	2440	2200	1660	1310	1460	1360	1550	1310	1150	1090	2090	1840
3	2310	2150	1360	1140	1620	1410	1360	1190	1100	998	1900	1800
4	2170	1980	1330	1060	1590	1530	1250	1120	1140	1010	1810	1610
5	2040	1940	1380	1230	1600	1530	1190	1110	1240	1140	1610	1270
6	2010	1880	1620	1300	1630	1490	1170	1090	1300	1230	1270	1030
7	2150	1990	1690	1510	1550	1290	1270	1160	1280	1190	1070	1020
8	2140	2050	1670	1510	1320	1160	1340	1210	1300	1260	1340	1070
9	2170	2070	1740	1540	1290	1170	1370	1300	1270	1180	1350	1320
10	2230	2050	1680	1500	1240	1130	---	---	1180	1080	1340	1240
11	2280	1980	1540	1260	1340	1110	---	---	1160	1070	1500	1290
12	2150	1770	1450	1220	1530	1260	---	---	1320	1160	1610	1380
13	1930	1710	1810	1260	---	---	1110	962	1320	1250	1380	1260
14	2320	1930	1940	1750	---	---	1260	1080	1250	1020	1330	1260
15	2350	2100	2010	1890	1360	1290	1280	1200	1160	1050	1380	1330
16	2160	1810	2100	2010	1500	1310	1270	1150	1160	1020	1400	1340
17	1950	1740	2100	2020	1420	1330	1160	1080	1060	973	1470	1400
18	1780	1610	2030	1680	1390	1300	1080	953	1070	1010	1490	1440
19	1620	1390	1680	1460	1360	1260	972	928	1130	1070	1510	1430
20	1590	1440	1800	1500	1300	1220	957	896	1120	1070	1440	1300
21	1800	1550	2120	1750	1350	1220	959	891	1190	1090	1310	1160
22	2060	1770	2500	2070	1320	1240	953	907	1190	1090	1510	1220
23	2360	1930	2420	2060	1440	1280	907	877	1140	1060	1630	1510
24	2470	2180	2110	1780	1540	1410	902	876	1190	1140	1640	1610
25	2400	1940	2120	1770	1620	1420	1020	897	1240	1140	1820	1640
26	2200	1870	2380	2120	1460	1250	1140	1020	1390	1240	1860	1640
27	2160	1900	2380	1960	1280	1180	1260	1140	1620	1390	1640	1580
28	2400	1980	1980	1880	1430	1260	1310	1260	1640	1580	1730	1610
29	2410	2090	1900	1430	1450	1330	1300	1240	1620	1470	1840	1730
30	2130	1800	1680	1430	1540	1320	1270	1240	1530	1460	1830	1650
31	---	---	1700	1490	---	---	1270	1170	1750	1520	---	---
MONTH	2470	1390	2500	1060	---	---	---	---	1750	973	2090	1020

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	24.5	20.0	15.5	12.5	12.5	10.5	9.5	9.0	10.5	9.0	12.5	12.0
2	23.5	19.0	14.5	12.0	13.5	11.0	10.0	8.5	10.0	9.5	13.5	12.0
3	23.5	19.0	14.5	12.5	12.5	11.5	9.5	8.0	10.5	9.0	13.5	12.0
4	23.5	19.0	14.5	11.5	13.0	12.0	8.5	7.5	12.0	10.0	14.0	12.0
5	23.5	19.0	14.5	12.0	13.5	12.0	8.0	7.0	12.0	9.5	14.5	12.5
6	24.0	19.0	15.0	12.5	13.5	12.5	7.5	7.0	12.0	10.0	15.5	13.5
7	24.5	19.5	15.5	13.5	15.0	13.0	8.5	7.5	12.0	10.0	17.0	14.5
8	24.0	20.0	15.0	13.5	13.0	11.0	10.0	8.5	12.0	9.5	18.0	15.5
9	23.0	19.0	15.5	13.5	11.0	10.0	10.5	9.0	12.0	9.5	19.0	16.5
10	20.5	17.0	16.0	14.0	12.5	10.0	10.5	9.5	12.0	9.5	19.0	17.0
11	20.0	15.0	15.5	13.0	13.0	11.0	11.0	9.5	12.5	9.5	19.5	17.0
12	20.0	16.0	14.0	12.5	11.5	9.5	10.5	10.0	13.0	10.0	20.0	17.5
13	19.5	15.5	15.0	12.5	12.5	10.5	10.5	10.0	12.0	10.5	20.0	17.5
14	20.0	15.5	15.0	13.0	13.5	11.0	10.0	9.5	13.0	10.5	20.5	18.0
15	20.0	16.0	14.5	13.5	11.5	9.5	10.0	9.5	14.0	11.5	21.0	18.5
16	20.5	16.0	14.5	12.0	11.0	8.5	10.0	9.5	13.5	13.0	21.0	18.5
17	20.5	16.5	15.5	13.0	10.5	8.5	10.0	9.5	14.5	12.5	21.5	18.5
18	21.5	17.0	15.0	13.0	10.5	8.0	10.5	9.5	14.5	13.0	22.0	19.0
19	21.5	17.5	14.5	12.5	10.0	9.0	10.5	10.0	14.0	12.0	22.5	19.5
20	21.5	17.5	14.5	12.0	11.0	9.5	10.5	9.5	13.0	12.5	22.0	19.0
21	22.5	18.0	13.5	11.5	11.5	10.5	11.0	9.0	13.5	12.5	22.0	19.0
22	22.0	18.5	11.5	9.5	11.5	11.0	11.0	9.0	13.5	12.5	22.5	19.5
23	21.0	18.0	10.5	8.5	11.5	11.0	11.0	9.0	14.5	12.5	22.0	19.5
24	20.5	17.0	9.5	8.0	12.0	11.0	10.0	9.5	15.0	13.0	21.0	18.5
25	20.5	16.5	9.5	7.0	11.5	10.0	11.5	9.5	14.0	12.5	19.0	17.5
26	20.5	16.5	10.0	7.5	10.5	9.0	10.5	9.0	13.0	12.0	18.5	16.5
27	20.5	17.0	10.0	8.0	9.5	8.0	10.5	10.0	12.5	11.5	19.0	15.5
28	20.5	17.0	10.5	9.0	8.5	7.0	11.5	10.0	13.0	11.0	20.0	16.0
29	20.0	17.0	11.0	9.0	8.0	8.0	12.0	10.5	13.0	11.0	21.0	17.5
30	17.5	14.5	10.5	10.0	9.5	8.0	11.5	10.0	---	---	19.5	17.5
31	15.0	13.5	---	---	10.0	8.5	11.5	9.5	---	---	19.5	16.5
MONTH	24.5	13.5	16.0	7.0	15.0	7.0	12.0	7.0	15.0	9.0	22.5	12.0

## SAN JOAQUIN RIVER BASIN

11261500 SAN JOAQUIN RIVER AT FREMONT FORD BRIDGE, CA—Continued

TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	18.0	15.5	24.5	19.5	28.0	22.5	28.0	22.5	28.5	23.5	28.5	22.5
2	17.5	13.5	26.0	20.5	28.5	23.0	29.0	23.0	27.0	22.5	27.0	23.0
3	19.5	15.0	27.5	22.0	28.0	23.0	29.0	23.5	27.5	22.0	25.0	19.0
4	20.5	16.5	28.0	23.5	27.5	22.0	29.5	24.0	28.5	23.0	24.5	18.5
5	20.5	16.5	27.0	22.5	27.5	22.0	30.0	25.0	28.0	23.0	26.5	20.0
6	20.5	16.5	25.5	21.5	27.5	22.5	30.0	25.5	27.0	22.0	27.0	21.5
7	21.0	16.5	25.5	20.0	27.0	22.0	30.0	25.5	28.5	22.5	27.5	22.5
8	21.5	17.5	25.0	20.5	25.0	21.0	29.0	24.0	29.5	23.5	28.0	22.5
9	22.5	18.0	24.5	19.5	24.5	19.5	28.5	23.5	29.0	24.0	28.0	22.5
10	23.0	19.0	23.5	20.0	25.0	20.0	---	---	28.5	23.5	27.5	22.5
11	23.5	19.0	23.0	18.5	26.0	20.5	---	---	29.0	24.0	27.0	21.5
12	23.5	19.5	22.5	18.5	26.5	21.5	29.5	---	30.0	25.0	27.0	22.0
13	22.5	19.0	24.5	18.5	---	---	29.0	---	29.5	24.5	26.0	20.5
14	22.0	18.0	25.5	20.0	27.5	---	28.5	24.0	28.5	24.0	24.0	20.0
15	20.5	18.0	25.5	20.5	27.5	23.0	29.0	23.5	28.0	22.5	24.5	19.0
16	20.5	16.0	26.0	20.5	29.5	23.5	29.0	24.0	27.5	23.0	26.0	20.0
17	19.5	17.0	25.5	20.0	28.5	23.5	29.0	24.5	28.0	23.0	26.5	21.5
18	18.5	15.0	25.0	19.0	27.5	23.0	29.5	25.0	29.0	23.5	24.0	20.5
19	20.0	15.5	25.0	19.0	27.5	22.5	29.5	25.0	29.5	24.5	20.5	17.5
20	20.5	17.5	25.5	19.5	27.5	22.5	29.5	25.5	28.5	24.5	20.5	15.5
21	21.5	18.0	25.5	20.0	28.0	22.5	30.0	25.0	28.5	24.0	21.0	16.0
22	20.5	16.5	26.0	20.0	28.5	23.5	30.5	25.5	26.5	23.5	22.5	17.0
23	22.0	16.5	26.0	20.0	28.0	23.0	30.0	25.5	27.0	22.5	24.0	18.0
24	23.5	18.0	25.0	19.5	27.5	23.0	30.0	25.5	27.5	22.5	24.5	19.0
25	25.5	19.5	25.5	19.5	27.5	22.0	30.0	25.0	27.0	22.5	24.5	19.0
26	26.0	21.0	27.0	20.5	27.5	22.5	31.0	25.5	26.5	22.5	24.5	19.0
27	26.5	21.5	27.5	22.0	28.0	22.5	31.0	26.0	27.0	21.5	24.0	19.0
28	24.5	20.5	25.0	21.5	29.0	24.0	30.5	25.0	28.0	22.0	24.0	18.5
29	22.0	17.0	25.0	19.5	28.5	23.5	29.5	24.0	28.0	22.5	23.5	18.5
30	23.5	17.5	26.0	19.5	28.0	23.0	30.0	24.0	28.0	23.0	22.5	18.0
31	---	---	27.5	21.5	---	---	29.0	24.0	28.0	22.5	---	---
MONTH	26.5	13.5	28.0	18.5	---	---	---	---	30.0	21.5	28.5	15.5

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DATE	TIME	Depth at sample location, feet (81903)	Specif. conductance, uS/cm 25 degC (00095)	Temperature, deg C (00010)	Location in X-sect. looking dwnstrm ft from l bank (00009)
APR					
05...*	1246	1.60	2000	18.9	4.70
05...*	1247	2.40	2000	18.8	14.1
05...*	1248	2.12	2000	18.8	23.5
05...*	1249	1.72	2000	18.8	32.9
05...*	1250	2.94	1990	18.7	42.3
05...*	1252	3.22	1990	18.7	51.7
05...*	1253	2.90	1990	18.7	61.1
05...*	1254	3.00	1990	18.7	70.5
05...*	1256	2.20	1990	18.7	79.9
05...*	1257	1.10	1980	18.8	89.3
SEP					
09...*	1500	1.37	1320	27.2	3.60
09...*	1501	1.48	1320	27.2	10.8
09...*	1502	1.51	1310	27.2	18.0
09...*	1503	1.82	1310	27.1	25.2
09...*	1504	1.68	1310	27.2	32.4
09...*	1505	1.38	1320	27.2	39.6
09...*	1506	1.12	1320	27.2	46.8
09...*	1507	1.10	1320	27.2	54.0
09...*	1508	1.56	1310	27.2	61.2
09...*	1509	.98	1320	27.3	68.4

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 5, 221 ft<sup>3</sup>/s; Sept. 9, 113 ft<sup>3</sup>/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, 111 ft<sup>3</sup>/s, Feb. 21, 2004; minimum daily, 9.2 ft<sup>3</sup>/s, Sept. 28, 2001.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	23	21	18	e33	69	e39	40	61	57	45	33
2	17	21	22	23	34	73	e39	39	62	62	45	41
3	19	20	22	e25	37	78	e39	41	64	62	46	43
4	23	20	20	e25	40	78	e39	44	58	64	44	36
5	26	23	20	e23	e44	71	e39	44	54	63	44	33
6	28	26	19	e22	43	63	e41	42	54	64	46	27
7	28	26	20	22	46	50	e41	37	51	59	51	27
8	28	25	20	23	43	49	43	35	50	53	49	32
9	26	25	20	23	40	47	43	e35	47	55	45	29
10	26	25	19	22	52	49	40	e36	48	54	42	30
11	24	24	22	24	55	45	37	e39	48	55	41	26
12	26	24	21	25	54	45	35	41	41	59	39	23
13	24	24	21	23	52	47	36	46	40	57	42	23
14	23	25	22	23	54	57	35	47	44	51	42	28
15	22	24	22	23	54	58	34	44	49	48	40	25
16	23	23	e23	23	57	56	34	48	47	47	e46	22
17	22	22	e21	24	58	55	36	48	41	48	54	23
18	22	21	20	24	65	54	37	46	41	45	52	21
19	23	20	16	24	78	52	34	41	47	44	45	21
20	23	20	17	24	99	e47	34	39	47	49	40	24
21	21	21	24	e26	111	e43	38	39	44	55	41	23
22	20	22	26	e25	101	e44	44	39	44	52	43	20
23	20	e19	23	e26	85	e45	42	43	43	50	47	17
24	21	18	19	28	79	e46	43	46	41	46	50	16
25	21	e19	21	31	65	e40	47	43	45	45	52	17
26	22	20	23	e30	70	e38	48	41	45	49	49	17
27	21	20	e24	29	68	e43	45	44	47	46	43	20
28	21	19	e21	29	58	e48	45	50	50	41	37	20
29	23	19	18	22	70	e49	47	54	53	40	36	20
30	22	19	21	e22	---	e46	40	56	58	39	37	20
31	23	---	20	25	---	e47	---	60	---	42	34	---
TOTAL	703	657	648	756	1745	1632	1194	1347	1464	1601	1367	757
MEAN	22.7	21.9	20.9	24.4	60.2	52.6	39.8	43.5	48.8	51.6	44.1	25.2
MAX	28	26	26	31	111	78	48	60	64	64	54	43
MIN	15	18	16	18	33	38	34	35	40	39	34	16
AC-FT	1390	1300	1290	1500	3460	3240	2370	2670	2900	3180	2710	1500

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2004, BY WATER YEAR (WY)

MEAN	24.0	22.9	22.1	26.2	55.9	54.9	39.6	43.5	54.4	56.1	55.0	29.0
MAX	33.2	28.8	23.7	27.9	60.2	56.8	44.8	48.2	61.0	63.0	63.6	40.3
(WY)	1999	2000	2001	2001	2004	2001	2000	1999	2000	1999	1999	1999
MIN	17.9	19.2	19.8	22.6	49.1	52.6	34.9	39.9	46.9	50.9	44.1	22.8
(WY)	2002	2003	2002	2003	2002	2004	1999	2001	2003	2003	2004	2001

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1999 - 2004

ANNUAL TOTAL	13781	13871		
ANNUAL MEAN	37.8	37.9	40.2	
HIGHEST ANNUAL MEAN			44.6	1999
LOWEST ANNUAL MEAN			37.4	2003
HIGHEST DAILY MEAN		111	111	Feb 21 2004
LOWEST DAILY MEAN	14	Sep 18	15	Oct 1
ANNUAL SEVEN-DAY MINIMUM	16	Sep 17	18	Sep 22
ANNUAL RUNOFF (AC-FT)	27330	27510	29140	
10 PERCENT EXCEEDS	60	57	61	
50 PERCENT EXCEEDS	38	39	40	
90 PERCENT EXCEEDS	20	20	20	

e Estimated.

## 11262895 SAN LUIS DRAIN, SITE B, NEAR STEVINSON, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—October 1998 to current year.

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. 1–6, Oct. 16 to Nov. 1, Nov. 14 to Dec. 1, Dec. 23 to Jan. 5, Jan. 28 to Feb. 5, Feb. 29 to Mar. 16, Mar. 23 to Apr. 3, Apr. 17 to May 4, May 22 to June 9, June 14–22, July 20 to Aug. 10, Aug. 18 to Sept. 1, Sept. 23–30, which are rated good; Nov. 2–5, Dec. 2, Apr. 4–7, May 5–11, June 23–29, Sept. 2–10, which are rated fair; and June 30 to July 7, which are rated poor. Water-temperature records rated excellent except for Oct. 1–6, and Nov. 26 to Dec. 2, which are rated good. Water quality is influenced by subsurface drainage from irrigated farmland.

EXTREMES FOR PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: Maximum recorded, 6,030 microsiemens, Apr. 6, 1999; minimum recorded, 2,550 microsiemens, Feb. 21, 2004.

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, 5,510 microsiemens, Mar. 15; minimum recorded, 2,550 microsiemens, Feb. 21.

WATER TEMPERATURE: Maximum recorded, 29.5°C, July 22, 23, 26, 27; minimum recorded, 8.0°C, Jan. 4–6.

## SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

## WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	4080	3870	3990	4200	3870	4050	4440	4110	4320	4080	3840	4000
2	4050	3490	3770	4340	3930	4130	4320	4030	4150	4040	3830	3960
3	3930	3580	3800	4750	3970	4420	4140	3900	4080	4070	3760	3930
4	3970	3690	3870	5350	4400	4880	4240	4020	4190	4270	4040	4210
5	3940	3560	3720	5350	4190	4740	4420	4090	4260	4280	3720	3980
6	4080	3790	3980	4280	4160	4210	4460	4280	4390	3970	3750	3830
7	4370	4010	4190	4290	4230	4270	4350	4030	4240	4190	3970	4090
8	4440	3920	4130	4230	4060	4170	4220	3950	4150	4230	4130	4180
9	4330	3690	3980	4170	3950	4030	4070	3870	3950	4270	4150	4200
10	4310	3650	3930	4270	4070	4160	4020	3760	3840	4240	4120	4180
11	4570	4210	4310	4720	4200	4460	3990	3770	3850	4210	4100	4160
12	4610	4470	4550	4630	4460	4570	4100	3970	4030	4190	4030	4140
13	4500	4420	4460	4460	4130	4260	4210	3990	4130	4330	4100	4210
14	4430	4300	4390	4130	3770	3940	4230	4070	4190	4390	4100	4250
15	4320	4190	4280	3950	3750	3880	4270	4020	4170	4390	4040	4250
16	4590	4300	4430	3930	3630	3830	4400	4170	4300	4470	4070	4280
17	4580	4350	4500	4120	3860	4020	4340	4160	4300	4640	4200	4480
18	4510	4240	4420	4150	3890	4000	4370	4190	4320	4350	4110	4220
19	4520	4370	4480	4160	3790	4000	4330	4150	4290	4270	4090	4160
20	4570	4440	4500	3890	3770	3850	4330	4170	4280	4260	4030	4140
21	4550	4410	4500	3970	3830	3910	4320	4140	4220	4320	4030	4230
22	4540	3970	4280	4090	3860	4000	4380	4150	4300	4320	4120	4260
23	4150	3930	4080	4110	3930	4040	4390	4160	4290	4280	4050	4180
24	4060	3770	3940	4010	3870	3970	4270	3650	3970	4310	3950	4130
25	4200	3820	4000	3990	3900	3960	4080	3620	3820	4140	3910	4070
26	4270	3980	4140	4020	3880	3970	5080	4010	4580	4050	3860	4020
27	4280	3860	4160	4160	3760	3990	5080	3940	4400	4080	3890	4010
28	4550	4080	4340	4240	4030	4170	4060	3830	3950	4250	3990	4170
29	4610	4270	4490	4320	4050	4200	3970	3750	3890	4470	4140	4300
30	4560	3820	4200	4450	4190	4380	3930	3720	3860	4380	4140	4270
31	4080	3650	3900	---	---	---	4000	3750	3920	4450	4210	4380
MONTH	4610	3490	4180	5350	3630	4150	5080	3620	4150	4640	3720	4160

## 11262895 SAN LUIS DRAIN, SITE B, NEAR STEVINSON, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	4420	4090	4250	4940	4600	4740	4670	4390	4580	4860	4570	4730
2	4260	3860	4060	4910	4620	4790	4730	4520	4680	4890	4600	4760
3	4490	4110	4360	4940	4780	4850	5130	4730	4970	4940	4630	4840
4	4330	4080	4240	4780	4110	4490	5250	5000	5110	5060	4650	4880
5	4490	4250	4370	4440	4160	4270	5160	4860	4990	4910	4450	4770
6	4320	4070	4190	4870	4440	4740	5390	5090	5260	4710	4180	4490
7	4090	3880	3990	5110	4830	4930	5460	4870	5250	4830	4290	4620
8	4060	3900	3990	5180	4860	5060	5150	4810	4930	4480	4080	4290
9	4020	3800	3950	5290	4930	5120	5010	4690	4850	4670	4180	4430
10	3890	3740	3830	5170	4880	5040	4780	4610	4720	4690	4230	4510
11	4080	3810	3990	5230	4930	5080	4880	4550	4720	4410	4130	4260
12	4550	4030	4240	5300	5130	5230	5030	4710	4860	4170	3930	4070
13	4500	4100	4350	5360	5190	5280	4810	4520	4710	4140	3860	3980
14	4240	3970	4100	5420	5240	5320	4830	4360	4650	4340	3860	4130
15	4020	3850	3930	5510	5190	5370	5020	4390	4780	4270	3720	3970
16	4210	3780	3930	5310	5030	5160	5200	4850	5070	4050	3620	3770
17	3920	3630	3790	5110	4980	5040	5270	4910	5160	3760	3480	3620
18	3680	3400	3580	5100	4930	5030	5240	4980	5140	3950	3510	3680
19	3670	3370	3500	5250	5070	5170	5360	4930	5200	4090	3530	3780
20	3730	2980	3540	5270	5000	5160	5140	4870	5050	4390	3590	4120
21	3500	2550	2940	5070	5000	5030	5160	4650	5000	4090	3900	4020
22	3630	3440	3510	5020	4970	4990	5250	4680	5090	4050	3810	3900
23	4110	3630	3820	5150	4990	5050	5280	4910	5180	4080	3870	3960
24	4250	4030	4120	5100	4970	5030	5010	4320	4660	4070	3750	3900
25	4270	3730	4060	5110	4910	5020	4830	4340	4560	4160	3850	4030
26	4440	4060	4290	4940	4770	4880	4860	4600	4760	3850	3540	3680
27	4610	4400	4500	4980	4620	4820	4630	4240	4430	3850	3600	3740
28	4570	4280	4440	4980	4720	4840	4460	4190	4340	4130	3680	3920
29	5080	4400	4740	4910	4420	4670	4550	4230	4400	4390	3950	4140
30	---	---	---	4800	4500	4660	4670	4270	4560	4450	4000	4230
31	---	---	---	4780	4440	4580	---	---	---	4380	3940	4190
MONTH	5080	2550	4020	5510	4110	4950	5460	4190	4860	5060	3480	4170
	JUNE			JULY			AUGUST			SEPTEMBER		
1	4280	4080	4200	4100	3890	3990	3590	3270	3480	4630	4410	4530
2	4480	4100	4310	4480	3760	4160	3720	3190	3530	4740	4500	4600
3	4590	4270	4410	4180	3690	3930	3890	3430	3590	4720	4600	4670
4	4710	4380	4530	4160	3750	3970	3830	3230	3620	4640	4130	4520
5	4630	4390	4560	4110	3680	3950	3880	3430	3690	4240	3700	4060
6	4690	4380	4560	4010	3710	3900	3980	3450	3710	4130	3630	3850
7	4770	4350	4550	4020	3690	3850	3760	3160	3440	4350	3840	4100
8	4500	4130	4330	4220	3890	4090	3480	3030	3260	4640	3640	4150
9	4460	4020	4220	4090	3950	4020	3600	2930	3260	4420	3640	4050
10	4320	4130	4190	4240	3860	4040	3580	3210	3330	4790	4340	4570
11	4440	4120	4280	4110	3680	3940	3400	3150	3270	4630	3560	3940
12	4390	4110	4260	4110	3620	3900	3440	3160	3310	3880	3610	3740
13	4220	3940	4120	3840	3540	3690	3680	3290	3460	4380	3650	4070
14	4230	3940	4130	3830	3550	3640	3680	3300	3450	4030	3830	3910
15	4410	4110	4250	3970	3760	3890	3730	3350	3560	4330	3970	4060
16	4420	3840	4120	4110	3770	3940	3670	3350	3500	4510	4330	4450
17	3990	3410	3660	4210	3860	4000	3740	3390	3540	4610	4400	4500
18	3890	3590	3740	4080	3840	3960	3580	3100	3420	4460	3940	4070
19	4100	3640	3930	4060	3420	3770	3400	3080	3250	3960	3690	3840
20	4120	3870	4030	3900	3090	3580	3320	3070	3160	3780	3420	3730
21	4260	3950	4100	3690	3030	3380	3280	3070	3180	3750	3430	3610
22	4060	3670	3850	3820	3160	3540	3490	3270	3370	3630	3430	3550
23	4110	3770	4000	3830	3110	3560	3580	3340	3470	3680	3310	3530
24	4160	4010	4100	3740	3150	3450	4330	3430	4040	3870	3550	3760
25	4300	4040	4190	3750	3350	3540	4030	3780	3940	3830	3220	3520
26	4300	4060	4160	3730	3470	3620	3960	3770	3850	3520	3210	3370
27	4250	3840	4090	3740	3290	3540	3970	3840	3900	3500	3280	3410
28	4100	3810	3960	3630	3090	3320	4020	3830	3940	3490	3220	3400
29	4120	3870	4000	3440	3140	3310	4020	3870	3960	3660	3370	3570
30	4170	3700	3970	3620	3200	3480	4310	3870	4120	3780	3480	3680
31	---	---	---	3610	3200	3470	4430	4300	4350	---	---	---
MONTH	4770	3410	4160	4480	3030	3760	4430	2930	3580	4790	3210	3960

## 11262895 SAN LUIS DRAIN, SITE B, NEAR STEVINSON, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	24.0	22.5	23.0	15.5	14.5	15.0	11.5	10.0	11.0	10.0	9.5	9.5
2	23.0	22.0	22.5	15.0	14.0	14.5	12.5	10.5	11.5	10.5	9.5	9.5
3	23.0	21.5	22.0	15.0	14.0	14.5	12.0	11.5	12.0	10.0	8.5	9.5
4	23.5	21.5	22.0	15.0	13.5	14.0	12.0	12.0	12.0	9.5	8.0	8.5
5	23.0	21.0	22.0	15.0	13.5	14.0	12.5	12.0	12.5	9.0	8.0	8.5
6	23.5	21.0	22.5	15.5	14.0	14.5	13.0	12.5	12.5	9.0	8.0	8.5
7	23.5	21.5	22.5	16.0	14.5	15.0	14.0	13.0	13.0	9.5	8.5	9.0
8	23.5	21.5	22.5	15.5	15.0	15.0	13.0	12.0	12.5	10.5	9.0	10.0
9	23.5	21.5	22.5	15.5	14.0	15.0	12.0	11.0	11.0	11.0	10.0	10.5
10	22.0	19.0	20.0	16.0	14.5	15.0	11.5	10.5	11.0	11.0	10.0	10.5
11	19.5	17.5	18.5	15.5	14.0	15.0	12.0	11.0	11.5	11.5	10.0	10.5
12	20.0	18.0	19.0	15.0	13.5	14.5	11.0	10.5	11.0	11.0	10.5	11.0
13	19.5	17.5	18.5	15.0	13.5	14.5	12.0	10.5	11.5	11.0	10.5	10.5
14	20.0	17.5	18.5	15.0	14.0	14.5	12.0	11.0	11.5	10.5	10.5	10.5
15	20.0	18.0	19.0	15.0	14.0	14.5	11.5	10.5	11.0	11.0	10.5	10.5
16	20.0	18.0	19.0	14.5	13.5	14.0	11.0	10.0	10.5	10.5	10.5	10.5
17	20.5	18.5	19.5	15.5	14.0	14.5	10.5	9.5	10.0	10.5	10.5	10.5
18	21.0	19.0	20.0	15.0	13.5	14.5	10.5	9.5	10.0	11.0	10.0	10.5
19	21.0	19.5	20.0	14.5	14.0	14.5	10.0	9.5	10.0	10.5	10.5	10.5
20	21.5	19.5	20.5	15.0	13.5	14.0	10.5	10.0	10.0	10.5	10.0	10.5
21	21.5	20.0	20.5	14.5	13.0	13.5	11.0	10.5	11.0	11.0	9.5	10.5
22	22.0	20.5	21.0	13.0	10.5	11.5	11.5	11.0	11.0	11.0	9.5	10.0
23	21.0	20.0	20.5	10.5	9.5	10.0	11.0	11.0	11.0	11.0	9.5	10.0
24	21.0	19.0	20.0	10.0	9.5	10.0	11.5	11.0	11.0	11.0	10.0	10.5
25	21.0	19.0	20.0	10.0	8.5	9.5	11.5	10.5	11.0	11.5	10.5	11.0
26	21.0	19.0	20.0	10.0	8.5	9.5	10.5	9.5	10.0	10.5	10.0	10.5
27	21.0	19.5	20.0	10.0	9.0	9.5	10.5	9.0	9.5	10.5	10.0	10.5
28	21.0	19.0	20.0	10.5	9.5	10.0	9.5	8.5	9.0	11.0	9.5	10.5
29	20.5	18.5	19.5	10.5	9.5	10.0	9.5	8.5	9.0	12.0	10.0	11.0
30	18.5	17.0	17.5	10.5	10.0	10.0	9.5	8.5	9.0	12.0	10.5	11.0
31	17.0	15.5	16.0	---	---	---	10.5	9.0	9.5	11.5	10.0	11.0
MONTH	24.0	15.5	20.3	16.0	8.5	13.2	14.0	8.5	10.9	12.0	8.0	10.2
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	10.5	9.5	10.0	14.0	13.0	13.5	18.0	15.5	17.0	23.5	20.5	22.0
2	10.5	10.0	10.0	14.5	12.5	13.5	17.0	14.0	15.5	24.5	21.0	22.5
3	10.5	9.5	10.0	14.5	13.0	14.0	18.5	15.0	16.5	26.0	22.5	24.0
4	11.5	10.5	11.0	15.0	13.0	14.0	19.5	16.5	18.0	27.0	24.0	25.5
5	11.5	10.0	11.0	16.0	13.5	15.0	19.5	17.0	18.0	26.5	23.5	25.0
6	12.0	10.5	11.5	16.5	14.5	15.5	20.0	17.0	18.5	25.0	23.0	24.0
7	12.5	11.0	11.5	18.0	15.5	16.5	20.5	17.5	19.0	24.5	21.5	23.0
8	12.5	10.5	11.5	19.0	17.0	18.0	20.5	18.0	19.5	24.0	21.5	22.5
9	12.5	11.0	11.5	20.0	18.0	19.0	21.5	18.5	20.0	24.0	21.0	22.5
10	12.5	10.5	11.5	20.0	18.0	19.0	22.0	20.0	21.0	22.5	20.5	21.5
11	12.5	11.0	12.0	20.5	18.0	19.0	23.0	20.0	21.5	22.0	19.5	20.5
12	13.5	11.0	12.5	20.5	18.5	19.5	23.0	20.5	21.5	21.5	19.0	20.5
13	12.5	11.5	12.0	21.0	18.5	19.5	23.0	20.5	21.5	22.5	19.0	21.0
14	13.5	11.0	12.0	21.0	19.0	20.0	22.0	19.5	20.5	23.5	20.5	22.0
15	14.0	12.0	13.0	21.5	19.5	20.5	21.0	19.0	19.5	24.0	21.0	22.5
16	13.5	13.0	13.0	21.5	19.5	20.5	20.0	17.5	18.5	24.0	21.5	23.0
17	14.0	12.5	13.0	22.0	19.5	20.5	19.0	17.5	18.5	23.5	21.0	22.0
18	14.5	13.0	13.5	22.5	20.0	21.5	19.0	16.5	17.5	23.0	20.0	21.5
19	14.0	13.0	13.5	22.5	20.5	21.5	19.5	16.5	18.0	23.5	20.0	21.5
20	14.0	13.0	13.5	22.5	20.0	21.0	20.0	18.0	18.5	24.0	21.0	22.0
21	14.0	13.0	13.5	22.5	20.5	21.5	21.0	18.0	19.0	23.5	20.5	22.0
22	14.0	13.5	14.0	23.0	20.5	21.5	19.0	17.0	18.0	23.5	20.5	22.0
23	15.0	13.0	14.0	22.5	20.5	21.0	20.5	17.0	18.5	23.0	20.5	21.5
24	15.5	14.0	14.5	21.0	19.5	20.5	21.5	18.5	20.0	22.5	20.0	21.0
25	15.0	13.0	14.0	20.0	18.5	19.0	23.5	20.0	21.5	23.0	19.5	21.0
26	14.0	12.5	13.0	19.0	17.5	18.0	24.5	21.5	23.0	23.5	20.0	22.0
27	13.5	12.0	13.0	19.0	16.5	18.0	25.5	22.5	24.0	24.5	21.5	23.0
28	13.5	12.0	13.0	20.0	17.0	18.5	24.5	21.5	23.5	23.5	21.5	22.5
29	14.0	12.5	13.5	20.5	18.0	19.5	21.5	19.0	20.5	23.5	21.0	22.0
30	---	---	---	19.5	18.0	19.0	22.5	19.0	20.5	24.5	21.0	22.5
31	---	---	---	19.5	17.0	18.0	---	---	---	25.0	22.0	23.5
MONTH	15.5	9.5	12.4	23.0	12.5	18.6	25.5	14.0	19.6	27.0	19.0	22.3

## 11262895 SAN LUIS DRAIN, SITE B, NEAR STEVINSON, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	26.0	23.0	24.5	25.5	22.5	24.0	26.5	24.0	25.0	27.0	24.5	25.5
2	27.0	24.0	25.5	26.0	23.0	24.5	26.0	23.0	24.5	26.5	25.0	25.5
3	26.5	24.0	25.5	26.5	23.5	25.0	26.0	23.0	24.5	25.5	21.0	22.5
4	26.5	23.5	25.0	27.0	24.0	25.5	26.5	23.5	25.0	23.0	20.0	21.0
5	26.0	23.5	25.0	28.0	25.0	26.5	27.0	24.0	25.5	24.5	21.5	22.5
6	26.0	24.0	24.5	28.5	25.5	27.0	26.5	23.5	25.0	25.5	23.0	24.0
7	26.0	23.0	24.0	28.0	26.0	27.0	27.5	24.0	25.5	26.0	23.0	24.5
8	24.0	21.5	23.0	27.5	25.0	26.0	28.0	24.5	26.5	27.0	24.0	25.0
9	23.0	20.0	21.5	26.5	24.0	25.5	28.0	25.0	26.5	27.0	24.5	25.5
10	23.5	20.5	22.0	26.5	23.5	25.0	28.0	25.0	26.5	27.0	24.5	25.5
11	24.5	21.0	22.5	27.5	24.0	25.5	28.5	25.5	27.0	26.0	24.0	25.0
12	25.0	21.5	23.0	28.0	25.0	26.5	29.0	26.0	27.5	26.5	24.0	25.0
13	25.5	22.0	23.5	28.0	25.5	26.5	28.0	25.5	27.0	25.5	23.0	24.0
14	25.5	23.0	24.5	28.0	25.5	26.5	28.0	25.5	26.5	24.5	22.0	23.0
15	26.0	23.5	24.5	28.0	25.0	26.5	27.5	24.5	26.0	23.5	21.0	22.0
16	27.5	24.0	25.5	28.0	25.5	26.5	27.0	24.5	25.5	24.5	21.5	22.5
17	27.0	23.5	25.0	28.5	25.5	27.0	27.0	24.0	25.5	25.0	22.5	23.5
18	26.0	23.5	24.5	28.5	26.0	27.0	28.0	24.5	26.0	24.0	22.0	22.5
19	26.0	23.0	24.5	29.0	26.0	27.5	28.5	25.5	27.0	22.0	20.0	20.5
20	26.0	23.0	24.5	29.0	26.5	27.5	28.0	25.0	26.5	20.5	18.5	19.5
21	26.5	23.0	24.5	29.0	26.5	27.5	27.5	25.0	26.5	20.5	18.0	19.0
22	26.5	23.5	25.0	29.5	26.5	28.0	26.5	24.5	25.5	20.5	18.5	19.5
23	26.5	23.5	25.0	29.5	26.5	28.0	26.0	23.5	24.5	22.0	19.5	20.5
24	26.5	23.5	24.5	29.0	26.5	27.5	26.0	23.0	24.5	22.5	20.0	21.0
25	26.5	23.5	25.0	29.0	26.0	27.5	26.0	23.5	24.5	23.0	20.5	21.5
26	26.5	23.5	25.0	29.5	26.0	27.5	25.5	23.5	24.5	23.5	21.0	22.0
27	27.0	23.5	25.0	29.5	26.5	28.0	25.5	23.0	24.0	23.5	21.0	22.0
28	27.0	24.0	25.5	29.0	26.0	27.5	26.5	23.5	24.5	22.5	21.0	22.0
29	26.5	24.0	25.0	28.0	25.0	26.5	27.0	24.0	25.5	22.5	20.5	21.0
30	26.0	23.5	24.5	27.5	24.5	26.0	26.5	24.0	25.5	21.0	19.5	20.5
31	---	---	---	27.0	24.0	25.5	27.0	24.0	25.5	---	---	---
MONTH	27.5	20.0	24.4	29.5	22.5	26.5	29.0	23.0	25.6	27.0	18.0	22.6

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DATE	TIME	Depth at sample location, feet (81903)	Specif. conductance, $\mu\text{S}/\text{cm}$ 25 degC (00095)	Temperature, deg C (00010)	Location in X-sect. looking downstrm ft from l bank (00009)
APR					
07...*	1356	1.10	5650	20.0	1.40
07...*	1358	3.20	5670	19.7	4.20
07...*	1359	5.10	5680	19.4	7.00
07...*	1401	5.10	5680	19.3	9.80
07...*	1403	4.90	5660	19.3	12.6
07...*	1404	4.90	5690	19.4	15.4
07...*	1406	5.40	5670	19.6	18.2
07...*	1408	4.50	5680	19.6	21.0
07...*	1409	2.50	5670	20.0	23.8
07...*	1411	.50	5640	20.2	26.6
JUL					
07...*	1231	1.40	4060	27.1	1.50
07...*	1232	2.80	4070	27.1	4.50
07...*	1236	5.40	4070	27.0	7.50
07...*	1238	5.40	4070	27.0	10.5
07...*	1240	5.20	4070	27.0	13.5
07...*	1242	5.30	4070	27.0	16.5
07...*	1244	5.60	4060	27.0	19.5
07...*	1245	4.60	4070	27.0	22.5
07...*	1246	1.90	4060	27.2	25.5
07...*	1247	.70	4070	27.4	28.5

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 7, 41 ft<sup>3</sup>/s, estimated; July 7, 59 ft<sup>3</sup>/s.

## SAN JOAQUIN RIVER BASIN

## 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. 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<sup>3</sup>/s, Feb. 8, 1998, gage height, 11.11 ft, maximum gage height, 12.03 ft, Jan. 28, 1997; minimum daily, 0.01 ft<sup>3</sup>/s, Sept. 24, 1991.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	178	101	264	117	504	81	49	85	68	57	43
2	87	215	104	276	125	519	79	48	79	80	54	53
3	92	220	118	258	138	510	74	53	71	84	59	54
4	107	222	119	220	147	471	69	55	62	93	56	57
5	114	213	128	200	149	446	76	51	68	102	57	62
6	122	220	126	194	152	445	68	51	68	117	65	59
7	125	220	129	187	161	400	63	57	64	101	62	54
8	120	221	130	174	147	357	56	57	66	78	61	47
9	125	213	128	164	130	337	59	58	65	87	63	42
10	132	206	145	161	137	314	57	67	54	85	61	43
11	125	197	157	164	146	302	52	56	52	84	47	40
12	136	194	164	159	145	277	47	71	45	95	40	42
13	143	185	162	152	159	276	42	95	53	104	39	49
14	141	188	161	129	156	275	53	80	50	90	40	43
15	132	181	162	128	151	256	49	65	64	84	38	44
16	127	177	167	129	161	232	44	68	63	86	48	38
17	129	172	165	129	164	211	53	75	51	77	51	38
18	136	174	150	126	185	191	57	65	44	66	50	39
19	157	171	148	123	215	170	56	62	46	69	43	48
20	167	172	168	120	241	176	48	64	46	69	39	61
21	163	161	184	124	260	163	57	61	44	75	43	54
22	170	153	189	129	249	182	56	50	45	69	51	39
23	171	142	181	125	223	176	62	54	45	66	61	37
24	174	128	171	127	214	137	58	63	46	63	61	42
25	170	133	181	131	220	117	71	75	56	54	58	46
26	171	131	197	134	318	103	74	99	57	60	50	45
27	170	127	192	133	352	112	80	74	59	63	45	49
28	169	114	183	138	354	112	69	83	70	54	39	46
29	172	102	189	131	458	105	62	81	64	55	39	40
30	157	96	233	119	---	87	56	69	65	56	46	47
31	159	---	267	110	---	91	---	73	---	56	43	---
TOTAL	4346	5226	4999	4858	5774	8054	1828	2029	1747	2390	1566	1401
MEAN	140	174	161	157	199	260	60.9	65.5	58.2	77.1	50.5	46.7
MAX	174	222	267	276	458	519	81	99	85	117	65	62
MIN	83	96	101	110	117	87	42	48	44	54	38	37
AC-FT	8620	10370	9920	9640	11450	15980	3630	4020	3470	4740	3110	2780

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2004, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	76.3	95.7	110	153	204	182	79.9	54.1	52.7	50.8	44.8	32.4							
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1986 - 2004	
ANNUAL TOTAL	43677		44218			
ANNUAL MEAN	120		121		94.2	
HIGHEST ANNUAL MEAN					252	
LOWEST ANNUAL MEAN					17.6	
HIGHEST DAILY MEAN	360	Jan 2	519	Mar 2	1060	Feb 9 1998
LOWEST DAILY MEAN	29	Jul 13	37	Sep 23	0.01	Sep 24 1991
ANNUAL SEVEN-DAY MINIMUM	43	Aug 14	42	Sep 12	0.12	Sep 23 1992
MAXIMUM PEAK FLOW			539		1060	
MAXIMUM PEAK STAGE			8.72		12.03	
ANNUAL RUNOFF (AC-FT)	86630		87710		68230	
10 PERCENT EXCEEDS	210		216		199	
50 PERCENT EXCEEDS	108		96		64	
90 PERCENT EXCEEDS	50		46		6.2	



## 11262900 MUD SLOUGH NEAR GUSTINE, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1985 to current year.

CHEMICAL DATA: Water years 1985–88, 1993–94, 1999, 2001–02.

SPECIFIC CONDUCTANCE: Water years 1985 to current year.

WATER TEMPERATURE: Water years 1985 to current year.

SEDIMENT DATA: Water years 1985–88, 1993–94, 1999, 2001–02.

PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: November 1985 to current year.

WATER TEMPERATURE: November 1985 to current year.

INSTRUMENTATION.—Water-quality monitor since November 1985.

REMARKS.—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. Specific conductance records rated excellent except for Oct. 1–9, Oct. 31 to Nov. 20, Dec. 15 to Jan. 6, Feb. 1–18, Mar. 6 to Apr. 6, Apr. 12–17, May 20 to June 16, July 2–19, Aug. 11–23, which are rated good; Apr. 7, 8, 18–21, June 17–22, July 20–31, Aug. 24 to Sept. 1, which are rated fair; and Apr. 22 to May 3, Aug. 1–4, Sept. 2–8, which are rated poor. Water-temperature records are rated excellent. 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, 5,440 microsiemens, May 2; minimum recorded, 1,260 microsiemens, Oct. 10.

WATER TEMPERATURE: Maximum recorded, 30.0°C, July 22, 26, 28; minimum recorded, 6.5°C, Jan. 4, 5.

## SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

## WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1450	1360	1560	1430	1950	1890	1680	1580	2560	2480	2160	1820
2	1520	1420	1430	1360	1930	1850	1680	1590	2530	2350	2120	1880
3	1510	1420	1390	1370	1850	1770	1770	1670	2510	2330	2330	2030
4	1620	1420	1440	1380	1810	1770	1850	1760	2470	2370	2390	2170
5	1620	1440	1560	1440	1790	1720	1850	1780	2570	2300	2370	2230
6	1620	1430	1520	1450	1840	1780	1830	1760	2590	2370	2450	2300
7	1670	1530	1470	1410	1820	1750	1890	1800	2500	2380	2440	2310
8	1710	1550	1450	1420	1820	1740	1970	1880	2590	2310	2540	2370
9	1610	1410	1460	1430	1840	1760	2000	1950	2680	2410	2580	2440
10	1420	1260	1440	1410	1770	1660	1980	1920	2750	2570	2620	2490
11	1590	1380	1460	1410	1710	1660	2020	1950	2780	2620	2680	2530
12	1570	1400	1480	1450	1700	1650	2050	1920	2830	2570	2730	2660
13	1520	1350	1490	1420	1760	1670	2110	1990	2830	2600	2760	2610
14	1500	1320	1430	1400	1780	1700	2340	2100	2770	2540	2870	2760
15	1510	1320	1400	1390	1770	1710	2240	2120	2740	2500	2970	2860
16	1570	1330	1410	1380	1780	1730	2250	2130	2740	2570	2950	2900
17	1600	1470	1430	1390	1770	1710	2300	2220	2740	2570	3010	2940
18	1540	1430	1440	1420	1800	1750	2320	2220	2680	2490	3160	3000
19	1490	1430	1480	1420	1770	1700	2320	2220	2530	2400	3230	3150
20	1490	1420	1460	1410	1700	1670	2350	2260	2630	2390	3170	3030
21	1490	1420	1470	1430	1780	1700	2370	2230	2560	2130	3140	2910
22	1430	1360	1510	1410	1790	1730	2280	2070	2600	2440	2910	2830
23	1400	1310	1580	1500	1820	1740	2350	2130	2730	2440	3240	2850
24	1420	1350	1690	1580	1810	1690	2360	2250	2820	2630	3340	3240
25	1430	1400	1610	1560	1740	1660	2340	2190	2790	2230	3500	3300
26	1460	1400	1650	1600	1830	1670	2330	2200	2450	2150	3540	3380
27	1460	1410	1700	1620	1930	1770	2310	2220	2480	2110	3520	3350
28	1490	1410	1790	1680	1820	1720	2360	2130	2410	2210	3600	3410
29	1500	1470	1910	1710	1770	1570	2310	2130	2330	1960	3650	3510
30	1620	1490	1920	1870	1690	1540	2410	2200	---	---	4000	3540
31	1600	1540	---	---	1650	1530	2490	2270	---	---	4100	3280
MONTH	1710	1260	1920	1360	1950	1530	2490	1580	2830	1960	4100	1820

## 11262900 MUD SLOUGH NEAR GUSTINE, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX		MIN		MAX		MIN		MAX		MIN	
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3920	3270	4700	4550	4180	3560	3870	3330	3420	3000	3820	3120
2	3720	3400	5440	4400	4400	3690	3770	3020	3660	3060	3730	3290
3	4030	3540	4400	4080	4690	4280	3560	2000	3480	2780	3760	3200
4	4060	3660	---	---	4970	4510	3130	2060	3760	3150	3580	3120
5	4030	3630	---	---	4630	4150	3350	2360	3430	3070	3290	2650
6	4260	3910	3780	3290	4450	4000	3050	2470	3150	2890	2710	2380
7	4500	4180	3520	3030	4540	4050	3320	2960	3470	2970	3010	2460
8	4660	4500	3180	2880	4520	3660	3850	3160	3320	2860	3470	2970
9	4670	4000	3240	2680	4060	3600	3550	3170	2880	2490	3160	2810
10	4250	3890	3460	2650	4520	4060	3640	2420	2900	2420	3480	2930
11	4250	3960	3480	3280	4800	4510	3660	2420	3400	2900	3520	2700
12	4400	3970	3390	2520	4700	4210	3380	2260	3650	3400	2700	2420
13	4640	3930	2800	2530	4210	3770	3200	2320	3920	3540	2600	2140
14	4430	3540	3390	2800	4280	3960	3050	2720	4030	3670	2920	2590
15	4210	3700	3670	3320	4250	3830	3200	2510	3940	3430	2800	2490
16	4640	4190	3520	3090	4020	3550	3330	2390	3640	3040	3070	2750
17	4430	4030	3120	2850	3820	3370	3560	2900	3910	3480	3090	2930
18	4220	3970	3380	3120	4060	3510	3600	3050	3790	3600	3050	2450
19	4620	3680	3520	3100	4390	3930	3470	2860	3610	3290	2460	2000
20	4610	4150	3360	2970	4410	4200	3540	3030	3620	3190	2010	1720
21	4400	4090	3690	3300	4530	4200	3430	2600	3350	2710	2270	1950
22	4530	4070	3830	3690	4540	3740	3550	3230	3080	2570	2370	2240
23	4400	4100	3960	3580	4040	3740	3630	3150	2810	2100	2330	2070
24	4430	4150	3950	3250	3980	3490	3500	2920	3400	2460	2120	1980
25	4150	3940	3440	2650	3760	3110	3700	3330	3680	3130	2110	2000
26	4290	3990	2730	2450	3680	3360	3690	3320	3800	3240	2100	1940
27	4040	3780	3200	2730	3710	3130	3520	3020	3920	3400	2100	1990
28	4000	3790	3400	2980	3410	2880	3560	2800	3920	3230	2150	2030
29	4320	3990	3870	3030	3700	3360	3290	2790	3880	3570	2420	2150
30	4570	4280	4160	3870	3820	3420	3340	2640	3660	2900	2360	1880
31	---	---	4250	3800	---	---	3430	2740	3680	3260	---	---
MONTH	4670	3270	---	---	4970	2880	3870	2000	4030	2100	3820	1720

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	24.5	21.5	15.5	13.0	12.5	10.5	9.5	9.0	10.5	9.0	13.0	12.5
2	23.5	20.5	14.5	13.0	13.5	11.0	10.0	9.0	10.5	9.5	14.0	11.5
3	23.5	20.0	15.0	13.0	12.5	11.5	9.5	8.0	11.0	9.0	14.0	12.0
4	23.5	20.5	14.5	12.5	13.0	12.0	8.5	6.5	12.5	10.0	14.5	12.0
5	23.5	20.5	15.0	13.0	13.0	12.0	8.5	6.5	12.5	9.5	16.0	13.0
6	24.0	20.5	15.0	13.5	13.5	12.5	8.0	7.0	12.5	10.0	17.0	14.5
7	24.5	21.0	16.0	14.5	14.5	13.0	9.5	7.5	12.5	10.0	18.5	15.0
8	24.0	21.5	16.0	14.5	13.0	11.0	11.0	9.0	12.5	9.5	20.0	16.5
9	23.5	21.0	15.5	14.0	11.5	10.0	11.5	10.0	12.5	9.5	21.0	17.5
10	21.0	18.0	16.0	14.0	12.0	10.0	11.0	10.0	12.5	9.5	20.0	17.5
11	20.0	16.5	15.5	13.5	12.0	10.5	11.5	10.0	13.0	10.0	21.0	17.0
12	20.5	17.5	14.5	13.0	11.0	9.5	11.0	10.5	13.5	10.5	20.5	17.5
13	19.5	17.0	15.5	13.0	12.0	10.5	10.5	10.0	12.5	11.0	21.0	17.5
14	20.0	16.5	15.5	13.5	12.5	11.0	10.0	9.5	13.5	11.0	21.5	18.0
15	20.5	17.5	15.0	14.0	11.5	9.5	10.0	9.5	14.5	12.0	21.5	19.0
16	20.5	17.5	14.5	12.5	10.5	8.5	10.0	9.5	14.0	13.0	21.5	18.5
17	21.0	18.0	15.5	13.5	10.0	8.5	10.0	9.5	14.5	12.0	22.5	18.5
18	21.5	18.5	15.5	13.5	10.5	8.5	10.5	9.5	15.0	13.0	23.5	19.5
19	21.5	19.0	15.0	13.5	10.0	9.0	10.5	10.0	14.5	12.0	23.0	20.0
20	21.5	19.0	15.0	13.0	10.5	9.5	10.5	9.5	13.5	12.5	23.0	19.5
21	22.5	19.5	14.5	12.0	11.5	10.5	11.0	8.5	14.5	12.5	23.0	19.5
22	22.0	20.0	12.0	10.0	11.5	11.0	10.5	8.5	14.0	13.0	23.0	19.5
23	21.0	19.5	10.5	8.5	11.5	10.5	10.5	8.0	15.5	12.5	22.5	19.0
24	21.0	18.5	9.5	8.5	11.5	11.0	10.5	9.5	16.0	13.5	21.5	18.5
25	21.0	18.5	9.5	7.5	11.5	9.5	11.5	9.5	15.0	12.0	19.5	17.5
26	21.0	18.5	10.5	8.0	10.0	8.5	10.0	9.0	13.0	11.5	18.5	16.0
27	21.5	18.5	10.5	8.5	9.5	7.5	10.5	9.5	13.5	11.0	19.5	15.5
28	21.0	18.5	11.0	9.5	8.5	7.0	11.5	9.5	14.0	11.0	20.5	16.0
29	20.5	18.0	11.0	9.5	8.5	8.0	13.0	10.0	13.5	12.0	22.0	17.5
30	18.0	15.5	11.0	10.5	9.0	8.0	12.0	10.0	---	---	20.0	17.5
31	16.0	14.5	---	---	10.0	8.5	11.5	9.5	---	---	19.5	16.0
MONTH	24.5	14.5	16.0	7.5	14.5	7.0	13.0	6.5	16.0	9.0	23.5	11.5

## 11262900 MUD SLOUGH NEAR GUSTINE, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	18.0	15.0	24.5	19.5	26.5	22.5	26.5	22.0	28.0	23.5	28.0	23.5
2	17.5	13.0	26.0	20.5	27.5	23.0	27.5	22.5	27.0	23.0	27.0	24.0
3	19.5	14.5	28.0	21.5	27.0	23.5	28.0	23.5	27.0	22.5	24.5	20.0
4	21.0	16.5	28.0	23.0	26.5	23.0	28.0	23.5	27.5	23.0	23.5	19.0
5	20.5	16.5	27.0	22.5	27.0	22.5	29.0	24.5	27.5	23.0	25.0	20.5
6	21.0	16.0	25.5	22.0	27.0	23.0	29.0	25.5	26.5	23.0	26.5	22.0
7	21.0	16.5	25.5	20.5	27.0	22.0	28.5	25.5	28.0	23.0	27.0	23.0
8	22.0	17.5	25.0	20.5	25.5	21.5	28.5	24.0	28.5	24.0	28.0	23.5
9	22.5	18.0	24.5	20.0	25.0	19.5	27.5	23.5	28.0	24.5	28.0	23.5
10	23.0	19.0	23.5	19.5	24.5	20.0	27.5	23.0	28.0	24.5	27.5	23.0
11	24.0	19.0	24.0	18.5	25.0	21.0	28.0	23.0	28.5	25.0	27.0	23.0
12	24.0	19.5	22.5	18.5	25.5	21.5	28.0	24.0	29.0	25.5	27.5	23.0
13	23.0	19.5	24.0	18.5	26.5	21.5	28.0	24.5	28.5	25.5	26.0	22.0
14	23.0	18.5	25.5	20.0	26.5	22.5	28.0	24.5	28.0	25.0	24.0	21.5
15	20.5	18.5	25.5	20.5	26.5	23.0	28.0	24.0	27.5	24.0	24.0	20.0
16	21.5	17.0	26.0	21.0	28.5	23.5	28.0	24.5	27.5	23.5	26.0	21.0
17	20.0	17.0	25.0	20.5	28.0	23.0	28.5	24.5	27.0	24.0	26.5	22.0
18	19.0	15.5	24.5	19.5	27.0	23.0	28.5	25.0	28.0	24.0	23.5	21.0
19	20.5	16.0	25.0	19.5	26.5	23.0	28.5	25.0	28.5	25.0	21.0	19.0
20	20.5	17.5	26.0	20.0	26.5	23.0	29.0	25.5	28.0	25.0	21.0	17.5
21	23.0	17.5	25.5	20.0	27.0	23.0	29.5	25.5	28.0	25.0	21.0	17.0
22	20.0	16.0	25.5	20.0	27.5	23.5	30.0	26.0	27.0	24.0	23.0	17.5
23	21.5	16.5	25.0	20.0	27.0	23.0	29.5	25.5	26.5	23.0	23.5	18.5
24	23.0	18.0	24.5	20.0	27.0	22.5	29.5	25.5	27.0	23.0	24.0	19.5
25	25.0	19.5	25.0	19.5	27.0	22.5	29.5	25.5	26.5	23.0	24.0	20.0
26	26.0	21.5	25.5	20.5	27.5	22.5	30.0	25.5	25.5	23.0	24.0	20.0
27	26.5	22.0	26.0	21.5	27.5	22.5	29.5	26.0	26.0	22.5	23.5	20.0
28	25.5	20.0	24.0	21.5	28.0	23.5	30.0	25.5	26.5	23.0	23.5	20.0
29	22.0	18.0	24.0	20.5	28.0	23.0	29.0	24.5	27.0	23.5	23.0	19.5
30	24.0	18.0	25.0	20.0	26.5	22.5	29.0	24.5	27.5	23.5	22.0	18.5
31	---	---	26.0	21.5	---	---	28.5	24.0	28.0	23.5	---	---
MONTH	26.5	13.0	28.0	18.5	28.5	19.5	30.0	22.0	29.0	22.5	28.0	17.0

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DATE	TIME	Depth at sample location, feet (81903)	Specif. conductance, uS/cm 25 degC (00095)	Temperature, deg C (00010)	Location in X-sect. looking dwnstrm ft from l bank (00009)
APR					
08...*	1115	1.04	5070	18.9	2.55
08...*	1116	1.31	5070	18.8	7.65
08...*	1117	1.28	5060	18.8	12.8
08...*	1118	1.40	5060	18.8	17.9
08...*	1119	1.24	5060	18.8	22.9
08...*	1121	1.20	5050	18.8	28.1
08...*	1122	1.18	5040	18.9	33.1
08...*	1123	1.12	5040	18.9	38.2
08...*	1124	1.28	5040	18.9	43.4
08...*	1125	1.48	5070	18.9	48.5
SEP					
08...*	1034	.81	3270	24.1	2.50
08...*	1035	.92	3280	24.0	7.50
08...*	1036	.93	3280	24.0	12.5
08...*	1037	.97	3270	24.0	17.5
08...*	1038	1.07	3260	24.0	22.5
08...*	1039	1.10	3260	24.0	27.5
08...*	1040	1.03	3260	24.0	32.5
08...*	1041	.96	3260	24.0	37.5
08...*	1042	.93	3260	24.1	42.5
08...*	1043	.78	3260	24.0	47.5

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 8, 57 ft<sup>3</sup>/s; Sept. 8, 47 ft<sup>3</sup>/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 remnants 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<sup>2</sup>.

PERIOD OF RECORD.—August 1915 to current year.

CHEMICAL DATA: Water years 1968–96, 2001–03.

BIOLOGICAL DATA: Water years 1973–81.

WATER TEMPERATURE: Water years 1966–77, 1979–93.

SEDIMENT DATA: Water years 1970–71, 1973–96, 2001–03.

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<sup>3</sup>/s can be diverted upstream from station for Yosemite Valley water supply.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,100 ft<sup>3</sup>/s, Jan. 2, 1997, gage height, 13.27 ft, from rating curve extended above 4,000 ft<sup>3</sup>/s, on basis of contracted-opening measurements at gage heights 10.4 and 11.55 ft; minimum daily, 1.5 ft<sup>3</sup>/s, Sept. 26, 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,900 ft<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 4	0430	1,830	5.68

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	6.4	18	83	71	111	613	1060	829	209	41	13
2	8.0	6.7	18	89	73	108	495	1230	881	205	37	12
3	8.0	8.6	17	93	78	104	531	1450	944	222	33	11
4	7.9	8.6	17	100	78	104	651	1630	906	267	31	9.9
5	7.7	8.8	70	93	77	109	862	1560	881	243	28	9.2
6	7.7	8.5	147	88	79	122	888	1300	855	262	26	8.6
7	7.7	8.9	129	86	77	162	728	1030	822	254	24	7.7
8	7.7	9.4	78	83	72	231	790	987	687	229	22	7.7
9	7.2	17	65	82	74	314	858	1050	501	210	20	6.5
10	6.9	19	61	83	72	364	923	1110	386	182	19	6.1
11	6.6	14	57	90	75	349	865	805	336	155	18	5.7
12	6.5	14	52	94	77	374	912	657	351	136	18	5.4
13	6.4	15	58	93	78	391	894	678	411	126	23	5.3
14	6.4	16	57	95	76	456	674	805	552	129	53	4.7
15	6.3	16	47	95	76	581	602	855	591	132	49	4.6
16	6.3	18	53	93	107	649	503	803	591	125	39	4.5
17	6.0	18	54	93	138	684	443	878	550	126	33	4.4
18	5.9	19	54	95	124	772	400	832	509	128	29	4.6
19	5.9	20	62	91	115	833	405	702	406	121	26	4.7
20	5.9	21	79	87	113	886	386	632	376	112	23	4.9
21	5.9	21	81	81	106	1010	376	556	380	106	22	4.8
22	5.9	18	70	78	104	1060	378	479	390	96	24	4.8
23	5.7	17	67	81	100	1060	372	499	385	89	32	4.9
24	5.7	18	96	82	97	967	456	559	383	84	32	4.9
25	5.9	17	107	77	104	825	628	552	351	77	29	4.7
26	6.0	15	92	74	123	672	858	482	326	71	25	4.7
27	5.5	16	74	78	122	541	1090	600	318	64	21	4.6
28	5.3	17	86	75	116	529	1210	1140	281	58	18	4.5
29	5.3	17	87	75	114	611	1060	999	276	53	16	4.3
30	5.3	18	90	77	---	645	903	731	237	49	15	4.4
31	5.6	---	90	75	---	624	---	805	---	46	14	---
TOTAL	201.0	446.9	2133	2659	2716	16248	20754	27456	15692	4366	840	187.1
MEAN	6.48	14.9	68.8	85.8	93.7	524	692	886	523	141	27.1	6.24
MAX	8.0	21	147	100	138	1060	1210	1630	944	267	53	13
MIN	5.3	6.4	17	74	71	104	372	479	237	46	14	4.3
AC-FT	399	886	4230	5270	5390	32230	41170	54460	31130	8660	1670	371

## 11264500 MERCED RIVER AT HAPPY ISLES BRIDGE, NEAR YOSEMITE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	35.2	61.0	82.9	90.4	108	195	543	1260	1213	468	111	43.2
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1916 - 2004	
ANNUAL TOTAL	130226.7		93699.0			
ANNUAL MEAN	357		256		352	
HIGHEST ANNUAL MEAN					802	
LOWEST ANNUAL MEAN					84.9	
HIGHEST DAILY MEAN	3840	May 29	1630	May 4	9030	Jan 2 1997
LOWEST DAILY MEAN	5.3	Oct 28	4.3	Sep 29	1.5	Sep 26 1977
ANNUAL SEVEN-DAY MINIMUM	5.6	Oct 25	4.6	Sep 24	1.9	Oct 14 1964
MAXIMUM PEAK FLOW			1830	May 4	10100	Jan 2 1997
MAXIMUM PEAK STAGE			5.68	May 4	13.27	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	258300		185900		254700	
10 PERCENT EXCEEDS	1140		840		1120	
50 PERCENT EXCEEDS	115		86		100	
90 PERCENT EXCEEDS	8.6		6.2		11	

## 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<sup>2</sup>.

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 except for estimated daily discharges, which are fair. No diversions between stations at Happy Isles Bridge and Pohono Bridge.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 24,600 ft<sup>3</sup>/s, Jan. 3, 1997, gage height, 23.43 ft, from floodmarks in gagehouse, from rating curve extended above 17,000 ft<sup>3</sup>/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<sup>3</sup>/s, Oct. 26, 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 2,900 ft<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 4	0415	3,170	7.02

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	18	28	167	148	249	1450	2030	1290	303	61	27
2	24	18	28	173	161	240	1170	2280	1320	284	56	25
3	24	21	27	163	155	227	1290	2640	1380	315	53	24
4	24	21	27	143	154	224	1520	2890	1330	332	49	23
5	23	21	54	159	156	232	1850	2820	1280	328	46	23
6	23	22	320	167	159	249	1950	2450	1230	329	43	22
7	23	22	285	172	161	309	1680	2030	1190	335	40	22
8	22	22	176	166	143	436	1820	1920	1040	299	42	21
9	22	33	134	166	152	571	1940	1950	817	278	48	21
10	22	35	126	164	147	612	2030	1990	661	246	47	20
11	21	31	117	174	153	589	1920	1570	566	214	44	19
12	21	28	103	183	154	584	1990	1330	560	186	41	19
13	21	28	119	186	159	584	1980	1330	610	169	38	18
14	21	28	121	195	157	584	1620	1460	758	165	57	18
15	20	29	97	209	157	934	1480	1530	817	168	67	18
16	20	30	104	225	192	1290	1270	1440	812	160	60	17
17	19	30	107	220	285	1350	1130	1520	765	155	53	17
18	19	31	108	216	e255	1490	993	1470	703	157	48	17
19	19	31	118	201	e245	1640	981	1290	592	152	44	17
20	18	31	148	188	249	1700	934	1200	525	141	42	18
21	18	31	165	175	231	1940	923	1090	517	134	40	18
22	18	30	144	164	226	2080	943	963	534	123	38	17
23	18	28	136	168	213	2110	919	967	515	114	44	17
24	17	27	187	171	206	1990	1100	1030	504	107	49	17
25	17	28	239	160	230	1760	1410	1020	469	100	45	17
26	17	27	194	151	274	1470	1780	895	430	93	41	16
27	17	26	153	164	258	1200	2120	1010	416	86	37	16
28	17	27	160	154	241	1170	2340	1790	379	80	35	16
29	17	27	175	154	247	1370	2110	1770	382	75	32	16
30	16	27	175	159	---	1470	1840	1290	338	69	30	15
31	17	---	176	156	---	1440	---	1300	---	65	29	---
TOTAL	619	808	4251	5413	5668	32094	46483	50265	22730	5762	1399	571
MEAN	20.0	26.9	137	175	195	1035	1549	1621	758	186	45.1	19.0
MAX	24	35	320	225	285	2110	2340	2890	1380	335	67	27
MIN	16	18	27	143	143	224	919	895	338	65	29	15
AC-FT	1230	1600	8430	10740	11240	63660	92200	99700	45080	11430	2770	1130

e Estimated.

## 11266500 MERCED RIVER AT POHONO BRIDGE, NEAR YOSEMITE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	61.3	121	181	202	247	429	1112	2330	1905	637	148	64.3
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1917 - 2004	
ANNUAL TOTAL	230365		176063			
ANNUAL MEAN	631		481		621	
HIGHEST ANNUAL MEAN					1466	
LOWEST ANNUAL MEAN					127	
HIGHEST DAILY MEAN	5880	May 29	2890	May 4	21000	Jan 2 1997
LOWEST DAILY MEAN	16	Oct 30	15	Sep 30	5.4	Oct 26 1977
ANNUAL SEVEN-DAY MINIMUM	17	Oct 24	16	Sep 24	5.6	Oct 20 1977
MAXIMUM PEAK FLOW			3170		24600	
MAXIMUM PEAK STAGE			7.02		23.43	
ANNUAL RUNOFF (AC-FT)	456900		349200		449600	
10 PERCENT EXCEEDS	1700		1520		1910	
50 PERCENT EXCEEDS	243		164		182	
90 PERCENT EXCEEDS	24		19		25	





## 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<sup>2</sup>.

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, 582,200 acre-ft, May 7, elevation, 790.67 ft; minimum, 279,600 acre-ft, Sept. 30, elevation, 706.36 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	441300	394000	381200	390700	403100	446800	538200	576300	576400	518400	416900	332100
2	439900	392500	380700	393300	403700	449100	540800	576600	576100	514900	413400	329700
3	438500	392300	380400	394800	404700	450900	539300	577400	576400	511700	410300	327400
4	437000	392200	380100	395700	405300	452300	540200	579000	576100	508700	407300	325200
5	435300	391900	379100	395900	405600	453500	542700	581000	575200	505800	404100	322900
6	434000	391500	378600	396300	405900	455000	546300	582000	574300	502600	401300	320900
7	432300	391200	378700	397000	406200	456100	549100	581900	573200	499700	398200	318800
8	431300	390900	378500	397300	406600	457500	552100	581300	571500	496500	395500	316300
9	430000	390900	378400	397600	406700	459600	555700	580300	569900	493600	392800	314600
10	429100	390700	378300	398200	407000	461200	558900	579600	567500	490700	389900	312900
11	427500	390400	378700	398600	407300	463700	562500	579400	565200	487300	387000	311200
12	425300	390000	378800	398800	407200	466800	565600	579100	565500	484200	384100	309200
13	424700	389600	379000	399100	407300	469000	567800	578500	562800	481700	381300	307200
14	422800	389100	379500	399400	407500	471600	570100	579000	558500	477400	380600	305500
15	421600	388500	379700	399800	407700	474700	571900	579200	556900	474400	374800	304300
16	419600	388000	379800	400300	407900	478800	572800	579600	555100	470600	371700	301000
17	418000	387400	379700	400700	408800	483200	573400	579600	553200	467300	368800	299000
18	416200	386700	379600	400700	411100	486900	573000	579000	551600	463700	366900	297300
19	414000	386500	379500	401100	413200	490500	572800	579200	549400	460200	363300	295900
20	411500	386600	379700	401400	414300	494800	572400	578900	546700	456800	360400	293500
21	410300	386200	379900	401200	415200	499100	572400	578300	544500	453600	358100	292000
22	408000	385500	380000	401200	416200	505100	571700	577500	542100	450500	355600	290700
23	405400	384800	379800	401400	417200	509900	571400	577000	539800	446900	353100	289200
24	403500	384300	380300	401700	418000	514500	570200	576000	537600	443900	350300	288200
25	402000	383900	382900	401600	420400	518500	569800	575400	535300	440600	348100	287600
26	400000	383400	384100	401600	431800	521100	570400	575100	532900	437400	345900	286000
27	398300	383000	384600	402100	438800	523400	572400	574100	530500	434100	343200	285200
28	397100	382500	384900	402700	442400	524400	574900	574500	527700	430900	341000	283300
29	395700	382100	385300	402700	444600	527200	576200	576500	524800	427300	338800	281900
30	394900	381700	386100	402900	---	530100	576000	576700	521600	423800	336500	279600
31	393900	---	387000	403000	---	532800	---	576500	---	420300	334300	---
MAX	441300	394000	387000	403000	444600	532800	576200	582000	576400	518400	416900	332100
MIN	393900	381700	378300	390700	403100	446800	538200	574100	521600	420300	334300	279600
a	743.79	740.21	741.77	746.37	757.81	779.60	789.32	789.43	777.00	751.22	725.51	706.36
b	-50500	-12200	+5300	+16000	+41600	+88200	+43200	+500	-54900	-101300	-86000	-54700
c	51280	1800	17050	16920	16730	31100	95940	136300	108800	116500	89970	56790

CAL YR 2003 b +68700

WTR YR 2004 b -164800

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<sup>2</sup>.

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 and since 1916).—Maximum discharge observed, 47,700 ft<sup>3</sup>/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<sup>3</sup>/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<sup>3</sup>/s, on basis of computation of peak flow over dam; minimum daily, 3.4 ft<sup>3</sup>/s, Mar. 5, 1966.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	807	391	342	303	296	272	1020	2790	1460	1980	1720	1110
2	835	377	326	299	297	276	1090	3080	1500	1900	1660	1090
3	813	367	329	309	290	262	1120	3020	1560	1880	1590	1120
4	807	360	332	299	289	265	1130	2930	1680	1880	1550	1130
5	807	359	322	300	292	263	1110	2950	1790	1860	1570	1100
6	831	357	312	297	293	262	1080	2960	1820	1800	1580	1100
7	891	355	319	297	291	262	1070	3010	1810	1780	1510	1100
8	889	355	318	300	290	261	1070	3070	1850	1780	1420	1040
9	838	355	315	305	294	259	1090	3030	1840	1790	1360	1000
10	829	351	313	307	300	258	1120	2920	1810	1760	1420	997
11	849	351	314	307	300	256	1430	2480	1750	1740	1460	978
12	849	351	310	306	299	253	1480	1880	1720	1760	1490	966
13	842	353	314	306	300	254	1410	1700	1720	1790	1550	981
14	2310	355	315	306	298	253	1420	1660	1730	1830	1570	993
15	2630	355	314	307	297	253	1410	1710	1670	1870	1550	1010
16	2800	357	305	306	297	251	1450	1790	1680	1880	1520	1000
17	2990	358	300	307	297	251	1530	1830	1680	1870	1460	964
18	3300	355	302	306	311	557	1560	1720	1770	1890	1410	925
19	3370	355	308	303	302	634	1460	1660	1830	1880	1400	848
20	3340	355	314	303	297	608	1430	1660	1800	1840	1370	804
21	3340	356	310	303	291	608	1470	1640	1700	1770	1320	738
22	3330	364	304	304	288	689	1620	1580	1610	1740	1310	663
23	3120	363	304	303	288	798	1910	1550	1580	1750	1290	595
24	807	357	305	302	290	855	2030	1560	1620	1750	1280	551
25	688	353	305	300	320	900	2030	1560	1630	1680	1210	545
26	577	349	305	300	333	932	2080	1550	1630	1640	1140	611
27	544	348	305	300	300	911	2200	1570	1630	1680	1110	699
28	535	346	304	299	284	859	2380	1630	1710	1730	1100	738
29	527	345	303	296	284	852	2510	1590	1830	1800	1120	816
30	470	342	300	299	---	877	2660	1540	2000	1850	1150	907
31	408	---	300	299	---	934	---	1470	---	1780	1170	---
TOTAL	45973	10695	9669	9378	8608	15425	46370	65090	51410	55930	43360	27119
MEAN	1483	356	312	303	297	498	1546	2100	1714	1804	1399	904
MAX	3370	391	342	309	333	934	2660	3080	2000	1980	1720	1130
MIN	408	342	300	296	284	251	1020	1470	1460	1640	1100	545
AC-FT	91190	21210	19180	18600	17070	30600	91970	129100	102000	110900	86000	53790
a	9340	1650	9080	8610	9240	8740	8270	8840	8640	9000	9010	9050
b	48150	0	89	0	0	22770	87950	117000	96340	103300	81380	53380

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	1.00	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)

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 - 2004, BY WATER YEAR (WY)

MEAN	911	385	531	737	1065	1279	1785	2232	2256	2091	1705	1322
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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1968 - 2004

ANNUAL TOTAL	364592	389027	
ANNUAL MEAN	999	1063	1359
HIGHEST ANNUAL MEAN			3779 1983
LOWEST ANNUAL MEAN			363 1977
HIGHEST DAILY MEAN	3370	Oct 19	3370 Oct 19 8020 Jan 4 1997
LOWEST DAILY MEAN	194	Jan 12	251 Mar 16 46 Oct 3 1968
ANNUAL SEVEN-DAY MINIMUM	195	Jan 11	253 Mar 11 74 Oct 12 1977
MAXIMUM PEAK FLOW			3480 Oct 18 9360 Jun 1 1969
MAXIMUM PEAK STAGE			8.32 Oct 18 12.40 Jun 1 1969
ANNUAL RUNOFF (AC-FT)	723200	771600	984900
TOTAL DIVERSION (AC-FT) a	583700	610400	
10 PERCENT EXCEEDS	1820		2780
50 PERCENT EXCEEDS	865		1160
90 PERCENT EXCEEDS	241		189

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<sup>2</sup>.

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<sup>3</sup>/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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	---	---	---	---	---	---	---	191	145	131	120
2	120	---	---	---	---	---	---	---	190	154	139	122
3	149	---	---	---	---	---	187	---	163	146	134	110
4	164	---	---	---	---	---	195	---	145	152	118	121
5	171	---	---	---	---	---	188	---	148	157	108	141
6	174	---	---	---	---	---	185	---	149	139	114	118
7	168	---	---	---	---	---	180	---	146	134	112	101
8	168	---	---	---	---	---	179	---	135	135	117	113
9	---	---	---	---	---	---	178	---	140	145	111	116
10	---	---	---	---	---	---	182	---	137	145	109	112
11	---	---	---	---	---	---	---	---	145	162	135	97
12	---	---	---	---	---	---	---	---	156	173	129	120
13	---	---	---	---	---	---	---	---	158	153	126	116
14	---	---	---	---	---	---	---	---	156	145	121	125
15	---	---	---	---	---	---	---	---	146	135	124	139
16	---	---	---	---	---	---	---	---	136	146	132	136
17	---	---	---	---	---	---	---	---	150	145	122	120
18	---	---	---	---	---	---	---	---	162	146	117	125
19	---	---	---	---	---	---	---	---	157	145	129	122
20	---	---	---	---	---	---	---	---	166	144	133	131
21	---	---	---	---	---	---	---	---	160	128	119	146
22	---	---	---	---	---	---	---	---	163	125	107	138
23	---	---	---	---	---	---	---	194	159	120	97	125
24	---	---	---	---	---	---	---	189	150	119	105	96
25	---	---	---	---	---	---	---	---	137	126	112	90
26	---	---	---	---	---	---	---	---	137	122	101	118
27	---	---	---	---	---	---	---	168	152	131	102	113
28	---	---	---	---	---	---	---	181	157	119	107	106
29	---	---	---	---	---	---	---	---	160	122	107	88
30	---	---	---	---	---	---	---	---	147	126	106	116
31	---	---	---	---	---	---	---	---	---	122	107	---
TOTAL	---	---	---	---	---	---	---	---	4598	4306	3631	3541
MEAN	---	---	---	---	---	---	---	---	153	139	117	118
MAX	---	---	---	---	---	---	---	---	191	173	139	146
MIN	---	---	---	---	---	---	---	---	135	119	97	88
AC-FT	---	---	---	---	---	---	---	---	9120	8540	7200	7020

## 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<sup>2</sup>.

PERIOD OF RECORD.—October 1940 to September 1995, October 2001 to current year.

CHEMICAL ANALYSES: Water years 1993–94.

SPECIFIC CONDUCTANCE: Water years 1989–94.

WATER TEMPERATURE: Water years 1989–94.

SEDIMENT DATA: Water years 1993–94.

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<sup>3</sup>/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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	288	249	e256	253	409	249	795	e207	e108	e80	e61
2	124	286	247	e259	257	362	243	906	e182	e108	e80	e57
3	124	281	e221	e301	260	382	236	1170	e180	e108	e94	e73
4	134	278	e239	e305	281	368	224	1400	e165	e107	e88	e92
5	159	293	e246	e287	313	322	247	1350	e148	e123	e82	e122
6	169	286	e244	272	294	304	230	1360	e151	e123	e82	e147
7	151	282	e238	265	280	292	205	1360	e158	e96	e81	e132
8	127	279	e238	258	273	285	202	1360	e140	e85	e121	e98
9	136	278	e236	251	269	277	192	1380	e133	e84	e125	e77
10	141	281	e239	250	267	270	196	1440	e122	e83	e102	e76
11	161	279	e245	250	265	273	198	1400	e127	e85	e83	e78
12	181	276	e247	250	265	271	224	1170	e143	e105	e95	e93
13	180	271	e240	250	261	256	329	744	e170	e121	e88	e134
14	163	270	e243	250	261	250	399	493	e171	e99	e86	e142
15	165	268	e251	250	262	244	416	405	e167	e90	e87	e119
16	172	261	e254	250	265	236	441	377	e151	e83	e108	e126
17	214	256	e248	251	270	228	454	366	e124	e82	e129	e115
18	282	255	e228	250	275	215	460	330	e107	87	e121	e101
19	381	255	e228	254	290	209	502	283	e116	101	e112	e105
20	564	255	e230	255	306	203	487	250	e131	e115	e128	e141
21	561	253	e235	256	305	224	498	237	e138	e100	e115	e145
22	573	252	e235	254	311	228	488	238	e142	e93	e147	e169
23	642	250	e235	252	304	256	510	238	e140	e90	e159	e146
24	649	248	e234	257	298	235	633	231	e125	e87	e127	e126
25	502	247	e240	258	300	235	770	217	e121	e90	e88	e106
26	436	242	e247	258	431	258	812	225	e113	e93	e80	e117
27	367	234	e240	254	821	268	751	229	e112	e90	e84	e124
28	312	241	e244	251	839	275	755	208	e122	e85	e79	e106
29	292	245	e242	256	512	294	742	194	e117	e80	e91	e97
30	287	246	e249	254	---	262	730	187	e111	e82	e84	e89
31	278	---	e254	251	---	249	---	204	---	e82	e79	---
TOTAL	8752	7936	7466	8015	9588	8440	12823	20747	4234	2965	3105	3314
MEAN	282	265	241	259	331	272	427	669	141	95.6	100	110
MAX	649	293	254	305	839	409	812	1440	207	123	159	169
MIN	124	234	221	250	253	203	192	187	107	80	79	57
AC-FT	17360	15740	14810	15900	19020	16740	25430	41150	8400	5880	6160	6570

e Estimated.

## SAN JOAQUIN RIVER BASIN

## 11272500 MERCED RIVER NEAR STEVINSON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	359	300	505	691	809	992	1009	1267	1035	379	220	296
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1941 - 2004	
ANNUAL TOTAL	95568		97385			
ANNUAL MEAN	262		266		654	
HIGHEST ANNUAL MEAN					3155 1983	
LOWEST ANNUAL MEAN					78.8 1961	
HIGHEST DAILY MEAN	1480	May 11	1440	May 10	12000	Dec 10 1950
LOWEST DAILY MEAN	73	Sep 10	57	Sep 2	0.00	Jul 19 1961
ANNUAL SEVEN-DAY MINIMUM	82	Sep 5	75	Aug 28	0.00	Jul 19 1961
MAXIMUM PEAK FLOW			1480	May 11	13600	Dec 5 1950
MAXIMUM PEAK STAGE			61.71	May 4	73.79	Dec 5 1950
ANNUAL RUNOFF (AC-FT)	189600		193200		473700	
10 PERCENT EXCEEDS	551		456		1710	
50 PERCENT EXCEEDS	222		240		232	
90 PERCENT EXCEEDS	96		90		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<sup>2</sup>.

PERIOD OF RECORD.—Water year 1992 to current year. Published as "Merced River near Stevinson" (11272500) water years 1985–94.

CHEMICAL DATA: Water years 1994–95, 1997–99, 2001 to current year.

SPECIFIC CONDUCTANCE: Water years 1992 to current year.

WATER TEMPERATURE: Water years 1992 to current year.

SEDIMENT DATA: Water years 1994–95, 1997 to current year.

PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: April 1992 to September 2004 (discontinued).

WATER TEMPERATURE: April 1992 to September 2004 (discontinued).

INSTRUMENTATION.—Water-quality monitor since April 1992.

REMARKS.—Specific conductance records rated excellent except for May 9–12, which are rated good. Water temperature records rated excellent.

Interruptions in record were due to malfunction of the recording instruments. Specific-conductance and water-temperature values are affected by irrigation return flow. Estimated 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, 553 microsiemens, July 31; minimum recorded, 34 microsiemens, Oct. 20.

WATER TEMPERATURE: Maximum recorded, 31.5°C, July 22; minimum recorded, 7.0°C, Jan. 4, 5.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instan- taneous dis- charge, cfs (00061)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, deg C water, (00010)	Alka- linity, wat flt Gran, field, mg/L as CaCO <sub>3</sub> (29802)	Chlor- ide, water, fltrd, mg/L (00940)
OCT									
09...	1430	e143	758	8.6	7.6	215	22.0	47.0	--
DEC									
17...	1350	e250	765	11.1	7.7	120	13.5	18.0	--
JAN									
22...	1200	e254	770	8.4	7.4	137	9.5	36.0	8.66
MAR									
26...	1200	e260	771	10.2	7.6	136	17.5	--	7.73
APR									
30...	1200	e712	767	7.0	7.7	58	17.5	--	1.77
MAY									
26...	1340	e225	764	9.2	7.5	152	24.0	--	12.7
JUN									
29...	1330	e114	764	10.7	7.6	222	27.5	--	26.6
AUG									
03...	1530	e104	764	13.4	8.5	243	27.5	--	26.2

e Estimated.

## 11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite +		Partic- ulate nitro- gen, susp, water, mg/L (49570)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00665)	Total nitro- gen, wat unf ysis, mg/L (62855)	Total carbon, suspnd sedimnt total, mg/L (00694)
			nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)					
OCT 09...	--	.07	2.16	.023	.11	.037	.122	2.83	1.1
DEC 17...	--	e.02	1.50	.008	<.02	e.005	.030	1.75	.4
JAN 22...	8.7	<.04	1.59	.012	.06	.011	.028	1.60	.3
MAR 26...	7.9	<.04	1.36	.013	.07	.018	.073	1.60	.6
APR 30...	3.0	<.04	<.06	<.008	.07	.006	.040	.24	.6
MAY 26...	8.4	<.04	1.65	.020	.09	.017	.059	1.81	.5
JUN 29...	18.0	.06	2.52	.062	.04	.057	.065	2.77	.3
AUG 03...	15.4	<.04	3.01	.024	.09	.016	.057	3.23	.5
Date	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	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)
OCT 09...	<.1	1.1	4.4	<.006	<.006	<.006	<.004	<.005	<.007
DEC 17...	<.1	.3	2.5	<.006	<.006	<.006	<.005	<.005	<.007
JAN 22...	<.1	.3	2.3	<.006	<.006	<.006	<.005	<.005	<.007
MAR 26...	<.1	.6	3.6	<.006	<.006	<.006	<.005	<.005	<.007
APR 30...	<.1	.6	2.9	<.006	<.006	<.006	<.005	<.005	<.007
MAY 26...	<.1	.5	3.2	<.006	<.006	<.006	<.005	<.005	<.007
JUN 29...	<.1	.3	2.7	<.006	<.006	<.006	<.005	<.005	<.007
AUG 03...	<.1	.5	3.0	<.006	<.006	<.006	<.005	<.005	<.007
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)
OCT 09...	<.050	<.010	<.002	<.041	<.020	.006	<.006	<.018	<.003
DEC 17...	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003
JAN 22...	<.050	<.010	<.004	<.041	<.020	.006	<.006	<.018	<.003
MAR 26...	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003
APR 30...	<.050	<.010	<.004	<.041	<.030	<.005	<.006	<.018	<.003
MAY 26...	<.050	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003
JUN 29...	<.050	<.010	<.004	<.041	<.020	e.019	<.006	<.018	<.003
AUG 03...	<.050	<.010	<.004	<.041	<.020	e.021	<.006	<.018	<.003

e Estimated.

&lt; 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 2003 TO SEPTEMBER 2004

Date	Desulf- inyl fipro- nil, water, fltrd, ug/L (62170)	Diazi- non, water, fltrd, ug/L (39572)	Diel- drin, water, fltrd, ug/L (39381)	Disul- foton, water, fltrd, 0.7u GF (82677)	EPTC, water, fltrd, 0.7u GF (82668)	Ethal- flur- alin, water, fltrd, 0.7u GF (82663)	Etho- prop, water, fltrd, 0.7u GF (82672)	Desulf- inyl- fipro- nil amide, wat flt ug/L (62169)	Fipro- nil sulfide water, fltrd, ug/L (62167)
OCT 09...	<.004	<.005	<.005	<.02	.005	<.009	<.005	<.009	<.005
DEC 17...	<.012	e.004	<.009	<.02	<.004	<.009	<.005	<.029	<.013
JAN 22...	<.012	.007	<.009	<.02	<.004	<.009	<.005	<.029	<.013
MAR 26...	<.012	e.004	<.009	<.02	<.004	<.009	<.005	<.029	<.013
APR 30...	<.012	<.005	<.009	<.02	<.004	<.009	<.005	<.029	<.013
MAY 26...	<.012	<.005	<.009	<.02	<.004	<.009	<.005	<.029	<.013
JUN 29...	<.012	e.013	<.009	<.02	<.004	<.009	<.005	<.029	<.013
AUG 03...	<.012	<.005	<.009	<.02	<.004	<.009	<.005	<.029	<.013
Date	Fipro- nil sulfone water, fltrd, ug/L (62168)	Fipro- nil, water, fltrd, ug/L (62166)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF (82666)	Mala- thion, water, fltrd, ug/L (39532)	Methyl para- thion, water, fltrd 0.7u GF (82667)	Metola- chlor, water, fltrd, ug/L (39415)	Metri- buzin, water, fltrd, ug/L (82630)
OCT 09...	<.005	<.007	<.003	<.004	<.035	<.027	<.006	<.013	<.020
DEC 17...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.013	<.006
JAN 22...	<.024	<.016	<.003	<.004	<.035	<.027	<.100	<.013	<.006
MAR 26...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.013	<.006
APR 30...	<.024	<.016	<.003	<.004	<.035	<.027	<.100	<.013	<.006
MAY 26...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.013	<.006
JUN 29...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.013	<.006
AUG 03...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.013	<.006
Date	Moli- nate, water, fltrd 0.7u GF (82671)	Naprop- amide, water, fltrd 0.7u GF (82684)	p,p'- DDE, water, fltrd, ug/L (34653)	Para- thion, water, fltrd, ug/L (39542)	Peb- ulate, water, fltrd 0.7u GF (82669)	Pendi- meth- alin, water, fltrd 0.7u GF (82683)	Phorate water fltrd 0.7u GF (82664)	Prome- ton, water, fltrd, ug/L (04037)	Propy- zamide, water, fltrd 0.7u GF (82676)
OCT 09...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004
DEC 17...	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.03	<.004
JAN 22...	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.05	<.004
MAR 26...	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004
APR 30...	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004
MAY 26...	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004
JUN 29...	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004
AUG 03...	<.003	<.007	e.002	<.010	<.004	<.022	<.011	<.01	<.004

&lt; Actual value is known to be less than value shown.

e Estimated.

## SAN JOAQUIN RIVER BASIN

11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	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)
OCT 09...	<.010	<.011	<.02	<.005	<.02
DEC 17...	<.025	<.011	<.02	.008	<.02
JAN 22...	<.025	<.011	<.02	.011	<.02
MAR 26...	<.025	<.011	<.02	.015	<.02
APR 30...	<.025	<.011	<.02	<.005	<.02
MAY 26...	<.025	<.011	<.02	<.005	<.02
JUN 29...	<.025	<.011	<.02	<.005	<.02
AUG 03...	<.025	<.011	e.26	.008	<.02

Date	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)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)
OCT 09...	e.023	<.02	<.005	<.002	<.009
DEC 17...	<.034	<.02	<.010	<.002	<.009
JAN 22...	<.034	<.02	<.010	<.002	<.009
MAR 26...	<.034	<.02	<.010	<.002	<.009
APR 30...	<.034	<.02	<.010	<.002	<.009
MAY 26...	<.150	<.02	<.010	<.002	.084
JUN 29...	<.034	<.02	<.010	<.002	<.009
AUG 03...	<.034	<.02	<.010	<.002	<.009

< 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 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	104	101	134	123	129	120	142	137	126	112
2	317	255	103	---	130	123	127	113	142	139	132	126
3	329	268	107	103	146	124	113	68	142	127	134	112
4	333	201	107	103	137	122	139	69	127	77	150	112
5	254	163	104	86	138	116	156	139	128	75	176	150
6	271	173	103	97	144	138	157	154	150	128	176	167
7	220	169	105	97	147	138	154	149	153	149	170	167
8	268	196	109	105	149	124	149	146	153	147	168	167
9	259	183	108	103	135	125	151	148	160	143	170	167
10	234	181	103	97	135	125	148	138	149	143	174	169
11	213	136	105	---	127	118	139	134	145	140	176	144
12	136	114	108	104	126	118	134	133	147	139	181	164
13	145	122	117	104	138	126	136	133	148	138	181	170
14	179	145	114	108	136	123	147	136	147	137	181	166
15	165	148	118	108	123	110	146	139	138	136	180	168
16	158	137	125	118	119	108	139	134	136	131	186	173
17	137	81	126	123	125	118	143	134	131	126	204	186
18	96	59	123	113	154	125	149	142	131	124	212	192
19	59	42	117	110	151	136	147	142	124	68	207	177
20	46	34	116	114	138	134	147	142	132	58	200	183
21	---	---	122	115	134	122	145	135	128	118	186	151
22	---	---	138	119	132	122	140	135	128	121	160	127
23	---	---	133	120	136	127	142	140	134	128	146	120
24	---	---	120	118	135	129	143	134	138	132	179	125
25	---	---	127	118	130	120	134	131	139	132	188	140
26	53	41	131	121	120	111	137	134	138	99	166	118
27	68	53	135	125	121	110	146	136	114	86	139	115
28	82	68	125	117	137	121	146	139	102	84	176	130
29	85	82	139	119	136	132	140	130	112	102	138	105
30	122	85	134	118	132	120	146	133	---	---	186	137
31	104	95	---	---	120	113	146	142	---	---	169	132
MONTH	---	---	139	---	154	108	157	68	160	58	212	105
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	194	133	---	---	---	---	361	310	413	336	483	309
2	167	132	---	---	---	---	364	310	500	318	517	385
3	183	132	---	---	249	194	365	320	337	233	466	356
4	206	119	---	---	245	207	---	---	293	279	439	280
5	166	113	---	---	275	243	---	---	356	284	290	224
6	193	123	---	---	299	252	---	---	380	340	280	195
7	224	189	50	48	302	228	---	---	340	255	294	178
8	204	169	56	48	291	260	452	345	265	229	386	223
9	203	179	51	43	321	264	409	331	277	193	467	340
10	205	170	47	41	323	263	421	356	311	189	541	346
11	206	159	49	41	311	269	421	296	351	296	456	290
12	166	149	52	44	320	298	320	---	348	234	463	280
13	157	76	67	52	317	216	326	203	302	264	327	176
14	86	71	72	62	231	202	396	326	323	258	---	---
15	79	71	90	72	253	199	400	332	347	260	---	---
16	80	71	91	85	265	230	449	375	316	202	---	---
17	81	67	109	89	---	---	511	394	208	177	---	---
18	94	66	119	108	---	---	412	324	244	---	---	---
19	78	63	136	116	---	---	346	304	273	242	---	---
20	76	66	161	133	319	212	310	217	267	205	---	---
21	79	68	170	145	319	213	355	310	276	215	---	---
22	77	72	213	145	287	179	391	336	261	173	---	---
23	80	67	219	155	287	247	437	391	179	151	275	194
24	67	59	180	165	297	254	434	350	276	175	304	234
25	---	---	180	169	300	259	422	325	372	271	408	270
26	---	---	205	166	333	294	327	284	427	372	425	264
27	---	---	181	135	351	310	498	327	414	343	264	220
28	---	---	206	147	312	248	527	469	343	282	302	208
29	---	---	194	177	347	247	541	423	344	301	307	243
30	---	---	210	177	373	277	532	464	349	270	432	307
31	---	---	206	160	---	---	553	397	330	286	---	---
MONTH	---	---	---	---	---	---	---	---	500	---	---	---

## 11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	15.5	14.0	12.0	10.5	10.0	9.5	10.5	9.0	13.0	11.5
2	23.0	19.5	---	13.0	12.5	11.0	10.5	9.0	10.5	9.5	14.0	11.5
3	23.0	19.0	14.5	13.0	12.5	11.5	9.5	8.0	11.0	9.5	14.0	12.0
4	23.5	19.5	14.0	12.0	13.0	12.0	9.0	7.0	12.0	10.5	14.5	11.5
5	23.0	19.5	14.0	12.0	13.0	12.0	9.0	7.0	11.5	9.0	15.5	12.0
6	23.5	19.5	14.5	12.5	13.5	12.5	8.5	7.5	11.5	9.0	16.5	13.0
7	23.5	20.0	15.0	13.0	14.5	12.5	9.5	8.0	12.0	9.5	17.5	13.5
8	23.5	20.0	14.5	13.5	12.5	11.0	11.0	9.0	11.5	9.0	18.0	14.5
9	22.5	19.0	15.0	13.5	11.5	10.5	10.5	9.5	12.0	9.0	19.0	15.0
10	20.0	17.0	15.5	13.5	13.0	11.0	10.5	9.5	12.0	9.0	19.5	16.0
11	20.0	16.5	15.0	13.0	12.5	11.0	11.5	9.5	12.0	9.0	19.5	15.5
12	20.0	17.0	14.0	12.5	11.0	10.0	11.0	10.5	12.5	9.5	20.0	16.0
13	19.5	16.5	15.0	13.0	12.0	10.5	10.5	10.5	11.5	10.0	20.5	16.5
14	19.5	16.0	14.5	13.0	13.0	11.0	10.5	10.0	13.0	10.0	21.0	17.0
15	19.5	16.5	14.0	13.0	11.0	9.5	10.5	10.0	13.5	11.0	21.0	17.5
16	19.5	16.5	14.0	12.0	10.5	9.0	10.5	10.0	13.0	12.0	21.0	17.0
17	19.5	17.0	15.0	13.0	10.5	9.0	10.0	10.0	14.0	11.5	21.5	17.5
18	19.5	17.0	15.0	13.0	10.5	8.5	10.5	9.5	14.5	12.5	22.0	17.5
19	20.0	17.5	14.5	12.5	10.0	9.0	10.5	10.0	13.5	11.5	22.5	18.5
20	19.0	17.0	14.5	12.5	11.0	10.0	10.5	9.5	13.0	12.0	22.0	18.0
21	---	17.5	13.5	12.0	11.5	10.5	10.5	8.5	13.5	12.0	22.0	18.0
22	---	---	12.0	10.5	11.5	10.5	10.5	8.5	13.5	12.5	22.5	18.5
23	---	---	11.0	9.0	11.5	10.5	10.0	8.5	15.0	12.0	21.5	18.0
24	---	---	10.5	9.5	12.0	11.0	10.0	9.0	15.0	13.0	21.0	17.0
25	18.5	16.5	10.5	8.5	12.0	10.5	11.0	9.5	14.0	12.0	19.0	17.0
26	18.5	16.5	10.5	8.5	10.5	9.0	10.0	8.5	13.5	11.5	19.0	15.5
27	19.0	16.5	10.0	8.0	10.0	8.0	10.5	9.5	12.0	11.0	19.5	15.5
28	19.0	16.5	10.5	9.0	9.0	7.5	11.5	9.5	12.0	11.0	20.0	16.0
29	19.0	16.5	11.0	9.5	9.0	8.5	12.0	10.0	12.5	11.0	21.0	16.5
30	17.5	15.5	10.5	10.0	10.0	8.5	11.5	9.5	---	---	19.0	17.0
31	15.5	14.5	---	---	10.5	9.0	11.0	9.5	---	---	19.5	15.5
MONTH	---	---	---	8.0	14.5	7.5	12.0	7.0	15.0	9.0	22.5	11.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	19.0	15.5	---	---	---	22.0	29.5	22.5	29.5	22.5	29.0	22.5
2	18.5	14.0	---	---	27.5	---	30.0	23.0	28.5	22.0	28.0	22.0
3	20.5	15.5	---	---	27.0	22.5	30.0	23.5	28.5	21.5	24.5	19.5
4	20.5	16.5	---	---	27.5	22.0	---	23.5	29.0	22.5	25.5	19.5
5	20.5	16.5	---	---	27.5	22.0	---	---	29.0	22.0	26.5	20.5
6	20.0	16.0	17.5	---	27.5	22.5	---	---	28.0	21.0	27.0	22.0
7	21.0	16.0	17.0	16.0	27.0	22.0	31.0	---	29.0	21.5	27.5	22.5
8	22.0	17.0	17.5	15.5	26.0	20.5	30.0	23.0	30.5	23.0	28.0	22.5
9	23.0	18.0	17.0	16.0	26.5	20.0	29.5	22.5	29.0	23.5	27.5	22.0
10	23.0	18.5	17.0	16.0	27.0	21.0	29.5	21.5	29.5	23.0	27.0	21.5
11	23.0	18.5	16.5	15.5	27.0	21.0	29.5	21.5	30.0	23.0	26.5	21.5
12	23.0	19.0	17.0	15.5	26.5	21.5	30.0	22.5	30.5	24.5	26.5	21.5
13	22.0	19.0	18.5	16.0	27.5	22.5	29.5	23.0	30.0	23.5	25.5	20.5
14	20.5	17.5	20.5	17.0	28.0	23.0	29.5	22.0	29.0	23.0	---	20.5
15	18.5	17.0	21.5	18.0	28.5	23.5	29.5	22.0	28.0	22.0	---	---
16	18.5	15.5	22.5	18.5	30.0	23.5	29.0	22.5	28.5	23.0	---	---
17	17.5	15.5	22.5	19.0	29.0	23.5	29.5	22.5	29.0	23.0	---	---
18	16.5	14.5	22.5	19.0	28.0	---	30.0	23.5	30.0	---	---	---
19	17.5	15.0	23.0	19.0	28.5	22.0	30.0	24.0	30.0	24.5	---	---
20	18.5	16.0	23.5	19.0	29.0	22.5	30.5	24.0	29.0	24.0	---	---
21	19.0	16.0	23.5	19.0	29.5	22.5	31.0	23.0	28.5	24.0	---	---
22	18.5	15.5	24.0	19.5	29.0	23.5	31.5	24.0	26.5	23.5	22.5	18.0
23	19.5	16.0	24.0	19.5	28.5	23.0	30.5	23.5	27.0	22.5	23.0	19.0
24	19.0	16.5	24.0	20.0	28.5	22.0	30.5	23.5	27.5	22.0	23.5	19.5
25	---	17.0	25.0	20.0	28.5	21.5	30.5	23.0	27.5	22.0	24.0	19.5
26	---	---	25.5	20.5	29.0	22.0	31.0	23.5	27.0	22.0	23.5	19.0
27	---	---	25.5	22.0	29.0	21.5	31.0	24.0	27.0	21.5	23.5	19.5
28	---	---	24.0	21.5	30.0	23.0	30.5	23.0	28.5	21.5	23.0	19.0
29	---	---	24.5	20.0	29.5	23.0	30.0	22.5	28.0	22.5	23.0	18.5
30	---	---	26.0	20.5	29.5	22.5	30.0	22.5	28.5	22.5	22.5	18.0
31	---	---	26.5	22.0	---	---	30.0	22.5	28.0	22.0	---	---
MONTH	---	---	---	---	---	---	---	---	30.5	---	---	---

## 11273500 MERCED RIVER AT RIVER ROAD BRIDGE, NEAR NEWMAN, CA—Continued

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)
OCT						
09...SS	1430	e143	22.0	93	31	e12
DEC						
17...SS	1350	e250	13.5	84	6	e4.0
JAN						
22...SS	1200	e254	9.5	64	7	e4.8
MAR						
26...SS	1200	e260	17.5	91	24	e17
APR						
30...SS	1200	e712	17.5	82	22	e42
MAY						
26...SS	1340	e225	24.0	90	15	e9.1
JUN						
29...SS	1330	e114	27.5	89	9	e2.8
AUG						
03...SS	1530	e104	27.5	91	18	e5.0

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DATE	TIME	Depth at sample loca- tion, feet (81903)	Specif. conduc- tance, wat unf us/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Loca- tion in X-sect. looking downstrm ft from l bank (00009)
APR					
08...*	0743	.80	197	17.2	6.00
08...*	0744	1.82	197	17.2	18.0
08...*	0745	1.93	196	17.2	30.0
08...*	0746	1.78	196	17.2	42.0
08...*	0747	1.42	196	17.2	54.0
08...*	0748	1.46	196	17.2	66.0
08...*	0749	1.20	196	17.2	78.0
08...*	0750	1.20	196	17.2	90.0
08...*	0751	1.52	196	17.2	102
08...*	0752	.55	196	17.2	114
SEP					
08...*	1637	.72	331	27.7	5.55
08...*	1638	1.43	332	27.7	16.6
08...*	1639	.88	333	27.7	27.8
08...*	1640	1.50	333	27.7	38.9
08...*	1641	1.61	333	27.7	50.0
08...*	1642	1.53	333	27.7	61.0
08...*	1643	1.08	333	27.7	72.2
08...*	1644	.54	333	27.7	83.2
08...*	1645	.40	333	27.6	94.3
08...*	1646	.48	331	27.6	105

SS Suspended sediment data determined from a sample collected and processed according to National Water Quality Assessment (NAWQA) protocol.

e Estimated.

\* Estimated discharge at time of cross-sectional measurement: Apr. 8, 200 ft<sup>3</sup>/s; Sept. 8, 89 ft<sup>3</sup>/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<sup>2</sup>.

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 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 (river only), 36,200 ft<sup>3</sup>/s, Jan. 28, 1997, elevation, 66.14 ft; minimum daily, 15 ft<sup>3</sup>/s, Aug. 9, 10, 1924. Maximum discharge (including flow in Merced River Slough in water years 1938–43), 33,000 ft<sup>3</sup>/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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	359	636	596	964	799	2590	757	1150	489	287	292	272
2	360	668	593	1000	817	2250	682	1320	497	287	300	256
3	371	695	578	1050	841	2050	641	1550	478	309	336	263
4	396	704	576	1150	910	2010	630	1800	442	327	354	284
5	429	737	586	1140	966	1890	650	1750	417	362	330	303
6	453	735	589	1090	974	1770	607	1730	428	356	311	344
7	444	739	584	1060	959	1670	559	1720	438	331	328	364
8	427	745	579	1050	919	1580	544	1710	412	307	321	331
9	438	751	561	1020	883	1520	521	1710	401	305	324	293
10	437	749	574	983	852	1470	524	1770	397	313	335	297
11	450	742	603	946	854	1410	494	1770	386	329	323	290
12	482	734	611	922	844	1330	530	1640	377	352	308	271
13	490	714	597	899	825	1240	609	1300	394	371	298	304
14	486	704	612	887	824	1200	690	958	409	329	306	320
15	486	713	632	861	816	1140	695	807	401	316	308	303
16	463	716	636	849	827	1090	703	724	376	308	319	302
17	469	713	638	844	852	1040	749	704	331	312	352	296
18	511	723	625	839	911	982	777	667	306	329	356	284
19	606	729	631	825	989	960	839	617	328	343	352	299
20	792	721	658	814	1250	967	856	573	352	362	546	348
21	848	725	692	806	1350	998	863	525	346	340	579	374
22	869	730	712	797	1360	981	855	494	341	321	617	364
23	947	716	726	796	1300	1000	837	495	331	315	656	316
24	1000	696	717	805	1240	955	918	488	294	329	622	295
25	884	671	748	812	1250	901	1070	484	285	321	590	272
26	820	662	783	814	1450	889	1160	536	292	317	578	278
27	743	644	817	816	1980	882	1100	570	312	289	547	292
28	683	637	820	804	2470	893	1090	525	341	267	510	281
29	648	624	821	812	2680	903	1080	503	311	262	525	266
30	619	602	879	817	---	841	1070	500	303	262	521	254
31	598	---	921	804	---	791	---	500	---	277	464	---
TOTAL	18008	21075	20695	28076	32992	40193	23100	31590	11215	9835	12908	9016
MEAN	581	702	668	906	1138	1297	770	1019	374	317	416	301
MAX	1000	751	921	1150	2680	2590	1160	1800	497	371	656	374
MIN	359	602	561	796	799	791	494	484	285	262	292	254
AC-FT	35720	41800	41050	55690	65440	79720	45820	62660	22240	19510	25600	17880

## 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)

	1938	1939	1940	1941	1942	1943	1938	1939	1940	1941	1942	1943
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 - 2004, BY WATER YEAR (WY)

	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	707	679	1188	2283	3119	3010	2832	2710	2078	961	510	604																																																	
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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1944 - 2004

ANNUAL TOTAL	240456	258703	
ANNUAL MEAN	659	707	1715
HIGHEST ANNUAL MEAN			11620 1983
LOWEST ANNUAL MEAN			200 1961
HIGHEST DAILY MEAN	1700	May 11 2680	Feb 29 36000 Jan 28 1997
LOWEST DAILY MEAN	228	Sep 18 254	Sep 30 20 Oct 26 1977
ANNUAL SEVEN-DAY MINIMUM	247	Sep 16 277	Sep 24 23 Oct 7 1977
MAXIMUM PEAK FLOW		2720	Feb 29 36200 Jan 28 1997
MAXIMUM PEAK STAGE		54.06	Feb 29 66.14 Jan 28 1997
INSTANTANEOUS LOW FLOW			15 Aug 9 1924
ANNUAL RUNOFF (AC-FT)	476900	513100	1242000
10 PERCENT EXCEEDS	1060	1170	3860
50 PERCENT EXCEEDS	648	634	606
90 PERCENT EXCEEDS	324	305	225

## 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<sup>2</sup>.

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<sup>3</sup>/s, Mar. 10, 1995, gage height, 9.51 ft, from rating curve extended above 4,000 ft<sup>3</sup>/s, on basis of critical depth measurement; no flow for all or part of each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 25	1900	2,990	6.11

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## 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	32	0.10	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	112	0.00	27	0.04	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	24	0.88	18	0.01	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	9.7	8.9	14	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	3.9	5.5	10	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	1.6	3.1	8.0	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.73	2.0	6.6	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.15	1.3	5.7	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	1.00	4.9	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.64	4.1	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.43	3.4	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.23	2.8	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.07	2.5	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	2.0	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	1.7	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.07	1.5	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	1.1	1.4	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	7.2	1.5	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	41	1.2	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	22	0.91	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	13	0.77	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	9.4	0.71	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	6.8	0.58	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	4.5	0.38	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	517	0.32	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	538	0.28	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	175	0.22	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	88	0.27	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	48	0.22	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.18	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.15	---	0.00	---	0.00	---	---
TOTAL	0.00	0.00	0.00	152.08	1495.12	153.29	0.15	0.00	0.00	0.00	0.00	0.00
MEAN	0.00	0.00	0.00	4.91	51.6	4.94	0.01	0.00	0.00	0.00	0.00	0.00
MAX	0.00	0.00	0.00	112	538	32	0.10	0.00	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	302	2970	304	0.3	0.00	0.00	0.00	0.00	0.00



## 11274500 ORESTIMBA CREEK NEAR NEWMAN, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.00	0.87	12.1	44.1	84.1	46.9	21.1	3.20	0.65	0.12	0.00	0.00
MAX	0.00	31.0	181	432	818	345	362	46.9	15.1	5.32	0.05	0.00
(WY)	1933	1951	1956	1997	1998	1995	1958	1983	1941	1941	1958	1932
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
(WY)	1933	1933	1933	1936	1935	1933	1933	1933	1932	1932	1932	1932

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1932 - 2004	
ANNUAL TOTAL	852.83		1800.64			
ANNUAL MEAN	2.34		4.92		17.4	
HIGHEST ANNUAL MEAN					89.4 1983	
LOWEST ANNUAL MEAN					0.00 1947	
HIGHEST DAILY MEAN	101	Jan 1	538	Feb 26	4550	Feb 3 1998
LOWEST DAILY MEAN	0.00	May 15	0.00	Oct 1	0.00	May 9 1932
ANNUAL SEVEN-DAY MINIMUM	0.00	May 15	0.00	Oct 1	0.00	May 9 1932
MAXIMUM PEAK FLOW			2990	Feb 25	12000	Mar 10 1995
MAXIMUM PEAK STAGE			6.11	Feb 25	9.51	Mar 10 1995
ANNUAL RUNOFF (AC-FT)	1690		3570		12620	
10 PERCENT EXCEEDS	5.2		1.5		19	
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<sup>3</sup>/s, Mar. 10, 1995, gage height, 18.40 ft, from rating curve extended above 2,470 ft<sup>3</sup>/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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	41	0.00	23	12	48	4.5	6.8	7.7	14	13	3.4
2	1.4	49	0.00	43	12	72	3.5	4.6	8.3	15	12	2.3
3	1.5	40	0.00	18	2.5	101	6.0	4.6	9.4	15	12	2.4
4	4.0	20	0.04	15	0.54	75	3.5	4.6	9.4	12	11	2.5
5	21	27	0.38	10	0.13	67	2.6	5.0	9.7	11	12	3.1
6	30	28	0.83	16	0.00	49	3.4	5.5	13	11	12	3.2
7	29	25	4.3	12	0.00	40	3.7	5.2	12	12	13	2.2
8	33	23	1.1	10	0.00	26	4.1	5.0	12	12	8.7	3.1
9	39	8.1	0.48	9.8	5.2	16	4.0	8.2	11	12	8.1	2.9
10	32	14	4.1	5.3	4.4	5.8	5.1	7.4	12	12	11	2.2
11	38	15	1.3	8.4	6.6	3.8	7.4	6.1	9.1	12	11	1.0
12	24	6.7	39	11	12	1.9	8.1	4.1	7.4	12	9.4	1.1
13	36	2.2	23	0.36	11	1.4	6.2	5.1	8.1	13	10	2.8
14	37	2.2	2.2	7.3	8.3	1.9	4.5	6.5	10	12	9.9	3.4
15	24	3.1	0.44	12	7.6	12	4.9	6.7	12	12	7.7	3.5
16	20	6.3	0.39	4.7	5.8	11	5.7	9.0	12	13	5.0	3.2
17	82	6.6	0.29	1.7	14	16	7.1	9.9	13	14	7.3	1.8
18	40	12	0.04	0.49	32	12	7.2	8.7	13	12	6.2	1.7
19	34	0.30	0.00	0.32	31	8.4	9.1	11	14	12	5.0	1.5
20	43	0.00	0.00	0.70	33	7.0	8.3	11	12	14	5.2	1.2
21	36	0.00	0.00	19	36	7.1	6.8	13	10	12	7.6	1.6
22	56	2.1	0.00	13	29	8.7	7.0	12	11	13	9.4	2.6
23	70	9.8	0.00	4.9	13	6.3	8.8	14	13	14	8.4	2.6
24	80	0.33	0.00	2.1	6.8	7.3	11	10	15	15	6.2	2.9
25	72	0.24	0.00	3.3	33	5.7	11	7.9	13	16	5.5	3.6
26	46	0.49	0.00	8.1	621	3.5	9.2	6.7	11	15	3.4	1.1
27	35	0.32	0.00	20	162	5.1	9.3	5.9	12	15	2.8	4.3
28	30	0.00	0.00	23	70	4.4	7.7	6.1	10	15	1.3	5.8
29	30	0.00	0.12	9.9	55	5.4	6.2	6.9	13	13	1.4	3.9
30	20	0.00	2.9	4.2	---	6.7	8.3	7.0	15	9.1	1.8	4.1
31	24	---	1.6	8.2	---	5.5	---	6.0	---	11	3.2	---
TOTAL	1070.9	342.78	82.51	324.77	1223.87	640.9	194.2	230.5	338.1	400.1	240.5	81.0
MEAN	34.5	11.4	2.66	10.5	42.2	20.7	6.47	7.44	11.3	12.9	7.76	2.70
MAX	82	49	39	43	621	101	11	14	15	16	13	5.8
MIN	1.4	0.00	0.00	0.32	0.00	1.4	2.6	4.1	7.4	9.1	1.3	1.0
AC-FT	2120	680	164	644	2430	1270	385	457	671	794	477	161

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2004, BY WATER YEAR (WY)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	30.2	29.5	24.3	93.1	141	79.6	49.4	47.1	24.0	27.4	21.2	13.4	
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	6.47	7.44	7.38	12.9	7.76	2.70	
(WY)	1995	1995	1995	2003	1995	2003	2004	2004	1992	2004	2004	2004	

## SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1992 - 2004	
ANNUAL TOTAL	4703.63		5170.13			
ANNUAL MEAN	12.9		14.1		48.5	
HIGHEST ANNUAL MEAN					134	1998
LOWEST ANNUAL MEAN					14.1	2004
HIGHEST DAILY MEAN	83	Jan 1	621	Feb 26	2250	Feb 3 1998
LOWEST DAILY MEAN	0.00	Jan 8	0.00	Nov 20	0.00	Dec 18 1992
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 17	0.00	Dec 19	0.00	Dec 18 1992
MAXIMUM PEAK FLOW			1020	Feb 26	2650	Mar 10 1995
MAXIMUM PEAK STAGE			11.88	Feb 26	19.60	Jan 23 1997
ANNUAL RUNOFF (AC-FT)	9330		10250		35100	
10 PERCENT EXCEEDS	32		32		100	
50 PERCENT EXCEEDS	8.7		8.1		17	
90 PERCENT EXCEEDS	0.31		0.49		2.2	

## 11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1992 to current year.

CHEMICAL DATA: Water years 1992–95, 1997–99, 2001 to current year.

SPECIFIC CONDUCTANCE: Water years 1992 to current year.

WATER TEMPERATURE: Water years 1992 to current year.

SEDIMENT DATA: Water years 1992–95, 1997 to current year.

PERIOD OF DAILY RECORD.—

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. 1–3, Oct. 17 to Nov. 3, Mar. 6 to Apr. 6, May 27 to June 21, July 23 to Aug. 3, which are rated good; Oct. 4–7, Nov. 4–16, which are rated fair; and Nov. 17, which is rated poor. Water-temperature records are rated excellent except for Aug. 30 to Sept. 7, which are rated good. 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, 1,620 microsiemens, Dec. 9; minimum recorded, 104 microsiemens, Dec. 30.

WATER TEMPERATURE: Maximum recorded, 28.5°C, July 6; minimum recorded, 5.0°C, Nov. 26.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Alkalinity, wat fltrd Gran, field, mg/L as CaCO3 (29802)	Chloride, water, fltrd, mg/L (00940)
OCT									
09...	1400	43	757	8.4	8.0	566	21.0	76.0	95.4
DEC									
17...	1320	.54	767	11.1	7.8	896	7.5	156	131
JAN									
22...	1250	14	770	9.8	7.7	670	8.0	104	96.0
MAR									
26...	1240	3.5	769	11.0	7.8	793	15.0	--	86.9
APR									
30...	1120	7.9	766	6.8	7.9	816	17.0	--	88.8
MAY									
26...	1250	7.1	766	9.5	7.9	712	21.0	--	68.3
JUN									
29...	1300	11	762	10.2	7.8	695	23.5	--	83.8
AUG									
03...	1500	11	764	9.1	8.1	708	24.0	--	83.9

Date	Sulfate water, fltrd, mg/L (00945)	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)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L (00665)	Total nitrogen, wat unfltrd, by analysis, mg/L (62855)	Total carbon, carbon, suspnd total, mg/L (00694)
OCT									
09...	34.0	<.04	.54	.009	.41	.043	.29	1.16	3.7
DEC									
17...	93.7	<.04	1.79	.011	.09	.029	.070	2.58	.5
JAN									
22...	75.8	.09	1.56	.030	.16	.043	.137	2.11	.9
MAR									
26...	114	<.04	3.90	.013	.09	.092	.162	4.19	.6
APR									
30...	95.0	<.04	3.87	.026	.29	.110	.30	4.43	2.3
MAY									
26...	87.3	e.02	3.75	.062	.48	.155	.50	4.29	3.1
JUN									
29...	114	<.04	4.87	.029	.72	.008	.42	5.78	6.2
AUG									
03...	113	.15	4.96	.070	.42	.071	.30	5.81	5.9

< 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 2003 TO SEPTEMBER 2004

Date	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	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)
OCT 09...	<.1	3.6	6.0	<.006	<.006	<.006	<.004	<.005	<.007
DEC 17...	<.1	.5	3.8	<.006	<.006	<.006	<.005	<.005	e.004
JAN 22...	<.1	.9	5.5	<.006	e.004	<.006	<.005	<.005	.008
MAR 26...	<.1	.6	4.9	<.006	<.006	<.006	<.005	<.005	.007
APR 30...	<.1	2.2	3.8	<.006	e.005	<.006	<.005	<.005	e.007
MAY 26...	<.1	3.1	5.5	<.006	<.006	<.006	<.005	<.005	<.007
JUN 29...	.3	5.9	3.4	<.006	e.009	<.006	<.005	<.005	e.031
AUG 03...	<.1	5.8	4.8	<.006	<.006	<.006	<.005	<.005	.018
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)
OCT 09...	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
DEC 17...	<.050	<.010	<.004	<.041	<.020	e.004	<.006	<.018	.003
JAN 22...	<.050	<.010	<.004	<.041	<.020	.005	<.006	<.018	.005
MAR 26...	<.050	<.010	<.004	<.041	e.029	e.007	<.006	<.018	.004
APR 30...	<.050	<.010	<.004	<.041	e.087	.006	<.006	<.018	<.003
MAY 26...	<.050	<.010	<.004	<.041	e.028	<.005	<.006	<.018	<.003
JUN 29...	<.050	<.010	<.004	<.041	<.020	<.020	<.006	<.018	<.003
AUG 03...	<.050	<.010	<.004	<.041	<.020	.009	<.006	<.018	<.003
Date	Desulf- inyl fipro- nil, water, fltrd, ug/L (62170)	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)	Desulf- inyl- fipro- nil amide, wat flt ug/L (62169)	Fipro- nil sulfide water, fltrd, ug/L (62167)
OCT 09...	<.004	<.005	<.005	<.02	.008	<.009	<.005	<.009	<.005
DEC 17...	<.012	<.005	<.009	<.02	<.004	<.009	<.005	<.029	<.013
JAN 22...	<.012	.029	<.009	<.02	e.003	<.009	<.005	<.029	<.013
MAR 26...	<.012	.006	<.009	<.02	<.004	<.009	1.10	<.029	<.013
APR 30...	<.012	<.005	e.007	<.02	.020	<.009	.013	<.029	<.013
MAY 26...	<.012	<.005	e.008	<.02	.049	<.009	.044	<.029	<.013
JUN 29...	<.012	<.005	e.013	<.02	e.027	e.768	e.014	<.029	<.013
AUG 03...	<.012	.025	.011	<.02	e.004	e.006	<.005	<.029	<.013

&lt; 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 2003 TO SEPTEMBER 2004

Date	Fipro- nil sulfone water, fltrd, ug/L (62168)	Fipro- nil, water, fltrd, ug/L (62166)	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)	Metri- buzin, water, fltrd, ug/L (82630)
	OCT 09...	<.005	<.007	<.003	<.004	<.035	<.027	<.006	e.011
DEC 17...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.036	<.006
JAN 22...	<.024	<.016	<.003	<.004	<.035	<.027	<.040	.013	.006
MAR 26...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.029	.012
APR 30...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.130	.009
MAY 26...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	1.40	.013
JUN 29...	<.024	<.016	<.003	e.011	<.035	<.027	e.076	e2.98	e.016
AUG 03...	<.024	<.016	<.003	<.004	<.035	<.027	<.046	.177	<.006
Date	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)	Propy- zamide, water, fltrd 0.7u GF ug/L (82676)
OCT 09...	<.002	<.007	.007	<.010	<.004	<.022	<.011	<.01	<.004
DEC 17...	<.003	<.007	.004	<.010	<.004	e.009	<.011	<.02	<.004
JAN 22...	<.003	<.007	<.005	<.010	<.004	<.022	<.011	.02	<.004
MAR 26...	<.003	<.007	.004	<.010	<.004	<.022	<.011	<.01	.010
APR 30...	<.003	<.007	.007	<.010	<.004	e.014	<.011	<.01	<.004
MAY 26...	<.003	<.007	.006	<.010	<.004	.597	<.011	<.01	<.004
JUN 29...	e.007	<.007	e.011	<.010	<.004	e.541	<.011	<.01	<.004
AUG 03...	<.003	<.007	.009	<.010	<.004	.235	<.011	<.01	<.004

< 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 2003 TO SEPTEMBER 2004

Date	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)
OCT 09...	<.010	<.011	<.02	<.005	<.02
DEC 17...	<.025	<.011	<.02	.023	<.02
JAN 22...	<.025	<.011	<.02	.080	<.02
MAR 26...	<.025	<.011	<.02	.114	<.02
APR 30...	<.025	<.011	<.02	.032	<.02
MAY 26...	<.025	<.011	<.04	.022	<.02
JUN 29...	<.025	<.011	<.05	e.021	<.02
AUG 03...	<.025	<.011	e3.54	.009	<.02

Date	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)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)
OCT 09...	e.014	<.02	<.005	<.002	e.006
DEC 17...	<.034	<.02	<.010	<.002	e.008
JAN 22...	<.034	<.02	<.010	<.002	e.006
MAR 26...	<.034	<.02	<.010	<.002	e.008
APR 30...	<.034	<.02	<.010	<.002	.018
MAY 26...	<.080	<.02	<.010	<.002	.036
JUN 29...	<.034	<.02	<.010	<.002	e.041
AUG 03...	<.034	<.02	<.010	<.002	.013

< 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 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	749	643	612	604	---	---	608	420	661	559	606	466
2	668	643	608	590	---	---	640	435	613	588	706	464
3	687	667	590	577	---	---	651	571	625	607	665	483
4	709	682	586	577	---	---	795	651	624	614	720	501
5	743	709	593	581	1310	1100	677	652	---	---	743	575
6	766	721	591	582	1110	908	670	615	---	---	649	520
7	724	571	583	572	1460	890	691	630	---	---	598	545
8	713	552	578	571	1600	1460	918	631	---	---	553	485
9	716	536	574	565	1620	1580	801	633	---	---	566	519
10	557	533	568	564	1580	1270	791	645	594	581	595	563
11	588	538	572	565	1290	1220	914	586	608	591	643	595
12	676	544	584	572	1220	667	876	605	826	593	658	630
13	650	536	599	583	863	701	724	717	817	623	653	629
14	615	550	615	598	857	823	---	---	709	623	660	627
15	609	579	620	602	864	825	730	619	717	617	627	545
16	611	593	609	600	861	837	669	627	637	607	683	558
17	611	603	616	605	873	853	657	630	682	637	703	643
18	607	603	814	611	---	---	676	656	848	635	688	663
19	612	602	830	812	---	---	703	605	654	633	685	665
20	625	608	---	---	---	---	751	681	651	591	717	683
21	652	625	---	---	---	---	730	652	594	579	739	714
22	656	638	---	---	---	---	693	641	621	564	745	735
23	638	615	1440	782	---	---	684	631	663	621	737	720
24	616	603	1200	1170	---	---	632	608	683	662	720	700
25	632	602	---	---	---	---	621	604	686	469	702	698
26	615	599	1180	919	---	---	660	606	485	237	710	700
27	625	612	919	789	---	---	637	598	322	272	740	709
28	625	614	---	---	---	---	674	555	398	307	765	740
29	647	623	---	---	---	---	555	539	531	352	771	757
30	645	635	---	---	511	104	558	536	---	---	764	754
31	637	611	---	---	498	458	619	558	---	---	775	761
MONTH	766	533	---	---	---	---	---	---	---	---	775	464
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	772	766	707	685	1020	906	777	728	772	710	1030	1000
2	774	763	720	707	931	840	744	675	805	711	1020	998
3	781	768	746	719	920	779	771	694	855	798	1010	1000
4	789	776	775	746	879	784	804	728	935	678	1020	1000
5	797	786	796	774	874	713	836	759	919	716	1020	977
6	871	787	808	794	814	754	970	799	872	650	977	941
7	866	733	811	801	777	754	968	808	833	639	992	957
8	737	674	811	800	805	777	906	678	862	606	991	945
9	737	681	812	734	823	805	751	574	895	771	991	948
10	715	681	786	702	831	819	745	564	934	773	992	856
11	756	715	859	774	834	801	746	630	941	732	870	850
12	782	754	899	859	801	772	789	680	828	753	976	870
13	755	633	917	788	799	771	843	748	784	689	946	907
14	651	615	788	673	803	734	800	684	775	723	1070	908
15	681	651	791	685	735	701	771	638	834	735	1140	897
16	668	655	822	779	723	704	718	646	835	814	1140	1010
17	655	638	871	779	727	686	723	575	835	726	1080	971
18	663	643	856	800	720	695	709	634	732	693	1100	1040
19	679	662	856	770	742	719	717	645	747	693	1150	1060
20	683	677	898	798	745	720	769	608	799	747	1150	1090
21	697	679	917	819	937	726	779	625	838	799	1110	1000
22	716	696	834	747	934	612	744	663	855	838	1000	876
23	716	682	827	718	920	680	807	690	851	816	963	847
24	691	681	721	686	---	---	821	741	819	789	981	883
25	714	687	731	644	820	718	805	700	861	819	957	878
26	741	714	744	689	828	750	793	687	892	861	968	929
27	740	692	766	716	850	694	785	650	918	892	985	878
28	701	677	824	747	838	709	768	673	937	918	985	773
29	677	664	924	799	828	732	751	678	961	937	773	622
30	685	665	935	876	820	761	776	714	1010	961	657	627
31	---	---	997	842	---	---	798	739	1030	1010	---	---
MONTH	871	615	997	644	---	---	970	564	1030	606	1150	622

## 11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.0	17.5	15.5	14.0	---	---	9.5	8.5	9.5	8.0	13.5	12.0
2	20.0	17.5	14.5	13.0	---	---	9.5	8.5	9.5	9.0	14.5	11.0
3	19.5	16.5	14.0	13.0	---	---	9.0	6.5	10.0	8.5	13.5	11.5
4	20.0	18.0	13.5	12.0	---	---	7.5	5.5	11.5	9.5	14.5	12.0
5	21.0	18.0	14.0	12.0	12.5	11.0	7.0	6.0	---	---	15.5	12.5
6	22.0	19.5	15.0	13.0	12.5	11.5	8.0	6.5	---	---	16.5	13.5
7	22.5	20.0	15.5	14.0	13.0	11.5	9.0	7.5	---	---	17.5	14.0
8	22.5	20.5	15.0	14.0	11.5	9.0	10.0	9.0	---	---	18.5	15.5
9	22.0	20.0	15.0	14.0	9.0	8.0	10.5	10.0	---	---	19.0	16.0
10	21.0	18.0	14.5	13.5	10.0	8.5	11.5	10.0	10.0	7.5	19.0	16.0
11	19.0	16.5	14.5	13.0	10.5	9.0	10.5	9.5	10.5	7.0	18.5	14.5
12	18.5	16.5	13.5	12.0	11.0	8.5	11.0	10.0	11.5	8.5	18.5	14.5
13	18.0	16.5	13.5	12.0	11.5	10.5	10.0	9.0	11.0	9.5	19.0	14.5
14	18.5	16.0	13.0	12.0	11.5	10.0	---	---	12.0	9.5	19.5	15.0
15	19.0	16.5	13.0	12.0	10.0	8.0	10.0	9.0	13.0	10.5	20.0	17.0
16	19.5	15.5	12.5	11.0	8.5	6.5	9.5	9.0	12.5	12.0	20.0	16.5
17	20.5	18.0	14.0	12.0	8.0	6.0	9.5	9.0	14.0	12.0	21.5	17.0
18	20.5	18.0	13.5	12.0	---	---	9.5	8.5	14.5	12.5	22.5	16.5
19	20.5	18.0	13.0	11.0	---	---	9.5	9.0	14.0	12.0	23.0	16.5
20	21.0	18.5	---	---	---	---	9.5	8.5	13.5	13.0	23.5	16.0
21	21.5	18.5	---	---	---	---	9.5	7.5	14.0	12.5	20.5	16.5
22	21.5	19.0	---	---	---	---	9.0	7.5	13.5	13.0	21.5	17.0
23	20.5	19.0	9.0	7.0	---	---	8.5	7.0	13.5	12.0	20.0	17.0
24	20.0	18.0	7.5	6.0	---	---	9.0	7.5	14.5	13.0	20.0	16.0
25	20.0	18.0	---	---	---	---	9.5	8.5	13.5	12.0	17.5	15.5
26	20.0	17.5	8.5	5.0	---	---	9.5	7.0	12.5	10.5	16.0	14.0
27	20.0	18.0	8.5	6.5	---	---	9.5	9.0	11.5	10.0	16.5	13.5
28	20.0	18.0	---	---	---	---	10.5	9.0	14.0	10.0	17.5	14.0
29	20.0	18.0	---	---	---	---	11.0	9.5	14.0	10.0	20.5	14.5
30	18.5	16.0	---	---	8.5	6.5	11.0	9.0	---	---	17.5	15.0
31	16.5	15.0	---	---	9.0	7.5	10.0	9.0	---	---	19.0	13.0
MONTH	22.5	15.0	---	---	---	---	---	---	---	---	23.5	11.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17.0	12.5	21.5	18.0	24.5	19.5	26.0	21.0	25.5	21.5	24.5	21.0
2	17.5	9.5	23.0	18.5	25.5	20.0	26.5	21.5	25.0	20.5	23.5	20.5
3	19.0	12.0	24.5	20.0	24.5	19.5	26.5	21.5	24.0	20.0	21.5	17.5
4	17.5	13.5	24.5	21.0	24.5	19.0	28.0	22.5	24.5	21.0	23.5	18.5
5	17.5	13.5	23.5	19.5	25.0	19.0	28.0	23.0	23.5	21.5	24.0	19.0
6	16.5	13.0	22.0	18.5	25.0	20.0	28.5	23.0	24.5	20.0	24.5	19.5
7	20.0	13.5	21.5	18.0	24.0	20.0	28.0	22.5	24.5	21.0	24.0	20.5
8	21.0	14.5	21.5	17.5	22.5	18.5	25.0	23.0	26.0	22.5	23.0	20.0
9	21.0	15.0	21.5	17.5	21.5	19.0	25.5	22.0	26.0	22.0	23.0	20.5
10	21.0	16.0	20.0	17.0	22.5	19.5	25.0	21.5	26.0	22.0	23.0	20.5
11	21.0	16.0	20.0	17.0	24.0	19.5	25.5	21.5	26.0	22.5	22.5	19.0
12	21.5	17.5	20.0	16.0	26.0	19.0	26.5	22.0	27.5	22.5	23.0	19.5
13	20.5	15.0	21.0	16.0	26.0	19.0	25.5	21.0	26.0	22.0	23.0	18.0
14	18.0	15.5	21.5	17.5	25.5	21.0	25.0	21.0	25.0	22.0	21.5	17.5
15	19.0	15.0	22.0	18.0	26.0	22.0	25.5	20.5	23.5	21.5	20.5	17.5
16	20.5	14.0	23.0	18.0	26.0	22.0	26.5	21.5	24.0	21.5	21.5	19.0
17	17.0	14.5	22.5	17.0	25.5	22.5	27.5	22.5	24.0	22.0	22.5	19.5
18	16.5	12.5	23.5	16.0	25.0	21.5	27.5	23.0	25.5	22.5	20.0	18.0
19	18.5	13.0	23.5	16.0	25.5	21.0	26.0	22.5	26.5	22.0	18.0	16.0
20	18.5	15.0	23.5	16.5	24.0	21.5	27.0	23.0	26.0	21.5	17.5	14.5
21	19.0	15.0	22.0	17.0	24.0	21.0	27.5	23.0	25.5	21.5	20.0	13.5
22	19.0	13.0	23.0	18.0	24.5	22.0	27.5	23.0	24.0	20.5	22.5	14.5
23	20.0	14.5	22.0	17.0	24.0	21.5	27.5	23.0	26.5	20.0	22.5	16.5
24	22.5	16.0	21.5	18.0	---	---	27.0	22.0	24.0	21.0	24.5	17.5
25	24.0	17.0	21.0	18.5	23.5	20.0	27.0	22.0	24.0	20.5	27.0	16.5
26	25.0	18.0	23.5	18.5	26.0	20.5	27.0	23.0	24.0	20.0	22.5	18.5
27	26.5	18.5	24.5	19.0	25.0	19.5	26.5	24.0	23.0	19.5	20.0	17.0
28	21.5	18.0	23.5	18.5	28.0	21.0	26.0	23.0	24.0	20.0	20.0	17.5
29	19.0	15.5	21.5	16.5	25.5	22.5	25.5	22.5	24.0	20.5	20.0	18.0
30	19.5	16.0	23.5	16.5	26.5	21.0	26.0	22.5	25.0	20.5	19.0	16.5
31	---	---	24.5	18.5	---	---	26.0	22.5	24.5	20.0	---	---
MONTH	26.5	9.5	24.5	16.0	---	---	28.5	20.5	27.5	19.5	27.0	13.5



## 11274538 ORESTIMBA CREEK AT RIVER ROAD, NEAR CROWS LANDING, CA—Continued

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sediment, sieve diameter, percent <.063mm (70331)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT						
09...SS	1400	43	21.0	95	263	31
DEC						
17...SS	1320	.38	7.5	78	8	<.01
JAN						
22...SS	1250	14	8.0	99	36	1.4
MAR						
26...SS	1240	2.3	15.0	98	33	.20
APR						
30...SS	1120	8.7	17.0	99	243	5.7
MAY						
26...SS	1250	7.2	21.0	100	323	6.3
JUN						
29...SS	1300	11	23.5	100	429	13
AUG						
03...SS	1500	11	24.0	98	215	6.4

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DATE	TIME	Depth at sample location, feet (81903)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Location in X-sect. looking dwnstrm ft from l bank (00009)
APR					
06...*	0925	.48	813	12.9	.90
06...*	0926	.75	813	12.9	2.70
06...*	0927	1.20	813	12.9	4.50
06...*	0928	1.57	813	12.9	6.30
06...*	0929	1.93	813	12.9	8.10
06...*	0930	1.84	813	12.9	9.90
06...*	0931	1.63	813	12.9	11.7
06...*	0932	1.42	813	12.9	13.5
06...*	0933	1.16	813	12.9	15.3
06...*	0934	.45	814	12.9	17.1
SEP					
07...*	1450	.50	948	23.2	.85
07...*	1451	.90	947	23.2	2.55
07...*	1452	.97	948	23.3	4.25
07...*	1453	1.45	947	23.3	5.95
07...*	1454	1.80	946	23.3	7.65
07...*	1455	1.78	947	23.3	9.35
07...*	1456	1.65	947	23.3	11.1
07...*	1457	1.48	946	23.3	12.8
07...*	1458	1.10	947	23.3	14.4
07...*	1459	.70	946	23.3	16.1

SS Suspended-sediment data determined from a sample collected and processed according to National Water-Quality Assessment (NAWQA) protocol.

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 6, 2.2 ft<sup>3</sup>/s; Sept. 7, 1.2 ft<sup>3</sup>/s.

## 11274550 SAN JOAQUIN RIVER NEAR CROWS LANDING, CA

LOCATION.—Lat 37°25'55", long 121°00'46", 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<sup>2</sup>.

## 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<sup>3</sup>/s, Jan. 28, 1997, gage height, 59.23 ft, from rating curve extended above 32,100 ft<sup>3</sup>/s; minimum daily, 257 ft<sup>3</sup>/s, Sept. 19, 2003.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	395	709	636	979	758	2650	854	1140	565	368	361	411
2	386	746	628	1070	778	2440	813	1260	525	348	385	318
3	417	779	619	1060	796	2200	747	1460	519	374	429	333
4	427	759	607	1130	842	2130	726	1690	472	409	419	344
5	489	777	617	1160	913	2020	736	1710	455	448	408	380
6	534	791	615	1120	939	1880	723	1700	482	441	379	398
7	529	790	620	1070	935	1760	663	1670	490	428	374	435
8	520	787	615	1040	903	1650	639	1670	482	410	404	403
9	556	782	601	1020	867	1560	604	1690	491	412	402	365
10	558	777	618	978	828	1500	611	1730	481	399	391	380
11	545	770	634	936	816	1440	613	1730	465	430	368	362
12	571	757	670	915	821	1400	656	1680	446	436	336	346
13	615	735	669	877	800	1280	665	1420	467	446	339	383
14	611	716	652	860	793	1230	736	1110	499	418	377	416
15	557	714	658	845	786	1220	750	912	482	385	405	378
16	518	727	673	816	788	1130	786	822	463	387	405	358
17	611	719	676	804	811	1100	832	786	407	397	418	355
18	620	727	673	797	889	1040	853	787	389	409	437	316
19	683	732	673	785	948	996	896	714	429	455	404	361
20	822	725	699	774	1160	988	924	676	443	440	513	447
21	900	726	715	780	1330	1030	924	608	438	414	593	464
22	931	730	742	767	1370	1050	938	581	430	421	634	432
23	1010	741	756	756	1320	1040	911	581	444	404	662	407
24	1080	713	759	760	1260	1030	956	573	396	410	669	383
25	1030	684	783	769	1270	973	1080	558	397	425	664	366
26	910	675	808	771	1890	975	1210	565	394	404	618	360
27	840	672	836	788	1990	984	1170	587	424	397	631	372
28	780	667	846	787	2310	e984	1120	584	453	350	597	374
29	750	658	841	770	2610	e977	1130	544	408	349	589	346
30	711	644	892	773	---	899	1140	556	384	338	609	293
31	690	---	924	770	---	875	---	578	---	344	564	---
TOTAL	20596	21929	21755	27527	32521	42431	25406	32672	13620	12496	14784	11286
MEAN	664	731	702	888	1121	1369	847	1054	454	403	477	376
MAX	1080	791	924	1160	2610	2650	1210	1730	565	455	669	464
MIN	386	644	601	756	758	875	604	544	384	338	336	293
AC-FT	40850	43500	43150	54600	64510	84160	50390	64800	27020	24790	29320	22390

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2004, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	
MEAN	1115	955	1338	3930	6181	3547	2735	2564	1895	1401	692	640
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	731	687	888	804	870	706	937	454	403	408	326
(WY)	2003	2004	2000	2004	2002	2002	2002	2002	2004	2004	2002	2003

## SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1996 - 2004
ANNUAL TOTAL	265541	277023	
ANNUAL MEAN	728	757	2228
HIGHEST ANNUAL MEAN			6775
LOWEST ANNUAL MEAN			744
HIGHEST DAILY MEAN	1760	May 11	37600
LOWEST DAILY MEAN	257	Sep 19	257
ANNUAL SEVEN-DAY MINIMUM	280	Sep 16	280
MAXIMUM PEAK FLOW		2680	Mar 1
MAXIMUM PEAK STAGE		43.19	Mar 1
ANNUAL RUNOFF (AC-FT)	526700	549500	1614000
10 PERCENT EXCEEDS	1130	1210	4910
50 PERCENT EXCEEDS	713	680	882
90 PERCENT EXCEEDS	375	385	459

e Estimated.

## 11274550 SAN JOAQUIN RIVER NEAR CROWS LANDING, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1996 to current year.

CHEMICAL DATA: Water years 2001–02.

SPECIFIC CONDUCTANCE: Water years 1996 to current year.

WATER TEMPERATURE: Water years 1996 to current year.

SEDIMENT DATA: Water years 2000–02.

PERIOD OF DAILY RECORD.—

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, 2, Nov. 14–18, Dec. 14 to Jan. 7, Feb. 7–19, Mar. 25–28, June 8–25, Aug. 17 to Sept. 9, which are rated good; and Oct. 3–8, which are rated fair. Water-temperature records are rated excellent except for Nov. 12–18, Dec. 18, Mar. 1–12, which are rated good; Dec. 19, 20, Mar. 13–23, which are rated fair; and Dec. 21 to Jan. 7, Mar. 24–29, which are rated poor. Interruptions in record were due to malfunction of the recording instrument. 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, 1,890 microsiemens, Mar. 19; minimum recorded, 443 microsiemens, May 11.

WATER TEMPERATURE: Maximum recorded, 30.0°C, July 5, 6, 22, 26; minimum recorded, 7.0°C, Jan. 5.

## SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

## WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	969	954	1020	952	1240	1230	1180	1130	1490	1450	947	735
2	1040	969	962	913	1250	1230	1180	1140	1470	1450	1080	947
3	1040	1020	924	897	1280	1240	1190	1130	1500	1450	1120	1080
4	1030	990	942	924	1280	1250	1140	1090	1450	1360	1160	1100
5	1030	961	956	920	1260	1210	1110	1090	1360	1270	1190	1160
6	978	948	972	909	1270	1210	1140	1110	1400	1310	1250	1190
7	1010	944	979	946	1290	1270	1180	1140	1450	1400	1340	1250
8	1040	968	1010	970	1320	1280	1220	1180	1490	1450	1370	1330
9	1040	990	1040	971	1310	1280	1260	1220	1520	1480	1380	1350
10	1010	914	1050	1020	1320	1290	1300	1260	1540	1520	1420	1370
11	1000	917	1050	1020	1300	1260	1320	1300	1550	1540	1490	1420
12	955	899	1080	1020	1280	1220	1360	1320	1620	1540	1550	1440
13	936	852	1100	1060	1320	1230	1380	1350	1650	1610	1610	1540
14	983	888	1110	1080	1330	1300	1380	1370	1670	1650	1610	1570
15	996	961	1090	1070	1320	1290	1430	1380	1650	1630	1670	1570
16	1060	982	1080	1050	1360	1270	1430	1410	1640	1590	1730	1670
17	1010	907	1100	1050	1290	1280	1420	1410	1600	1560	1790	1690
18	966	926	1080	1050	1300	1290	1440	1410	1570	1460	1850	1790
19	961	838	1080	1050	1310	1230	1470	1440	1470	1430	1890	1840
20	842	691	1090	1060	1260	1230	1470	1460	1430	1180	1850	1810
21	697	657	1090	1060	1240	1230	1480	1440	1330	1230	1830	1700
22	673	648	1070	1050	1260	1230	1480	1450	1280	1170	1720	1630
23	658	577	1090	1040	1270	1250	1480	1460	1410	1280	1660	1570
24	615	583	1140	1070	1310	1270	1480	1440	1440	1410	1710	1560
25	693	594	1180	1130	1320	1220	1460	1450	1440	1340	1740	1640
26	756	693	1170	1160	1220	1200	1480	1450	1360	877	1730	1570
27	843	751	1190	1160	1240	1200	1480	1460	1100	990	1630	1510
28	884	839	1200	1190	1270	1240	1500	1460	1020	690	---	1500
29	932	872	1230	1190	1260	1220	1510	1460	735	665	---	---
30	984	924	1240	1220	1220	1210	1470	1450	---	---	1700	1620
31	1010	983	---	---	1210	1180	1500	1450	---	---	1710	1600
MONTH	1060	577	1240	897	1360	1180	1510	1090	1670	665	---	---

## 11274550 SAN JOAQUIN RIVER NEAR CROWS LANDING, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	1750	1650	801	726	1390	1300	1600	1540	1600	1490	1400	1190
2	1800	1620	726	631	1510	1380	1680	1600	1520	1340	1590	1400
3	1790	1690	631	544	1510	1370	1680	1630	1420	1330	1700	1590
4	1740	1680	546	488	1600	1510	1640	1510	1400	1290	1720	1700
5	1730	1590	532	493	1620	1580	1520	1360	1400	1310	1720	1610
6	1670	1500	534	504	1620	1490	1370	1340	1470	1340	1610	1450
7	1800	1670	535	506	1540	1490	1420	1360	1500	1390	1450	1310
8	1870	1770	532	488	1530	1480	1490	1420	1390	1330	1310	1260
9	1880	1810	517	468	1500	1400	1530	1480	1360	1320	1460	1270
10	1880	1800	483	445	1470	1390	1610	1530	1330	1230	1450	1290
11	1850	1710	485	443	1420	1350	1620	1510	1280	1230	1380	1310
12	1810	1490	501	468	1480	1390	1530	1470	1380	1270	1500	1300
13	1610	1260	674	501	1480	1380	1490	1400	1430	1360	1480	1120
14	1260	1210	873	674	1420	1270	1470	1430	1440	1370	1180	1080
15	1320	1210	1040	873	1410	1270	1570	1470	1390	1270	1260	1080
16	1340	1140	1150	1020	1530	1410	1620	1570	1380	1210	1300	1150
17	1190	1090	1160	1070	1620	1520	1620	1570	1390	1220	1290	1190
18	1190	1070	1150	1040	1680	1620	1600	1550	1300	1210	1380	1280
19	1130	975	1180	1140	1700	1680	1550	1410	1330	1280	1390	1250
20	984	935	1190	1130	1700	1660	1440	1400	1340	1030	1290	1070
21	1030	972	1320	1180	1660	1540	1510	1420	1040	998	1080	993
22	1030	985	1430	1310	1560	1430	1520	1460	1020	955	1080	1020
23	1110	1030	1430	1350	1470	1420	1600	1500	990	937	1200	1040
24	1090	992	1440	1320	1530	1460	1620	1500	1020	952	1280	1190
25	997	819	1450	1230	---	1440	1560	1430	1090	1000	1300	1250
26	835	775	1390	1310	1670	1520	1530	1440	1170	1080	1310	1200
27	858	808	1320	1250	1550	1490	1590	1500	1170	1130	1290	1180
28	871	773	1320	1220	1490	1350	1700	1590	1220	1160	1220	1160
29	804	745	1400	1310	1450	1350	1690	1610	1230	1200	1330	1190
30	811	778	1400	1310	1560	1450	1690	1530	1220	1180	1460	1330
31	---	---	1370	1330	---	---	1590	1500	1220	1200	---	---
MONTH	1880	745	1450	443	---	1270	1700	1340	1600	937	1720	993

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	1	23.5	20.5	15.0	13.5	12.5	10.5	9.5	9.5	10.5	9.5	13.0
2	22.5	19.5	14.5	13.0	12.5	11.5	9.5	9.0	10.5	10.0	13.5	12.0
3	22.5	19.0	14.5	13.0	12.5	11.5	9.5	8.5	11.0	10.0	13.5	12.5
4	23.0	19.5	14.0	12.5	13.0	12.0	8.5	7.5	12.0	10.5	14.0	12.5
5	22.5	19.5	14.0	12.5	13.5	12.5	8.0	7.0	12.0	10.5	14.5	13.0
6	23.0	20.0	14.5	13.0	13.5	13.0	7.5	7.5	11.5	10.0	15.5	14.0
7	23.0	20.5	15.0	14.0	14.5	13.0	9.0	7.5	12.0	10.5	16.5	15.0
8	23.0	20.5	15.0	14.0	13.5	11.5	10.5	9.0	12.0	10.0	18.0	16.0
9	22.5	20.0	15.0	14.0	11.5	10.5	10.5	10.0	12.0	10.0	19.0	17.0
10	20.5	18.0	15.5	14.0	12.0	10.5	11.0	10.5	12.0	10.0	19.0	17.5
11	19.5	16.5	15.0	13.5	12.5	11.5	11.0	10.0	12.5	10.0	19.0	17.0
12	19.5	17.0	14.0	13.0	11.5	10.5	11.0	10.5	12.5	10.5	19.5	17.5
13	19.0	16.5	14.5	13.0	12.0	11.0	11.0	10.5	12.0	11.0	19.5	17.5
14	19.0	16.5	14.5	13.5	13.0	12.0	10.5	10.0	13.0	11.0	20.0	18.0
15	19.5	17.0	14.5	13.5	12.0	10.5	10.5	10.0	14.0	12.0	20.5	18.5
16	20.0	17.0	14.0	12.5	11.0	9.5	10.5	10.0	13.5	13.0	20.5	18.5
17	20.0	17.5	15.0	13.5	10.5	9.5	10.5	10.0	14.0	12.5	21.0	18.5
18	20.0	17.5	15.0	13.0	10.5	9.0	10.5	10.0	15.0	13.5	21.5	19.0
19	20.5	18.0	14.5	13.5	10.0	9.0	10.5	10.5	14.0	12.5	22.0	19.5
20	20.0	18.0	14.5	13.0	10.5	9.5	11.0	10.0	13.5	13.0	21.5	19.0
21	20.0	18.0	13.5	12.0	11.0	10.5	10.5	9.0	13.5	12.5	21.5	19.5
22	20.0	18.5	12.0	10.0	11.5	11.0	10.5	9.5	13.5	13.0	22.0	19.5
23	19.5	18.0	10.5	9.0	11.5	11.0	10.5	9.0	14.5	13.0	21.0	19.5
24	19.0	17.5	9.5	9.0	11.5	11.0	10.5	9.5	14.5	13.5	20.5	18.5
25	19.0	17.0	9.5	8.0	11.5	10.5	11.5	10.0	14.5	12.5	19.0	17.5
26	19.0	17.0	10.0	8.5	10.5	9.0	10.5	9.5	12.5	11.5	18.0	16.5
27	19.5	17.5	10.0	8.5	9.0	8.0	10.5	10.0	12.5	11.5	18.5	16.0
28	19.5	17.5	10.5	9.5	8.5	7.5	11.5	10.0	12.5	11.0	19.5	16.5
29	19.5	17.5	10.5	9.5	8.0	8.0	12.5	11.0	12.5	11.5	20.5	---
30	18.0	16.0	11.0	10.5	9.5	8.0	11.5	10.5	---	---	19.5	17.5
31	16.0	14.5	---	---	10.0	9.0	11.5	10.0	---	---	19.0	16.5
MONTH	23.5	14.5	15.5	8.0	14.5	7.5	12.5	7.0	15.0	9.5	22.0	---

## 11274550 SAN JOAQUIN RIVER NEAR CROWS LANDING, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	18.0	16.0	21.5	18.0	26.5	22.5	28.5	23.5	28.0	23.5	27.0	22.5
2	17.0	14.0	22.0	18.5	27.0	23.0	29.0	23.5	27.5	23.0	26.0	22.0
3	19.5	15.5	22.0	19.0	26.5	23.0	29.5	24.0	27.0	22.0	23.5	19.5
4	20.0	17.0	21.5	19.5	26.5	22.0	29.5	24.0	28.0	23.0	24.0	18.5
5	20.0	17.0	21.0	18.5	26.5	22.0	30.0	25.0	27.5	23.0	25.5	20.5
6	20.0	16.5	20.5	18.0	26.5	22.5	30.0	25.5	26.5	22.0	26.5	21.5
7	20.5	17.0	20.0	17.5	26.0	22.0	29.5	25.0	27.5	22.5	26.5	22.5
8	21.5	18.0	19.5	17.5	25.0	21.0	28.5	24.0	28.5	23.5	27.0	22.5
9	22.0	18.5	20.0	17.5	24.5	20.0	28.0	23.0	28.0	24.0	27.0	22.5
10	22.5	19.0	19.5	17.0	25.5	20.5	28.0	22.5	28.0	23.5	26.5	22.0
11	23.0	19.0	19.5	17.0	26.0	21.0	28.5	23.0	28.5	24.0	26.0	21.5
12	22.5	19.5	19.0	16.5	26.0	21.5	28.5	24.0	29.0	24.5	25.5	22.0
13	22.0	19.0	20.5	17.0	27.0	22.0	28.0	23.5	28.5	24.5	24.5	20.5
14	21.0	18.0	22.0	18.5	27.0	23.0	28.0	23.5	27.5	23.5	23.5	20.5
15	20.0	18.0	22.5	19.5	27.5	23.5	28.0	23.0	26.5	22.5	23.5	19.5
16	19.5	16.5	23.0	20.0	28.5	23.5	28.5	24.0	27.5	22.5	25.0	20.5
17	18.5	16.5	23.0	20.0	28.5	24.0	28.5	24.0	27.5	23.0	25.0	21.5
18	17.5	15.5	23.0	19.5	27.5	22.5	29.5	24.5	28.5	23.5	23.5	20.0
19	18.5	15.5	23.5	19.5	27.0	22.0	29.0	24.5	28.5	24.5	20.0	18.0
20	19.5	17.0	24.0	20.0	27.0	22.5	29.0	24.5	28.0	24.0	20.5	16.5
21	20.5	17.5	24.0	20.0	27.5	23.0	29.5	24.5	27.0	24.0	20.5	16.5
22	19.0	16.5	24.5	20.5	28.0	23.5	30.0	25.0	25.5	23.5	22.0	18.0
23	20.0	16.5	24.5	20.0	27.5	22.5	29.5	24.5	26.0	23.0	23.0	18.5
24	21.0	18.0	24.5	20.5	27.0	22.5	29.0	24.5	26.5	23.0	23.5	19.5
25	21.5	18.5	24.5	20.5	27.0	---	29.0	24.5	26.0	22.5	23.5	19.5
26	22.0	19.0	25.5	21.0	27.0	22.5	30.0	25.0	26.0	23.0	23.5	19.5
27	22.5	19.5	26.0	22.5	27.5	22.0	29.5	25.0	25.5	22.0	23.0	19.5
28	21.5	19.5	24.5	21.5	29.0	24.0	29.5	24.5	26.5	22.0	23.0	19.5
29	20.0	17.0	24.0	20.0	28.5	24.0	28.5	23.5	27.0	23.0	22.5	19.0
30	21.0	17.5	25.0	20.0	28.5	23.5	29.0	23.5	26.5	23.0	22.5	19.0
31	---	---	26.0	22.0	---	---	28.5	24.0	26.5	22.5	---	---
MONTH	23.0	14.0	26.0	16.5	29.0	---	30.0	22.5	29.0	22.0	27.0	16.5

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DATE	TIME	Depth at sample location, feet (81903)	Specif. conductance, uS/cm 25 degC (00095)	Temperature, deg C (00010)	Location in X-sect. looking dwnstrm ft from l bank (00009)
APR					
06...	1333	1.90	1610	18.6	8.10
06...	1335	3.00	1610	18.5	24.3
06...	1337	2.30	1620	18.5	40.5
06...	1339	4.80	1630	18.5	56.7
06...	1341	6.80	1630	18.5	72.9
06...	1344	4.60	1630	18.5	89.1
06...	1347	5.80	1640	18.6	105
06...	1350	7.20	1640	18.6	122
06...	1354	12.1	1640	18.6	138
06...	1357	8.00	1650	18.7	154
SEP					
09...	0917	.76	1330	23.1	9.20
09...	0918	1.97	1330	23.0	27.6
09...	0919	1.98	1330	23.0	46.0
09...	0920	2.08	1330	23.0	64.4
09...	0921	2.36	1330	23.0	82.8
09...	0922	2.60	1340	23.0	101
09...	0923	2.34	1340	23.0	120
09...	0924	2.14	1340	23.0	138
09...	0925	2.32	1340	22.9	156
09...	0926	1.78	1340	22.8	175

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 6, 713 ft<sup>3</sup>/s; Sept. 9, 382 ft<sup>3</sup>/s.

## 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<sup>2</sup>.

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<sup>3</sup>/s, which are poor. Some stock ponds and small diversions upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,270 ft<sup>3</sup>/s, Feb. 3, 1998, gage height, 14.92 ft, from rating curve extended above 3,400 ft<sup>3</sup>/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<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 1	1945	190	3.25	Feb. 25	1915	295	3.80

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	40	1.0	12	1.7	0.10	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	37	1.5	11	1.6	0.11	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	11	4.2	8.5	1.5	0.06	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	5.9	3.2	7.0	1.4	0.04	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	4.2	2.3	6.1	1.4	0.03	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	3.2	1.9	5.6	1.3	0.04	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	2.5	1.8	5.2	1.3	0.03	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	2.1	1.6	4.9	1.2	0.03	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	1.9	1.6	4.7	1.1	0.03	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	1.7	1.5	4.4	0.90	0.03	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	1.6	1.4	4.2	0.70	0.03	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	1.4	1.4	4.1	0.71	0.03	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	1.3	1.4	3.9	0.56	0.02	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	1.3	1.4	3.5	0.48	0.02	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	1.3	1.3	3.4	0.46	0.03	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	1.3	1.4	3.3	0.50	0.02	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	1.2	2.0	3.2	0.58	0.01	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	1.1	3.2	3.1	0.72	0.02	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	1.1	5.3	3.0	0.86	0.01	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	1.1	4.5	2.8	1.0	0.01	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	1.0	3.7	2.6	0.86	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	1.0	3.4	2.4	0.69	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	1.0	3.1	2.4	0.45	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	1.2	2.5	2.2	0.34	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	1.3	71	2.0	0.26	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	1.1	143	2.2	0.24	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.99	52	2.2	0.18	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	1.0	26	1.9	0.13	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	1.0	16	1.8	0.08	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	7.2	1.0	---	1.7	0.06	0.00	0.00	0.00	0.00	0.00
31	0.00	---	4.4	1.0	---	1.8	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	11.60	133.79	364.6	127.1	23.26	0.70	0.00	0.00	0.00	0.00
MEAN	0.00	0.00	0.37	4.32	12.6	4.10	0.78	0.02	0.00	0.00	0.00	0.00
MAX	0.00	0.00	7.2	40	143	12	1.7	0.11	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.99	1.0	1.7	0.06	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	23	265	723	252	46	1.4	0.00	0.00	0.00	0.00

## 11274630 DEL PUERTO CREEK NEAR PATTERSON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.13	0.94	4.03	18.0	33.0	23.9	8.83	3.78	1.75	0.33	0.09	0.17
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	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1966	1967	1969	1977	1977	1977	1990	1992	1966	1965	1965	1965

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1965 - 2004	
ANNUAL TOTAL	550.75		661.05			
ANNUAL MEAN	1.51		1.81		7.79	
HIGHEST ANNUAL MEAN					47.7	
LOWEST ANNUAL MEAN					0.03	
HIGHEST DAILY MEAN	39	Jan 1	143	Feb 26	1870	Feb 3 1998
LOWEST DAILY MEAN	0.00	Jul 4	0.00	Oct 1	0.00	Jul 1 1965
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 4	0.00	Oct 1	0.00	Jul 1 1965
MAXIMUM PEAK FLOW			295	Feb 25	5270	Feb 3 1998
MAXIMUM PEAK STAGE			3.80	Feb 25	14.92	Feb 3 1998
ANNUAL RUNOFF (AC-FT)	1090		1310		5640	
10 PERCENT EXCEEDS	4.0		3.2		13	
50 PERCENT EXCEEDS	0.02		0.00		0.13	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

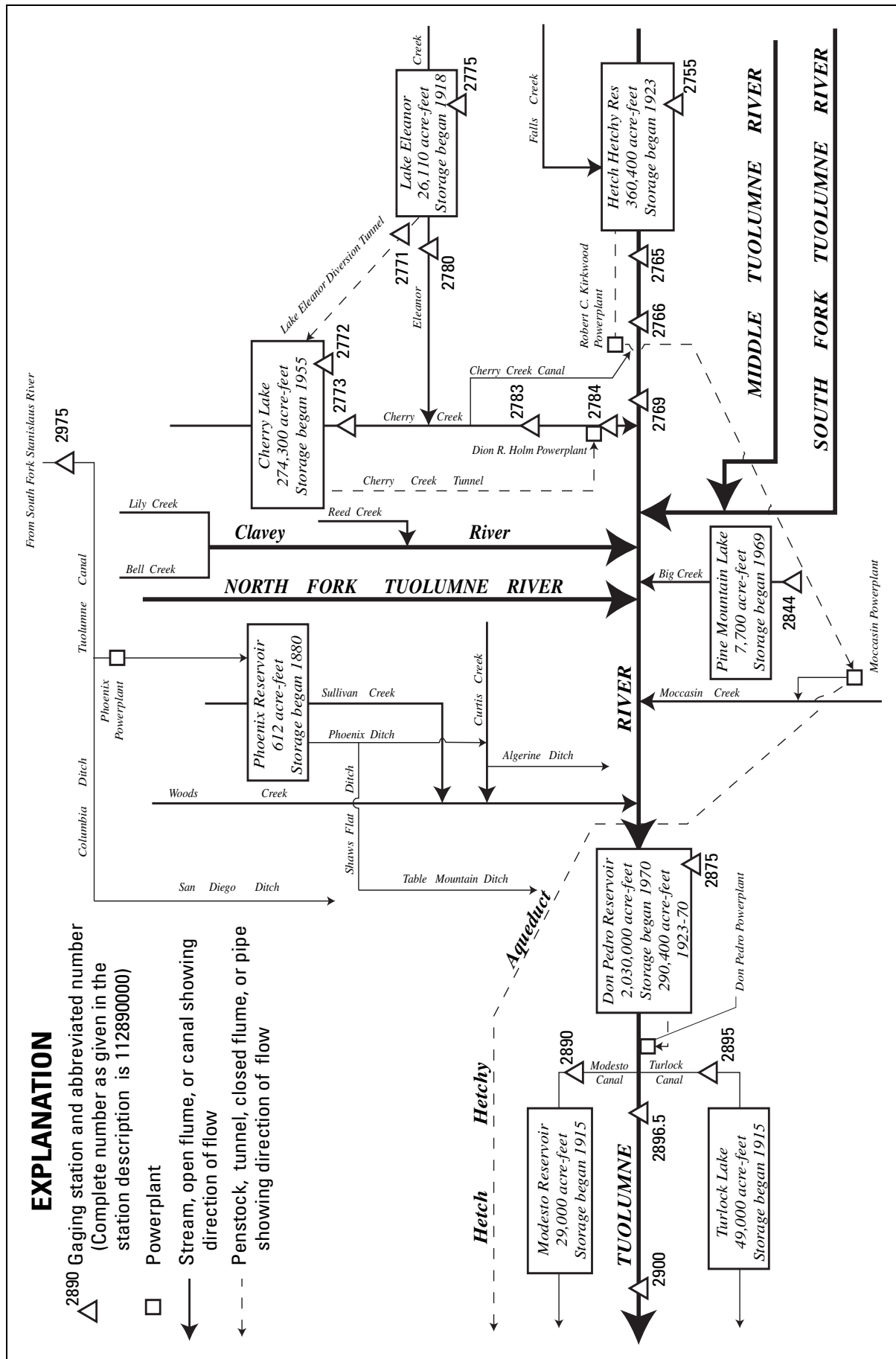


Figure 29. Diversions and storage in Tuolumne River Basin.



## 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<sup>2</sup>.

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, represent contents at 2400 hours. See schematic diagram of Tuolumne River Basin.

COOPERATION.—Reservoir storage values for the 2400 hour, Oct. 1, 2003 to Sept. 30, 2004, were interpolated, based on 0800-hour observations provided by the City and County of San Francisco.

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, 362,100 acre-ft, May 27, 28, June 2, 3, 6, gage height, 3,806.90 ft, May 27, 28, June 6; minimum, 213,600 acre-ft, Mar 14, gage height, 3,724.70 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	284000	255500	236400	253500	247800	228900	230800	267900	361800	356300	336000	301800
2	283000	254200	236300	254300	247200	227200	230800	274700	362100	356200	335000	300600
3	281600	252800	236000	254900	246600	225300	231000	283500	362100	356100	333800	299500
4	280700	251500	236000	255500	245700	223300	231700	292400	361700	356200	332600	298500
5	279800	249800	236800	256000	245000	221300	233700	300300	361900	356100	331600	297400
6	278700	248400	238200	256600	244000	219300	235700	306900	362100	356000	330600	295000
7	277600	246900	239400	256800	243500	217600	237200	312000	361800	355900	329700	294400
8	276600	245600	240100	256700	242600	216600	238700	316600	361300	355400	328300	293900
9	275500	244500	240400	256500	241800	215800	240600	321900	360900	355000	327800	292600
10	274400	243200	240800	256300	240900	215300	242500	326500	360200	354500	326700	291600
11	273400	241600	241100	256300	240200	215000	244400	329500	359600	353900	325500	290600
12	272500	240300	241400	256400	239200	214300	246700	332000	359200	353300	324300	289600
13	271600	238900	242000	256200	238400	213800	248500	334700	360000	352700	323300	288600
14	270500	237700	242500	255700	237600	213600	249500	338400	361300	351900	322200	287400
15	269500	237400	242700	254900	236700	213800	250000	342000	361600	351100	321300	286200
16	268600	237300	242900	254400	236500	214400	249800	345800	361400	350400	320400	285100
17	267600	237200	243200	253800	236700	214700	249200	349800	361400	349800	319200	284000
18	267000	237300	243500	253300	236700	215500	248500	353100	361100	349000	317900	282800
19	266200	237400	244200	252600	236500	216800	248700	354400	360700	348200	316700	281600
20	265400	237300	244900	251800	235900	218400	247300	356500	360300	347300	315500	279600
21	264500	237100	245600	251800	235400	220400	245000	357400	360000	346500	314300	279500
22	263600	236200	245900	251700	234800	223000	244000	358300	359600	345700	313200	278500
23	262800	236900	246400	251400	234200	225500	243500	359100	359200	344600	311900	277400
24	262000	236900	247400	250900	233000	227300	243200	360300	359000	343700	310800	276000
25	261300	236800	248700	250500	232500	228600	243700	361000	358700	342900	309800	275100
26	260600	236700	249700	250400	232200	229500	246100	361400	358200	341900	308600	274100
27	259800	236600	250500	250000	231500	229400	249700	362100	357400	341200	307200	273000
28	258900	236500	251100	249400	230500	229200	254200	362100	356800	340100	307200	271900
29	258300	236400	251600	249000	229800	229500	258400	361800	356500	339000	305200	270800
30	257100	236400	252300	248300	---	230100	262900	361600	356400	337900	304200	269800
31	256100	---	253000	248000	---	230700	---	361800	---	336900	302900	---
MAX	284000	255500	253000	256800	247800	230700	262900	362100	362100	356300	336000	301800
MIN	256100	236200	236000	248000	229800	213600	230800	267900	356400	336900	302900	269800
a	3750.00	3738.50	3748.25	3745.32	3735.00	3735.10	3753.90	3806.70	3804.00	3793.95	3776.00	3757.80
b	-28100	-19700	+16600	-5000	-18200	+900	+32200	+98900	-5400	-19500	-34000	-33100
CAL YR 2003 b	+14700											
WTR YR 2004 b	-14400											

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<sup>2</sup>.

## 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 except for estimated daily discharges, which are fair. 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<sup>3</sup>/s, Jan. 3, 1997, gage height, 15.08 ft; no flow at times in 1968–70.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	65	60	67	60	71	133	89	1450	118	116	105
2	70	64	55	63	63	99	139	101	1400	115	116	90
3	65	65	52	61	63	133	142	105	1830	115	116	87
4	65	64	52	59	63	130	143	106	1680	115	116	87
5	68	64	53	59	63	129	143	107	1140	115	116	87
6	69	64	53	59	63	128	144	104	1450	115	116	87
7	69	64	55	59	63	128	145	105	1310	115	116	87
8	68	64	50	59	62	127	145	107	1070	114	115	87
9	68	65	49	58	62	128	145	107	383	114	116	87
10	68	64	51	58	62	127	146	106	174	113	116	86
11	68	63	51	58	63	127	146	105	163	112	114	86
12	68	65	51	58	64	127	146	105	167	112	115	87
13	68	66	51	58	64	127	146	105	174	111	115	87
14	68	66	53	58	64	126	146	105	212	114	115	86
15	68	67	52	58	63	129	146	107	577	114	115	78
16	68	64	59	58	66	130	146	112	577	114	114	70
17	68	64	58	57	65	130	146	115	393	114	116	70
18	68	64	56	58	74	129	145	164	338	113	118	70
19	68	64	56	57	68	130	145	201	229	116	118	71
20	68	62	57	57	66	130	145	167	179	117	118	70
21	76	59	56	58	66	130	147	183	180	115	118	70
22	76	88	56	58	66	130	146	196	180	113	118	70
23	71	84	56	57	66	129	144	199	180	113	117	70
24	69	71	61	57	65	129	138	176	179	114	117	70
25	69	70	63	57	78	130	145	e250	179	114	117	70
26	69	70	59	57	80	130	160	e450	178	115	117	70
27	68	70	58	57	74	130	155	694	177	115	117	69
28	66	70	58	57	71	129	157	2950	178	113	117	69
29	66	70	59	57	70	129	108	2640	149	114	116	69
30	65	70	62	57	---	129	80	1310	125	115	116	70
31	65	---	60	57	---	129	---	1330	---	116	116	---
TOTAL	2131	2010	1722	1808	1917	3909	4262	12701	16601	3543	3603	2362
MEAN	68.7	67.0	55.5	58.3	66.1	126	142	410	553	114	116	78.7
MAX	81	88	63	67	80	133	160	2950	1830	118	118	105
MIN	65	59	49	57	60	71	80	89	125	111	114	69
AC-FT	4230	3990	3420	3590	3800	7750	8450	25190	32930	7030	7150	4690

e Estimated.



## 11276500 TUOLUMNE RIVER NEAR HETCH HETCHY, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—October 1971 to September 1972, August 1987 to current year.

WATER TEMPERATURE: October 1971 to September 1972, August 1987 to current year.

INSTRUMENTATION.—Water-temperature recorder October 1971 to September 1972, and since August 1987.

REMARKS.—Water-temperature records rated excellent except for Oct. 1-3, May 21 to June 7, July 9 to Aug. 4, which are rated good; and

June 8-10, which is rated fair. 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.

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, 16.5°C, June 17; minimum recorded, 6.5°C, Feb. 26, 28.

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.5	11.5	11.5	11.0	12.5	12.0	9.5	9.0	8.0	7.5	7.5	7.0
2	12.5	11.5	11.5	11.0	12.5	12.0	9.5	8.5	8.5	7.0	8.0	7.0
3	12.5	11.0	12.0	11.0	12.5	12.0	9.0	8.5	8.0	7.5	8.0	7.5
4	12.5	11.5	11.5	10.5	12.5	12.0	9.0	8.5	8.0	7.5	8.0	7.5
5	12.5	11.0	12.0	11.0	12.5	12.0	9.5	8.5	8.5	7.5	8.0	7.5
6	13.0	11.5	12.0	11.0	12.5	12.0	9.5	9.0	8.5	7.5	8.5	7.5
7	12.5	11.5	12.0	11.5	12.0	11.5	9.5	9.0	8.0	7.5	8.5	7.5
8	12.5	11.5	12.0	11.5	12.0	11.5	9.5	9.0	8.0	7.0	8.5	7.5
9	12.5	11.5	12.0	11.5	12.0	11.5	9.5	9.0	8.5	7.5	8.5	7.5
10	12.5	11.0	12.0	11.5	12.0	11.0	9.5	8.5	8.5	7.0	8.5	7.5
11	12.5	11.0	12.0	11.5	11.5	11.0	9.5	8.5	8.5	7.5	8.5	7.5
12	12.5	11.0	12.0	11.5	12.0	11.0	9.0	8.5	8.5	7.0	8.0	7.5
13	12.5	11.0	12.0	11.5	12.0	11.5	9.0	8.5	8.0	7.5	8.5	7.5
14	12.5	11.0	12.5	11.5	11.5	11.0	9.0	8.5	8.5	7.5	8.5	7.5
15	12.5	11.0	12.0	11.5	11.5	11.0	9.0	8.5	8.0	7.5	8.5	7.5
16	12.0	11.0	11.5	11.0	11.0	10.5	9.0	8.5	8.0	8.0	8.5	7.5
17	12.5	11.0	12.0	11.5	11.0	10.5	9.0	8.0	8.0	8.0	8.5	7.5
18	12.5	11.0	12.0	11.0	11.0	10.5	9.0	8.5	8.0	7.5	8.5	7.5
19	12.5	11.5	12.0	11.5	11.0	10.5	9.0	8.0	8.0	7.0	8.5	7.5
20	12.5	11.5	13.5	11.5	11.0	10.5	8.5	8.0	8.0	7.5	8.5	7.5
21	12.5	11.5	13.0	12.5	11.0	10.5	9.0	8.0	7.5	7.5	8.5	7.5
22	12.5	11.5	12.5	12.0	10.5	10.0	8.5	8.0	8.0	7.5	8.5	7.5
23	12.5	11.5	12.5	12.0	10.5	10.0	9.0	8.0	8.0	7.5	8.5	7.5
24	12.5	11.5	12.5	12.0	10.5	10.5	9.0	8.0	8.0	7.5	8.5	7.5
25	12.5	11.5	12.5	12.0	10.5	9.5	8.5	8.0	7.5	7.0	8.0	7.0
26	12.5	11.5	12.5	12.0	10.0	9.5	8.5	7.5	7.5	6.5	8.0	7.0
27	12.5	11.5	12.5	12.0	9.5	9.0	8.5	8.0	7.5	7.0	8.0	7.0
28	12.5	11.5	13.0	12.0	9.5	9.0	8.5	8.0	8.0	6.5	8.5	7.0
29	12.5	11.5	13.0	12.5	9.5	9.5	9.0	8.0	7.5	7.0	8.5	7.5
30	11.5	11.0	12.5	12.0	10.0	9.5	8.5	8.0	---	---	8.0	7.5
31	11.5	11.0	---	---	9.5	9.5	8.5	7.5	---	---	8.5	7.5
MONTH	13.0	11.0	13.5	10.5	12.5	9.0	9.5	7.5	8.5	6.5	8.5	7.0

## 11276500 TUOLUMNE RIVER NEAR HETCH HETCHY, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	7.5	9.5	8.0	12.0	10.5	13.5	12.0	11.5	10.5	11.5	10.5
2	8.5	7.5	9.5	8.0	12.5	11.0	13.5	12.0	11.5	10.0	11.5	10.5
3	8.5	7.5	9.5	8.0	12.5	10.5	14.0	12.0	11.5	10.0	11.5	10.5
4	8.5	7.5	9.5	8.0	12.5	10.5	13.5	12.5	11.0	10.0	11.5	10.0
5	8.5	7.5	9.5	8.0	13.0	11.5	14.0	12.5	11.0	10.0	11.5	10.5
6	8.5	7.5	9.0	8.0	13.5	11.0	14.0	12.5	11.0	10.0	12.0	10.5
7	8.5	7.5	9.5	8.0	13.0	11.0	14.0	13.0	11.0	10.0	12.0	10.5
8	9.0	7.5	9.5	8.0	12.0	11.0	14.0	12.5	11.5	10.0	12.0	10.5
9	8.5	7.5	9.5	8.0	12.5	11.5	14.0	12.5	11.5	10.0	12.0	10.5
10	8.5	7.5	9.0	8.0	12.5	11.5	13.5	12.0	11.0	10.0	12.0	10.5
11	8.5	7.5	9.0	8.0	12.5	11.0	13.5	12.5	11.5	10.5	12.0	10.5
12	8.5	7.5	9.5	8.0	12.5	11.0	13.5	12.5	11.5	10.5	12.0	10.5
13	8.5	7.5	9.5	8.0	13.0	11.5	14.0	12.5	11.5	10.5	11.5	10.5
14	8.5	7.5	10.0	8.5	14.5	12.0	13.5	12.5	11.5	10.5	11.5	10.5
15	8.5	7.5	10.0	8.5	16.0	13.0	13.5	12.5	11.5	10.5	12.0	10.5
16	8.0	7.5	10.0	8.5	16.0	13.0	13.5	12.5	11.5	10.5	12.0	10.5
17	8.0	7.5	10.5	9.0	16.5	15.0	13.5	12.5	11.5	10.0	12.0	10.5
18	8.0	7.5	10.5	9.0	16.0	14.5	13.5	12.5	11.5	10.5	11.0	10.5
19	8.0	7.5	10.5	9.0	14.5	12.5	13.0	12.0	11.5	10.5	10.5	10.0
20	8.5	8.0	11.0	9.5	13.0	12.0	13.0	12.0	11.5	10.5	11.0	10.0
21	8.5	8.0	10.5	9.5	13.5	12.0	13.0	12.0	11.5	10.5	11.5	10.0
22	9.0	7.5	11.0	9.5	14.0	12.5	13.0	12.0	11.0	10.5	12.0	10.0
23	8.5	8.0	10.5	9.5	13.5	12.0	13.0	11.5	11.5	10.5	12.0	10.5
24	9.5	8.0	11.0	9.5	13.5	12.0	12.5	11.5	11.5	10.5	12.0	10.5
25	9.5	8.0	11.5	10.0	13.5	12.0	12.5	11.5	11.5	10.5	12.0	10.5
26	9.5	8.5	12.5	11.0	13.5	12.0	12.5	11.0	11.5	10.5	12.0	10.5
27	9.5	8.5	13.0	12.0	13.5	12.0	12.0	11.0	11.5	10.0	12.0	10.5
28	9.5	8.0	13.0	10.5	13.5	12.5	12.0	11.0	11.5	10.5	12.0	10.5
29	9.0	8.0	11.0	10.0	13.0	11.5	12.0	10.5	11.5	10.5	12.0	10.5
30	9.5	7.5	11.5	10.5	13.5	12.0	11.5	10.5	11.5	10.5	12.0	10.5
31	---	---	12.0	10.5	---	---	11.5	10.5	11.5	10.5	---	---
MONTH	9.5	7.5	13.0	8.0	16.5	10.5	14.0	10.5	11.5	10.0	12.0	10.0

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DATE	TIME	Depth at sample location, feet (81903)	Temper- ature, water, deg C (00010)	Loca- tion in X-sect. looking dwnstrm ft from l bank (00009)
APR				
28...*	1505	.50	9.2	2.00
28...*	1507	1.00	9.2	6.00
28...*	1509	1.80	9.1	10.0
28...*	1510	1.30	9.1	14.0
28...*	1512	3.00	9.1	18.0
28...*	1514	1.80	9.1	22.0
28...*	1515	1.30	9.1	26.0
28...*	1516	1.40	9.1	30.0
28...*	1518	1.30	9.1	34.0
28...*	1520	.80	9.1	38.0
AUG				
04...*	1347	1.00	11.1	4.00
04...*	1348	1.50	11.1	8.00
04...*	1349	2.30	11.1	12.0
04...*	1350	2.00	11.1	16.0
04...*	1351	2.00	11.0	20.0
04...*	1352	2.70	11.0	24.0
04...*	1353	2.40	11.0	28.0
04...*	1354	2.30	11.0	32.0
04...*	1355	1.80	11.1	36.0
04...*	1356	2.10	11.1	40.0

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 28, 153 ft<sup>3</sup>/s; Aug. 4, 115 ft<sup>3</sup>/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<sup>2</sup>.

## 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<sup>3</sup>/s, Jan. 3, 1997, gage height, 22.98 ft; minimum daily, 25 ft<sup>3</sup>/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<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	64	69	163	71	170	154	89	1480	116	111	110
2	78	63	57	164	82	202	160	103	1400	111	111	90
3	65	67	56	125	100	233	162	111	1890	110	111	82
4	63	63	53	104	94	216	164	112	1750	134	111	81
5	63	62	57	95	90	209	163	113	1180	110	110	81
6	66	62	60	93	89	207	163	113	1510	109	110	80
7	66	62	94	96	91	207	163	112	1320	109	110	80
8	66	63	67	102	88	205	163	113	1110	108	110	80
9	66	83	55	99	85	202	162	113	499	108	110	80
10	66	70	70	96	83	199	162	113	208	108	111	79
11	66	63	79	94	82	192	161	110	166	107	110	79
12	65	63	66	91	83	186	161	110	165	106	110	79
13	65	65	69	88	82	182	161	110	170	106	111	79
14	65	65	82	86	81	178	161	110	180	105	110	79
15	65	69	79	83	81	178	160	110	491	109	110	79
16	65	67	67	81	113	178	161	113	588	107	110	66
17	65	64	72	79	155	174	162	118	396	108	110	63
18	65	64	67	78	194	171	160	125	350	107	113	63
19	65	63	65	77	175	169	161	210	265	107	113	63
20	65	63	74	76	133	165	160	192	183	111	113	64
21	66	58	72	74	121	163	159	173	178	110	113	62
22	77	62	68	73	119	162	161	203	178	108	113	62
23	71	98	66	72	125	160	156	205	177	106	113	62
24	67	74	85	71	116	157	156	199	176	107	113	62
25	67	70	128	71	204	157	144	205	175	109	113	62
26	67	70	105	70	356	181	174	432	174	108	112	62
27	66	70	86	72	248	169	168	585	173	110	112	62
28	64	70	79	76	199	162	168	2610	174	109	112	62
29	63	70	80	73	175	158	153	3370	166	107	112	62
30	63	70	112	72	---	156	91	1320	125	109	111	62
31	63	---	112	72	---	154	---	1310	---	111	112	---
TOTAL	2068	2017	2351	2766	3715	5602	4754	13012	16997	3390	3451	2177
MEAN	66.7	67.2	75.8	89.2	128	181	158	420	567	109	111	72.6
MAX	84	98	128	164	356	233	174	3370	1890	134	113	110
MIN	63	58	53	70	71	154	91	89	125	105	110	62
AC-FT	4100	4000	4660	5490	7370	11110	9430	25810	33710	6720	6850	4320

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2004, BY WATER YEAR (WY)

	54.5	74.9	108	181	145	159	265	1041	1713	814	171	85.2
MEAN	54.5	74.9	108	181	145	159	265	1041	1713	814	171	85.2
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1971 - 2004	
ANNUAL TOTAL	129850		62300			
ANNUAL MEAN	356		170		401	
HIGHEST ANNUAL MEAN					1584	
LOWEST ANNUAL MEAN					53.5	
HIGHEST DAILY MEAN	7460	Jun 1	3370	May 29	14500	Jan 3 1997
LOWEST DAILY MEAN	53	Dec 4	53	Dec 4	25	Oct 11 1988
ANNUAL SEVEN-DAY MINIMUM	57	Mar 8	60	Nov 30	27	Oct 11 1988
MAXIMUM PEAK FLOW			5440		17700	
MAXIMUM PEAK STAGE			19.13		22.98	
ANNUAL RUNOFF (AC-FT)	257600		123600		290800	
10 PERCENT EXCEEDS	285		200		882	
50 PERCENT EXCEEDS	94		109		86	
90 PERCENT EXCEEDS	64		64		42	

## 11276600 TUOLUMNE RIVER ABOVE EARLY INTAKE, NEAR MATHER, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.—October 1971 to June 1972, August 1987 to current year.

WATER TEMPERATURE: October 1971 to June 1972, August 1987 to current year.

INSTRUMENTATION.—Water-temperature recorder October 1971 to June 1972, and since Aug. 12, 1987.

REMARKS.—Water-temperature records rated excellent except for Aug. 5–14, which are rated good. 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, several days in January 1972, Dec. 24, 25, 1990.

EXTREMES FOR CURRENT YEAR.—

WATER TEMPERATURE: Maximum recorded, 23.0°C, July 6, 7; minimum recorded, 4.0°C, Jan. 5.

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.5	15.5	11.0	9.5	10.0	9.0	7.0	7.0	7.5	6.0	7.5	7.0
2	17.5	15.0	10.0	8.5	9.5	8.5	7.5	6.0	7.5	6.0	8.5	7.0
3	17.5	15.0	9.5	8.5	8.5	8.0	6.5	5.5	7.0	6.0	8.0	6.5
4	17.5	15.0	8.5	7.5	9.0	7.5	5.5	4.5	6.0	5.0	9.0	7.0
5	17.5	15.0	9.0	7.5	10.0	9.0	4.5	4.0	6.0	5.0	9.0	7.5
6	17.5	15.0	9.5	8.0	10.0	10.0	5.5	4.5	6.0	5.0	10.0	8.0
7	17.5	15.0	10.0	8.5	10.5	10.0	7.0	5.5	6.5	5.5	11.0	8.5
8	17.5	15.0	10.5	9.0	10.0	8.5	7.0	6.5	6.5	5.0	11.0	9.0
9	17.0	15.0	10.0	10.0	9.0	8.0	8.0	7.0	6.5	5.5	11.5	9.5
10	16.5	14.5	10.0	9.0	9.0	8.5	7.5	7.0	6.5	5.0	12.0	10.0
11	16.0	13.5	9.5	8.5	8.5	7.5	7.5	6.5	7.0	5.0	12.0	9.5
12	16.0	13.5	9.5	8.0	8.0	7.0	7.5	6.5	7.0	5.0	12.0	9.5
13	15.5	13.0	10.0	9.0	9.0	8.0	7.0	6.5	7.0	5.5	12.0	9.5
14	15.0	13.0	9.5	8.5	8.5	7.5	7.0	6.5	7.5	6.0	12.5	9.5
15	15.0	13.0	10.0	9.5	7.5	6.5	7.0	6.0	8.0	6.5	13.0	10.0
16	14.5	12.5	10.0	9.0	6.5	6.0	6.5	5.5	8.0	7.5	13.0	10.5
17	14.5	12.5	10.5	9.0	6.5	6.0	6.5	6.0	8.0	8.0	13.0	10.5
18	14.5	12.5	9.5	9.0	7.0	6.0	7.5	6.0	8.0	7.5	13.5	10.5
19	15.0	12.5	10.0	8.5	7.5	6.5	6.5	6.0	7.5	6.5	13.5	10.5
20	15.0	12.5	10.0	9.0	8.5	7.5	7.0	6.0	7.5	7.0	13.5	10.5
21	15.0	13.0	10.0	8.5	8.5	7.5	6.5	5.5	8.0	7.0	14.0	11.0
22	15.0	13.0	8.5	7.0	8.0	7.0	6.0	5.0	8.0	7.5	14.0	11.0
23	15.0	13.0	7.5	7.0	8.5	7.5	5.5	4.5	8.5	7.5	14.0	11.0
24	14.5	12.5	8.0	6.5	8.5	8.0	6.5	5.0	8.0	7.5	14.0	11.5
25	14.5	12.5	7.0	6.5	8.5	7.5	6.5	5.5	7.5	7.0	12.0	10.5
26	14.0	12.0	7.0	6.0	8.0	6.5	6.5	5.5	7.0	5.5	11.5	10.0
27	14.0	12.0	7.0	6.0	6.5	5.0	7.5	6.5	6.5	5.0	12.0	9.0
28	14.0	12.0	8.5	7.0	5.5	4.5	7.0	6.0	7.5	5.5	12.5	9.5
29	13.5	12.0	9.0	8.0	6.0	5.5	7.5	6.5	7.5	6.0	13.0	10.0
30	12.5	10.5	9.0	8.5	6.5	5.5	7.5	6.5	---	---	13.0	10.5
31	11.0	10.0	---	---	7.0	6.5	7.5	6.5	---	---	13.0	10.0
MONTH	17.5	10.0	11.0	6.0	10.5	4.5	8.0	4.0	8.5	5.0	14.0	6.5

## 11276600 TUOLUMNE RIVER ABOVE EARLY INTAKE, NEAR MATHER, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.0	10.5	17.0	13.0	13.5	12.0	20.0	16.5	20.5	17.0	19.5	16.0
2	12.5	9.5	18.0	14.0	14.5	12.0	19.5	16.5	20.5	17.0	19.0	16.5
3	13.0	9.5	18.5	14.5	14.0	12.0	21.0	17.0	20.0	16.5	19.0	16.0
4	13.5	10.5	18.5	15.0	14.0	11.5	21.5	17.5	19.5	16.5	18.5	15.5
5	14.0	11.0	18.5	15.0	14.0	11.5	22.0	18.5	19.5	16.0	18.5	15.5
6	14.0	11.0	17.0	15.0	14.5	13.0	23.0	19.0	19.5	16.0	19.0	15.5
7	14.0	10.5	17.5	13.5	14.0	12.5	23.0	19.5	19.5	16.0	19.5	16.0
8	14.5	11.0	17.0	13.5	13.5	12.0	22.5	19.0	20.0	16.0	19.5	16.0
9	15.0	11.0	17.5	13.5	13.0	11.5	22.0	19.0	20.0	16.5	19.5	16.0
10	15.0	11.5	16.5	13.5	16.0	12.0	22.0	18.5	20.0	17.0	19.5	16.5
11	14.5	11.0	16.0	13.0	18.0	13.5	22.0	18.5	20.0	17.0	19.5	16.5
12	14.5	11.5	16.5	13.0	18.5	14.5	22.0	18.5	19.0	17.0	19.0	16.5
13	14.0	11.5	17.0	13.0	19.0	15.0	22.0	18.5	20.0	17.0	18.5	16.0
14	14.0	11.0	17.0	13.5	19.0	15.5	22.0	18.5	20.0	17.0	18.5	15.5
15	12.5	10.5	17.0	14.0	17.5	16.0	22.0	18.5	20.0	17.0	18.5	15.5
16	11.0	10.0	17.5	14.0	18.0	15.5	22.0	18.5	20.0	17.5	19.0	15.5
17	10.5	9.5	17.5	14.0	18.5	15.5	22.0	19.0	20.0	17.0	19.0	16.0
18	10.5	8.5	17.0	14.0	19.0	17.0	22.0	18.5	20.0	17.0	17.0	15.5
19	10.5	9.0	16.0	13.0	20.0	16.5	22.0	19.0	19.5	17.0	15.5	14.0
20	12.0	9.5	15.5	12.5	20.5	17.0	22.5	19.0	20.0	16.5	15.0	13.0
21	13.5	10.0	15.5	12.5	20.5	17.0	22.5	19.0	19.5	17.0	15.5	12.5
22	14.5	10.5	16.0	12.5	20.0	16.5	22.5	19.0	18.5	17.0	15.5	12.5
23	14.5	10.5	16.0	13.0	20.5	16.5	22.5	19.0	18.5	16.0	16.0	13.0
24	15.0	11.0	15.5	12.5	20.0	17.0	22.5	19.0	18.5	15.5	16.5	13.5
25	15.5	11.5	16.0	12.5	20.0	16.5	22.5	19.0	19.0	15.5	17.0	14.0
26	16.0	12.5	14.5	12.5	19.5	16.0	22.0	18.5	19.0	16.0	17.5	14.0
27	16.5	12.5	15.0	13.5	20.0	16.5	21.5	18.0	19.0	15.5	17.0	14.0
28	16.0	12.5	14.5	11.5	20.0	16.5	21.5	18.0	19.0	16.0	17.0	14.5
29	15.5	12.0	12.0	11.0	20.0	16.5	21.0	18.0	19.0	16.0	17.0	14.0
30	16.0	12.0	13.5	11.0	19.5	16.0	21.0	17.5	19.0	16.0	17.0	14.0
31	---	---	13.5	11.5	---	---	21.0	17.5	19.0	16.0	---	---
MONTH	16.5	8.5	18.5	11.0	20.5	11.5	23.0	16.5	20.5	15.5	19.5	12.5

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DATE	TIME	Depth at sample location, feet (81903)	Temperature, water, deg C (00010)	Location in X-sect. looking downstrm ft from l bank (00009)
APR				
29...*	1041	3.10	12.6	5.00
29...*	1045	6.30	12.6	15.0
29...*	1049	8.00	12.8	25.0
29...*	1052	8.20	12.8	35.0
29...*	1054	7.80	12.9	45.0
29...*	1057	6.50	12.9	55.0
29...*	1059	5.10	12.9	65.0
29...*	1101	3.20	12.9	75.0
29...*	1103	2.50	13.0	85.0
29...*	1105	2.00	13.0	95.0
AUG				
05...*	1113	.80	17.4	3.00
05...*	1115	1.20	17.4	9.00
05...*	1117	2.00	17.3	15.0
05...*	1120	2.10	17.3	21.0
05...*	1121	2.30	17.3	27.0
05...*	1123	2.30	17.3	33.0
05...*	1125	2.34	17.3	39.0
05...*	1126	2.41	17.3	45.0
05...*	1128	2.20	17.3	51.0
05...*	1131	1.64	17.3	57.0

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 29, 161 ft<sup>3</sup>/s; Aug. 05, 109 ft<sup>3</sup>/s.





## 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 current year.

GAGE.—Ultrasonic-velocity meter system. Elevation of gage is 4,670 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair. 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<sup>3</sup>/s, Feb. 17, 2001; no flow at times each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.00	296	241	267	311	262	186	32	0.0	0.00
2	0.0	0.0	0.00	294	173	268	310	260	161	32	0.0	0.00
3	0.0	0.0	0.00	295	93	266	312	254	120	33	0.0	0.00
4	0.0	0.0	0.00	294	97	267	313	247	110	33	0.0	0.00
5	0.0	0.0	0.00	291	98	267	313	240	154	33	0.0	0.00
6	0.0	0.0	0.00	288	96	269	312	231	207	32	0.0	0.00
7	0.0	0.0	0.00	286	97	270	311	227	206	34	0.0	0.00
8	0.0	0.0	e233	286	98	272	310	224	205	32	0.0	0.00
9	0.0	0.0	366	283	99	275	309	220	207	32	0.0	0.00
10	0.0	0.0	360	281	99	279	310	216	208	33	0.0	0.00
11	0.0	0.0	357	280	99	281	307	212	209	33	0.0	0.00
12	0.0	0.0	353	278	100	283	305	210	208	33	0.0	0.00
13	0.0	0.0	349	276	98	285	303	209	208	34	0.0	0.00
14	0.0	0.0	345	273	102	286	301	208	207	34	0.0	0.00
15	0.0	0.0	347	270	99	289	301	205	208	33	0.0	0.00
16	0.0	0.0	346	268	100	291	303	202	206	33	0.0	0.00
17	0.0	0.0	343	264	117	294	302	198	203	32	0.0	0.00
18	0.0	0.0	340	260	212	296	301	146	200	32	0.0	0.00
19	0.0	0.0	335	258	283	299	300	115	145	e12	0.0	0.00
20	0.0	0.0	331	255	282	301	303	137	e46	0.0	0.0	0.00
21	0.0	0.0	328	256	279	302	303	183	0.00	0.0	0.0	0.00
22	0.0	0.0	325	256	278	304	286	199	0.00	0.0	0.0	0.00
23	0.0	0.0	321	256	278	304	278	198	0.00	0.0	0.0	0.00
24	0.0	0.0	318	253	276	307	280	63	0.00	0.0	0.0	0.00
25	0.0	0.0	317	252	274	305	279	80	0.00	0.0	0.0	0.00
26	0.0	0.0	315	249	272	306	277	176	0.00	0.0	0.0	0.00
27	0.0	0.0	312	248	275	308	283	182	0.00	0.0	0.0	0.00
28	0.0	0.0	309	248	273	311	278	e59	e20	0.0	0.0	0.00
29	0.0	0.0	305	248	270	312	268	0.00	32	0.0	0.0	0.00
30	0.0	0.0	302	244	---	311	265	0.00	31	0.0	0.0	0.00
31	0.0	---	299	244	---	312	---	e59	---	0.0	0.0	---
TOTAL	0.0	0.0	7856.00	8330	5158	8987	8934	5422.00	3687.00	602.0	0.0	0.00
MEAN	0.00	0.00	253	269	178	290	298	175	123	19.4	0.00	0.00
MAX	0.00	0.00	366	296	283	312	313	262	209	34	0.00	0.00
MIN	0.00	0.00	0.00	244	93	266	265	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	15580	16520	10230	17830	17720	10750	7310	1190	0.00	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2004, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	
MEAN	22.8	89.8	192	108	175	279	383	339	125	55.7	24.0	3.54
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	0.00	0.00	0.00	0.00	0.00	0.00	298	175	35.7	0.00	0.00	0.00
(WY)	1997	1997	2000	1997	1997	2000	2004	2004	2001	2001	1997	1997

## SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1996 - 2004	
ANNUAL TOTAL	47056.00		48976.00			
ANNUAL MEAN	129		134		163	
HIGHEST ANNUAL MEAN					221 1998	
LOWEST ANNUAL MEAN					121 1997	
HIGHEST DAILY MEAN	366	Dec 9	366	Dec 9	816	Feb 17 2001
LOWEST DAILY MEAN	0.00	May 27	0.00	Oct 1	0.00	Oct 1 1996
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 4	0.00	Oct 1	0.00	Oct 1 1996
ANNUAL RUNOFF (AC-FT)	93340		97140		118300	
10 PERCENT EXCEEDS	334		307		394	
50 PERCENT EXCEEDS	106		98		132	
90 PERCENT EXCEEDS	0.00		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<sup>2</sup>.

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, excluding extremes, represent contents at 2400 hours. See schematic diagram of [Tuolumne River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 274,500 acre-ft, May 28, 2004, gage height, 4,703.13 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, 274,500 acre-ft, May 28, gage height, 4,703.13 ft; minimum, 206,100 acre-ft, Dec. 5, gage height, 4,663.08 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	229600	218500	208200	226400	225200	219300	230000	250600	273200	265200	256000	250700
2	229400	218100	207500	226400	224700	218500	230200	252900	273300	265000	255600	250600
3	229200	218100	206900	226200	224300	217700	230700	255400	273300	264800	255200	250600
4	229200	217900	206200	226700	224000	216900	231500	258300	273100	264500	254800	250400
5	229100	217800	206700	226500	223500	216100	232700	261100	272900	264200	254400	250400
6	228900	217500	209500	226200	223000	215400	233800	262900	272700	263900	254000	250300
7	228600	217300	211300	226000	222800	215000	234600	264000	272600	263600	253600	250300
8	228300	217400	211700	226200	222500	214800	235800	265100	272300	263200	253600	250200
9	228000	217800	212300	226300	221900	214900	237100	266500	271600	262900	253300	250100
10	227600	217800	212900	226400	221200	215200	238200	267600	270700	262600	253200	250100
11	227400	217700	213500	226600	220600	215200	239100	267900	270300	262600	253100	250000
12	227200	217400	214000	226600	219900	215300	240000	267800	270200	262400	252700	250000
13	226900	217000	214800	227100	219200	215500	240900	268000	270000	262100	252300	249900
14	226500	216500	215600	227300	218900	215900	241400	268700	269900	261800	252000	249800
15	226000	216200	215900	227300	218600	216600	241700	269800	270400	261400	251900	249700
16	225500	215500	216300	227500	219000	217400	241600	271100	270800	261100	251800	249700
17	225000	214700	216600	228000	219000	218200	241400	272100	271200	260800	251700	249600
18	224600	213900	217000	228700	219000	219100	241000	272700	271500	260800	251700	249600
19	224500	213300	217500	228900	218800	220200	240700	272600	272000	260500	251600	249500
20	223900	212700	218600	228400	218700	221200	240400	272600	272200	260100	251500	249500
21	223400	212200	219500	227900	219000	222600	240100	272600	271700	259700	251500	249300
22	222800	212100	219900	227500	218500	224100	239800	272500	271300	259400	251400	249300
23	222300	212000	220300	227100	218500	225600	239600	273300	270700	259000	251300	249200
24	221800	211400	221800	226900	218500	226800	239900	273500	270100	258600	251200	249200
25	221400	210700	222700	227000	218900	227700	241300	273400	269400	258500	251200	249100
26	221300	210000	223200	226600	219100	228100	242400	273400	268800	258100	251100	249000
27	220800	209700	223700	226200	218900	228100	244300	273400	268200	257700	251000	249000
28	220300	209200	224000	225900	218900	228200	246100	273900	267300	257300	251000	248900
29	219800	208900	224800	225500	219100	228500	247600	273600	266500	256900	250900	248800
30	219200	208600	225300	225300	---	229000	248900	273300	265600	256500	250900	248800
31	218700	---	226000	225200	---	229600	---	273100	---	256100	250800	---
MAX	229600	218500	226000	228900	225200	229600	248900	273900	273300	265200	256000	250700
MIN	218700	208600	206200	225200	218500	214800	230000	250600	265600	256100	250800	248800
a	4670.77	4664.63	4675.15	4674.66	4671.01	4677.31	4688.65	4702.39	4698.16	4692.78	4689.74	4688.58
b	-11300	-10100	+17400	-800	-6100	+10500	-49300	+24200	-7500	-9500	-5300	-2000

CAL YR 2003 b +14600

WTR YR 2004 b +18800

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<sup>2</sup>.

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<sup>3</sup>/s, May 16, 1996, from rating curve extended above 4,000 ft<sup>3</sup>/s, gage height, 11.15 ft; minimum daily, 0.77 ft<sup>3</sup>/s, Dec. 1–4, 1988.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	5.4	6.2	6.6	6.2	9.5	8.4	6.8	10	9.1	16	16
2	4.9	5.3	6.2	6.4	6.5	9.6	8.4	6.8	9.8	9.3	15	16
3	5.0	5.9	5.9	6.2	6.5	9.3	8.3	6.8	9.6	9.3	14	16
4	5.0	5.8	5.8	6.2	6.3	9.3	8.2	6.8	9.5	9.2	15	16
5	5.0	5.8	5.9	6.2	6.2	9.2	8.1	6.8	9.2	9.0	15	16
6	5.0	5.8	6.2	6.2	6.2	9.2	8.0	6.6	9.0	12	15	16
7	5.0	6.0	7.0	6.2	6.3	9.7	7.9	6.4	8.7	16	15	16
8	5.0	6.2	6.0	6.2	6.2	9.7	7.6	6.2	8.9	16	15	16
9	5.0	7.4	5.8	6.2	6.2	9.7	7.6	6.2	8.7	16	16	16
10	5.0	6.3	6.2	6.3	6.2	9.5	7.6	6.2	8.5	16	16	16
11	5.0	6.2	6.1	6.4	6.2	9.3	7.5	6.2	8.3	15	16	16
12	5.0	6.2	5.9	6.4	6.2	9.2	7.5	6.2	8.1	e15	16	16
13	5.0	6.2	6.1	6.4	6.2	9.0	7.5	6.2	7.9	e15	16	16
14	5.1	6.2	6.5	6.5	6.2	8.8	7.4	6.2	7.8	15	17	15
15	5.2	6.2	6.2	6.5	6.2	8.8	7.3	6.2	7.7	15	17	15
16	5.2	6.2	6.1	6.5	8.2	8.8	7.2	6.2	7.9	15	17	15
17	5.2	6.2	6.0	6.5	7.8	8.5	7.3	7.1	8.1	15	18	15
18	5.2	6.2	5.9	6.5	9.0	8.4	7.2	8.8	8.2	15	19	15
19	5.3	6.2	6.0	6.5	8.3	8.6	7.2	8.7	8.0	15	19	16
20	5.2	6.1	6.2	6.5	8.1	8.7	7.2	8.2	8.1	15	19	16
21	5.2	6.1	6.2	6.5	8.0	8.6	7.4	8.0	8.1	15	19	16
22	5.2	6.2	6.1	6.5	8.2	8.5	7.2	8.0	8.0	14	19	16
23	5.2	6.2	6.1	6.5	8.2	8.7	7.2	8.2	7.9	14	18	16
24	5.2	6.2	7.9	6.5	8.4	8.8	7.1	30	7.8	14	17	16
25	5.2	6.2	7.5	6.5	10	9.0	7.0	26	7.6	14	17	15
26	5.2	6.1	6.9	6.4	11	9.3	6.9	16	7.6	14	17	15
27	5.2	6.1	6.5	6.6	9.8	8.9	6.8	12	7.6	15	17	15
28	5.2	6.1	6.5	6.2	9.3	8.8	6.8	1050	7.8	16	17	15
29	5.3	6.2	6.6	6.2	9.3	8.7	6.8	483	8.3	15	17	15
30	5.3	6.2	6.5	6.2	---	8.5	6.8	23	8.8	15	16	15
31	5.4	---	6.2	6.2	---	8.4	---	10	---	16	16	---
TOTAL	158.8	183.4	195.2	197.7	217.4	279.0	223.4	1809.8	251.5	433.9	516	469
MEAN	5.12	6.11	6.30	6.38	7.50	9.00	7.45	58.4	8.38	14.0	16.6	15.6
MAX	5.4	7.4	7.9	6.6	11	9.7	8.4	1050	10	16	19	16
MIN	4.9	5.3	5.8	6.2	6.2	8.4	6.8	6.2	7.6	9.0	14	15
AC-FT	315	364	387	392	431	553	443	3590	499	861	1020	930

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004, BY WATER YEAR (WY)

MEAN	9.54	11.6	10.8	18.9	11.5	14.6	13.3	36.9	126	95.7	26.7	21.1
MAX	166	135	155	352	134	171	167	359	1198	993	176	139
(WY)	1978	1977	1977	1977	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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004	
ANNUAL TOTAL	9647.4		4935.1			
ANNUAL MEAN	26.4		13.5		33.1	
HIGHEST ANNUAL MEAN					195	
LOWEST ANNUAL MEAN					7.08	
HIGHEST DAILY MEAN	1040		1050		2830	
LOWEST DAILY MEAN	4.9		4.9		0.77	
ANNUAL SEVEN-DAY MINIMUM	4.9		5.0		0.79	
MAXIMUM PEAK FLOW			4930		5120	
MAXIMUM PEAK STAGE			11.02		11.15	
ANNUAL RUNOFF (AC-FT)	19140		9790		24010	
10 PERCENT EXCEEDS	16		16		17	
50 PERCENT EXCEEDS	6.6		7.8		7.3	
90 PERCENT EXCEEDS	5.2		5.8		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<sup>2</sup>.

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 represent usable contents. 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, 27,600 acre-ft, May 28, 29, maximum gage height, 4,661.52 ft, May 29; minimum, 5,650 acre-ft, Mar. 7, gage height, 4,635.55 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19600	19100	19900	16600	7450	e6950	20600	26500	27400	25300	23500	21700
2	19600	19100	20000	16300	7420	e6690	20800	26700	27400	25300	23400	21700
3	19600	19100	20000	16000	7470	e6440	21100	27000	27400	25300	23300	21600
4	19600	19100	20000	15700	7480	e6220	21600	27100	27400	25200	23300	21600
5	19600	19100	20300	15400	7500	5930	22200	27100	27400	25200	23200	21500
6	19600	19100	21900	15100	7480	5730	22800	27000	27300	25100	23200	21500
7	19500	19100	23600	14800	7470	5690	23300	26900	27200	25100	23100	21400
8	19500	19100	23600	14400	7470	5910	23800	26800	27100	25000	23100	21400
9	19500	19300	23100	14100	7450	6350	24300	26800	27000	25000	23000	21300
10	19500	19300	22700	13800	7410	6960	24700	26700	26700	24900	22900	21300
11	19400	19400	22300	13500	7400	7400	25000	26600	26400	24800	22900	21300
12	19400	19400	21800	13200	7400	7770	25200	26300	26200	24800	22800	21200
13	19400	19400	21500	12900	7400	8120	25400	26100	25900	24700	22800	21200
14	19400	19400	21100	12700	7380	8620	25500	26100	25700	24600	22700	21100
15	19400	19500	20800	12400	7390	9410	25500	26200	25500	24500	22700	21100
16	19300	19500	20300	12100	8080	10200	25400	26300	25400	24400	22600	21100
17	19300	19600	19900	11900	8790	10900	25200	26400	25200	24300	22600	21000
18	19300	19700	19400	11600	9140	11700	24900	26600	25000	24200	22500	21000
19	19300	19700	19000	11400	9060	12500	24700	26800	24900	24200	22400	21000
20	19300	19700	18900	11100	8850	13400	24500	26900	24900	24100	22400	20900
21	19300	19800	18600	10800	8610	14500	24300	27000	25000	24100	22300	20900
22	19200	19800	18300	10500	e8360	15600	24200	26900	25100	24000	22300	20800
23	19200	19800	17900	10200	e8050	16600	24100	26900	25200	24000	22200	20800
24	19200	19800	18400	9880	e7760	17400	24200	27100	25300	23900	22100	20800
25	19200	19900	18500	9560	e7760	18200	24400	27300	25300	23800	22100	20700
26	19200	19900	18200	9220	e7780	18700	25000	27200	25400	23800	22100	20700
27	19200	19900	17900	8930	e7600	18900	25700	27200	25400	23700	22000	20700
28	19100	19900	17500	8620	e7390	19000	26100	27600	25400	23700	21900	20600
29	19100	19900	17300	8320	e7190	19300	26300	27500	25400	23600	21900	20600
30	19100	19900	17000	8050	---	19800	26400	27400	25400	23600	21800	20600
31	19100	---	16700	7760	---	20200	---	27400	---	23500	21800	---
MAX	19600	19900	23600	16600	9140	20200	26400	27600	27400	25300	23500	21700
MIN	19100	19100	16700	7760	7190	5690	20600	26100	24900	23500	21800	20600
a	4652.34	4653.26	4649.68	4638.62	---	4653.59	4660.27	4661.32	4659.18	4657.18	4655.29	4653.96
b	-600	+800	-3200	-8940	-570	+13010	+6200	+1000	-2000	-1900	-1700	-1200

CAL YR 2003 b +13430

WTR YR 2004 b +900

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<sup>2</sup>.

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<sup>3</sup>/s, Jan. 2, 1997, gage height, 26.74 ft, from rating curve extended above 2,600 ft<sup>3</sup>/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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	5.8	6.1	7.2	6.7	7.8	12	166	82	24	23	19
2	5.0	5.8	5.9	6.9	7.2	8.0	12	178	45	24	23	17
3	5.5	6.1	6.0	6.6	7.0	7.5	12	241	156	24	23	17
4	5.8	6.0	6.0	6.5	6.9	7.3	12	332	115	24	23	16
5	5.7	5.9	6.3	6.4	6.9	9.0	12	455	47	24	23	17
6	5.7	5.9	6.8	6.4	6.9	10	22	419	37	24	23	18
7	5.7	5.7	32	6.9	6.9	10	36	283	30	24	23	18
8	5.7	5.9	56	7.1	6.7	10	51	221	27	24	23	19
9	5.6	7.2	43	6.9	6.7	10	76	203	25	24	23	19
10	5.6	6.2	30	6.8	6.7	10	106	185	25	24	23	19
11	5.6	6.1	19	6.8	6.6	10	129	157	24	23	23	19
12	5.6	6.0	9.2	6.7	6.5	10	175	138	24	23	23	18
13	5.8	5.8	7.4	6.4	6.5	10	155	124	24	23	23	17
14	6.0	5.9	8.0	6.3	6.5	10	107	71	24	24	23	17
15	6.0	6.2	7.0	6.2	6.5	10	112	26	e24	23	23	17
16	5.9	6.2	6.7	5.9	9.4	10	115	26	e24	23	23	17
17	5.9	6.2	6.5	5.9	7.8	11	107	26	e24	23	23	17
18	5.9	6.2	6.4	5.8	9.6	11	92	26	24	23	23	17
19	5.9	6.2	6.2	5.7	7.9	11	78	26	24	23	23	17
20	5.9	6.2	6.9	5.6	7.4	11	67	27	24	24	23	17
21	5.9	6.2	6.5	5.5	7.2	11	61	27	24	23	23	17
22	5.9	6.2	6.4	5.3	7.5	11	57	26	24	23	23	17
23	5.9	6.2	6.4	5.3	7.3	11	53	26	24	23	23	17
24	5.9	6.2	10	5.2	7.1	11	52	26	24	23	23	17
25	5.9	6.2	8.3	6.2	9.8	11	57	30	24	23	23	17
26	5.9	6.2	7.2	6.9	8.7	12	69	34	24	23	23	17
27	5.9	6.2	6.8	7.2	7.9	12	117	28	24	23	23	17
28	5.9	6.0	6.6	7.1	7.8	12	142	422	24	23	23	17
29	6.0	5.9	6.6	7.0	7.6	12	153	633	24	23	23	17
30	5.9	6.0	7.1	6.9	---	12	161	381	24	23	23	17
31	5.8	---	7.2	6.8	---	12	---	195	---	23	23	---
TOTAL	178.7	182.8	360.5	198.4	214.2	320.6	2410	5158	1069	725	713	522
MEAN	5.76	6.09	11.6	6.40	7.39	10.3	80.3	166	35.6	23.4	23.0	17.4
MAX	6.0	7.2	56	7.2	9.8	12	175	633	156	24	23	19
MIN	5.0	5.7	5.9	5.2	6.5	7.3	12	26	24	23	23	16
AC-FT	354	363	715	394	425	636	4780	10230	2120	1440	1410	1040

e Estimated.

## 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
LOWEST ANNUAL MEAN	144
HIGHEST DAILY MEAN	5000
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
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)

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
LOWEST ANNUAL MEAN	86.2
HIGHEST DAILY MEAN	8270
LOWEST DAILY MEAN	.00
ANNUAL SEVEN-DAY MINIMUM	.00
MAXIMUM PEAK FLOW	11700
MAXIMUM PEAK STAGE	14.95
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 - 2004, BY WATER YEAR (WY)

MEAN	17.2	36.3	30.3	67.7	56.4	24.9	89.8	290	327	108	25.3	25.0
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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1961 - 2004

ANNUAL TOTAL	21909.6	12052.2	
ANNUAL MEAN	60.0	32.9	91.4
HIGHEST ANNUAL MEAN			320
LOWEST ANNUAL MEAN			4.73
HIGHEST DAILY MEAN	1370	May 29	633
LOWEST DAILY MEAN	3.8	Jan 20	5.0
ANNUAL SEVEN-DAY MINIMUM	3.9	Jan 16	5.5
MAXIMUM PEAK FLOW			910
MAXIMUM PEAK STAGE			13.62
ANNUAL RUNOFF (AC-FT)	43460	23910	66250
10 PERCENT EXCEEDS	27	70	268
50 PERCENT EXCEEDS	10	14	8.5
90 PERCENT EXCEEDS	4.5	5.9	4.7





## 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<sup>2</sup>.

PERIOD OF RECORD.—March 1963 to current year. Prior to October 1965, published as "below Cherry Powerhouse."

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 fair. 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<sup>3</sup>/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<sup>3</sup>/s, June 4, 1977.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	195	112	360	592	534	660	1140	1020	1150	335	56	44
2	166	216	465	789	803	1200	1140	894	1090	323	241	35
3	84	109	451	755	630	1200	1140	1040	1190	295	246	34
4	39	118	440	380	551	1190	1140	962	1210	317	245	35
5	39	103	453	762	610	1200	1140	1190	1090	312	239	34
6	144	181	278	796	647	1210	1140	1480	1090	282	238	36
7	178	138	175	757	496	1220	1170	1380	1080	253	235	36
8	198	42	470	587	477	1230	1180	1310	1070	339	63	36
9	210	152	477	587	674	1230	1200	1140	1070	283	186	37
10	213	142	496	603	751	1230	1220	1120	1070	230	47	37
11	153	128	480	516	745	1220	1230	1210	781	61	56	37
12	90	318	426	704	742	1210	1280	1260	634	240	240	41
13	226	316	336	352	734	1190	1300	1240	720	242	232	45
14	231	365	341	481	518	1190	1230	1080	752	246	235	35
15	267	359	448	690	550	1190	1230	789	464	245	57	35
16	313	569	477	507	795	1180	1230	611	451	237	53	35
17	346	578	448	324	922	1180	1230	783	437	246	46	36
18	225	613	456	213	914	1180	1220	937	390	56	46	36
19	87	478	455	515	950	1170	1210	1080	212	239	46	37
20	347	455	357	821	819	1160	1190	1080	145	243	46	38
21	334	402	178	893	555	1150	1190	1090	478	241	46	37
22	338	70	431	871	1020	1150	1180	1090	424	243	46	36
23	330	93	436	793	726	1140	1180	564	529	242	46	36
24	300	389	402	639	660	1150	1170	781	483	241	46	36
25	257	463	487	489	823	1160	782	981	592	56	46	36
26	86	456	470	812	1020	1180	1180	1050	425	241	46	36
27	265	221	384	857	949	1180	921	1110	503	251	46	36
28	328	320	421	710	756	1170	1230	2400	636	259	46	36
29	339	217	344	816	641	1160	1100	2060	637	248	45	36
30	338	203	417	717	---	1160	1080	1480	639	243	45	36
31	337	---	336	634	---	1150	---	1300	---	238	43	---
TOTAL	7003	8326	12595	19962	21012	36190	34973	35512	21442	7527	3354	1100
MEAN	226	278	406	644	725	1167	1166	1146	715	243	108	36.7
MAX	347	613	496	893	1020	1230	1300	2400	1210	339	246	45
MIN	39	42	175	213	477	660	782	564	145	56	43	34
AC-FT	13890	16510	24980	39590	41680	71780	69370	70440	42530	14930	6650	2180

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2004, BY WATER YEAR (WY)

	398	415	471	645	686	748	842	1085	1153	739	511	457
MEAN	398	415	471	645	686	748	842	1085	1153	739	511	457
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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1963 - 2004

ANNUAL TOTAL	248357	208996	
ANNUAL MEAN	680	571	679
HIGHEST ANNUAL MEAN			1437
LOWEST ANNUAL MEAN			47.9
HIGHEST DAILY MEAN	2870	Jun 6	2400
LOWEST DAILY MEAN	39	Oct 4	34
ANNUAL SEVEN-DAY MINIMUM	120	Nov 3	35
MAXIMUM PEAK FLOW			6810
MAXIMUM PEAK STAGE			12.49
ANNUAL RUNOFF (AC-FT)	492600	414500	491700
10 PERCENT EXCEEDS	1240	1190	1260
50 PERCENT EXCEEDS	483	464	612
90 PERCENT EXCEEDS	175	46	54

## 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<sup>2</sup>.

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<sup>3</sup>/s, which are fair, and flows below 0.10 ft<sup>3</sup>/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<sup>3</sup>/s, Feb. 17, 1986, gage height, 7.03 ft, from rating curve extended above 1,100 ft<sup>3</sup>/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<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 150 ft<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft <sup>3</sup> /s)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft <sup>3</sup> /s)
Jan. 1	1700	275	4.26	Feb. 26	2100	237	4.13

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	125	1.3	19	2.0	0.51	0.07	0.00	0.00	0.00
2	0.00	0.00	0.00	68	4.0	20	1.9	0.46	0.04	0.00	0.00	0.00
3	0.00	0.00	0.00	24	9.3	13	1.8	0.42	0.03	0.00	0.00	0.00
4	0.00	0.00	0.00	12	8.1	10	1.7	0.35	0.03	0.00	0.00	0.00
5	0.00	0.00	0.00	8.3	4.9	8.2	1.6	0.32	0.02	0.00	0.00	0.00
6	0.00	0.00	0.00	6.6	3.9	6.8	1.5	0.31	0.02	0.00	0.00	0.00
7	0.00	0.00	0.00	6.0	3.6	5.9	1.5	0.29	0.02	0.00	0.00	0.00
8	0.00	0.00	0.00	5.3	3.0	5.1	1.4	0.28	0.01	0.00	0.00	0.00
9	0.00	0.00	0.00	4.2	2.7	4.6	1.3	0.27	0.01	0.00	0.00	0.00
10	0.00	0.00	0.01	3.4	2.3	4.0	1.2	0.25	0.01	0.00	0.00	0.00
11	0.00	0.00	1.1	3.0	2.2	3.6	1.2	0.24	0.01	0.00	0.00	0.00
12	0.00	0.00	0.72	2.6	2.0	3.3	1.0	0.23	0.01	0.00	0.00	0.00
13	0.00	0.00	0.51	2.3	1.8	3.0	0.97	0.19	0.00	0.00	0.00	0.00
14	0.00	0.00	3.2	2.0	1.7	2.7	0.93	0.16	0.00	0.00	0.00	0.00
15	0.00	0.00	1.5	1.9	1.6	2.7	0.93	0.15	0.00	0.00	0.00	0.00
16	0.00	0.00	0.56	1.7	5.6	2.5	0.96	0.13	0.00	0.00	0.00	0.00
17	0.00	0.00	0.35	1.6	9.1	2.3	0.99	0.12	0.00	0.00	0.00	0.00
18	0.00	0.00	0.24	1.5	55	2.2	0.97	0.11	0.00	0.00	0.00	0.00
19	0.00	0.00	0.21	1.3	33	2.1	0.97	0.10	0.00	0.00	0.00	0.00
20	0.00	0.00	1.1	1.2	15	2.0	0.96	0.10	0.00	0.00	0.00	0.00
21	0.00	0.00	0.74	1.2	10	2.0	0.96	0.09	0.00	0.00	0.00	0.00
22	0.00	0.00	0.55	1.1	9.8	1.9	0.95	0.09	0.00	0.00	0.00	0.00
23	0.00	0.00	0.57	1.0	12	1.8	0.90	0.08	0.00	0.00	0.00	0.00
24	0.00	0.00	21	1.0	8.2	1.8	0.85	0.06	0.00	0.00	0.00	0.00
25	0.00	0.00	29	1.0	58	2.4	0.80	0.06	0.00	0.00	0.00	0.00
26	0.00	0.00	15	0.95	138	9.8	0.74	0.05	0.00	0.00	0.00	0.00
27	0.00	0.00	6.1	1.2	92	4.0	0.68	0.04	0.00	0.00	0.00	0.00
28	0.00	0.00	3.6	3.0	41	2.9	0.60	0.12	0.00	0.00	0.00	0.00
29	0.00	0.00	4.1	2.0	23	2.5	0.56	0.14	0.00	0.00	0.00	0.00
30	0.00	0.00	35	1.6	---	2.2	0.52	0.12	0.00	0.00	0.00	0.00
31	0.00	---	15	1.5	---	2.2	---	0.09	---	0.00	0.00	---
TOTAL	0.00	0.00	140.16	297.45	562.1	156.5	33.34	5.93	0.28	0.00	0.00	0.00
MEAN	0.00	0.00	4.52	9.60	19.4	5.05	1.11	0.19	0.01	0.00	0.00	0.00
MAX	0.00	0.00	35	125	138	20	2.0	0.51	0.07	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.95	1.3	1.8	0.52	0.04	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	278	590	1110	310	66	12	0.6	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 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.08	2.84	9.91	26.1	32.9	23.8	10.8	3.77	1.10	0.25	0.04	0.02
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	0.00	0.00	0.00	0.00	0.00	0.04	0.01	0.02	0.00	0.00	0.00	0.00
(WY)	1971	1977	1977	1991	1991	1977	1977	1977	1977	1972	1971	1969

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1969 - 2004
ANNUAL TOTAL	1037.91	1195.76	
ANNUAL MEAN	2.84	3.27	9.17
HIGHEST ANNUAL MEAN			38.2 1983
LOWEST ANNUAL MEAN			0.01 1977
HIGHEST DAILY MEAN	172 Apr 13	138 Feb 26	1370 Jan 2 1997
LOWEST DAILY MEAN	0.00 Jun 29	0.00 Oct 1	0.00 Aug 27 1969
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 29	0.00 Oct 1	0.00 Aug 27 1969
MAXIMUM PEAK FLOW		275 Jan 1	2620 Feb 17 1986
MAXIMUM PEAK STAGE		4.26 Jan 1	7.03 Feb 17 1986
ANNUAL RUNOFF (AC-FT)	2060	2370	6650
10 PERCENT EXCEEDS	6.2	5.7	15
50 PERCENT EXCEEDS	0.10	0.01	0.35
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<sup>2</sup>.

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 represent total contents at 2400 hours. Storage capacity values and "end-of-month" elevations for period Nov. 1–26, 28, and Dec. 1 to Feb. 2 represent 0800 values. 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, 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, 1,726,000 acre-ft, June 8, 9, maximum elevation, 805.06 ft, June 9; minimum, 1,331,000 acre-ft, Sept. 30, minimum elevation, 767.00 ft.

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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1512000	1438000	1445000	1488000	1539000	1622000	1682000	1685000	1701000	1674000	1521000	1392000
2	1511000	1438000	1445000	1491000	1539000	1626000	1681000	1684000	1704000	1669000	1517000	1388000
3	1509000	1438000	1445000	1492000	1542000	1631000	1680000	1682000	1710000	1665000	1512000	1386000
4	1506000	1438000	1445000	1494000	1544000	1635000	1680000	1681000	1714000	1661000	1508000	1384000
5	1505000	1438000	1446000	1495000	1546000	1641000	1679000	1681000	1718000	1656000	1503000	1381000
6	1502000	1440000	1447000	1497000	1547000	1645000	1680000	1681000	1720000	1651000	1498000	1377000
7	1500000	1439000	1450000	1499000	1549000	1649000	1680000	1679000	1723000	1647000	1494000	1372000
8	1499000	1439000	1449000	1501000	1551000	1653000	1680000	1679000	1726000	1642000	1489000	1369000
9	1497000	1440000	1450000	1503000	1553000	1657000	1682000	1677000	1725000	1637000	1486000	1366000
10	1494000	1441000	1452000	1506000	1554000	e1657000	1684000	1675000	1724000	1632000	1481000	1362000
11	1491000	1442000	1453000	1507000	1556000	e1660000	1685000	1675000	1723000	1626000	1476000	1361000
12	1487000	1443000	1454000	1510000	1558000	1666000	1686000	1674000	1722000	1620000	1471000	1360000
13	1484000	1444000	1456000	1511000	1560000	1669000	1688000	1673000	1720000	1616000	1466000	1357000
14	1480000	1444000	1457000	1513000	1562000	1671000	1688000	1672000	1718000	1612000	1463000	1355000
15	1477000	1445000	1458000	1515000	1563000	1673000	1688000	1671000	1716000	1607000	1459000	1352000
16	1474000	1446000	1459000	1517000	1565000	1674000	1688000	1669000	1715000	1602000	1453000	1349000
17	1471000	1446000	1459000	1520000	1569000	1672000	1687000	1668000	1713000	1597000	1448000	1347000
18	1468000	1447000	1460000	1521000	1575000	1670000	1687000	1667000	1711000	1591000	1444000	1345000
19	1464000	1448000	1461000	1523000	1577000	1668000	1687000	1668000	1709000	1586000	1440000	1343000
20	1460000	1448000	1461000	1525000	1578000	1666000	1686000	1668000	1707000	1580000	1436000	1341000
21	1456000	1448000	1462000	1526000	1578000	1667000	1686000	1669000	1704000	1574000	1433000	1339000
22	1453000	1448000	1464000	1527000	1579000	1667000	1686000	1670000	1702000	1569000	1431000	1338000
23	1452000	1447000	1464000	1530000	1581000	1668000	1686000	1670000	1699000	1564000	1427000	1337000
24	1450000	1447000	1466000	1530000	1583000	1668000	1686000	1671000	1696000	1560000	1423000	1336000
25	1449000	1447000	1471000	1532000	1590000	1670000	1686000	1671000	1692000	1556000	1418000	1335000
26	1447000	1448000	1473000	1532000	1602000	1670000	1686000	1671000	1689000	1551000	1415000	1334000
27	1445000	e1447000	1474000	1533000	1610000	1670000	1687000	1672000	1685000	1546000	1412000	1334000
28	1444000	1447000	1474000	1533000	1616000	1671000	1689000	1679000	1682000	1540000	1408000	1332000
29	1442000	e1445000	1476000	1534000	1619000	1675000	1689000	1689000	1679000	1535000	1404000	1332000
30	1441000	e1445000	1478000	1536000	---	1678000	1687000	1693000	1677000	1530000	1401000	1331000
31	1441000	---	1480000	1538000	---	1680000	---	1697000	---	1525000	1396000	---
MAX	1512000	1448000	1480000	1538000	1619000	1680000	1689000	1697000	1726000	1674000	1521000	1392000
MIN	1441000	1438000	1445000	1488000	1539000	1622000	1679000	1667000	1677000	1525000	1396000	1331000
a	778.39	---	782.40	787.90	795.48	800.98	801.58	802.46	800.67	786.65	773.85	767.00
b	-74000	+4000	+35000	+58000	+81000	+61000	+7000	+10000	-20000	-152000	-129000	-65000
CAL YR 2003 b	+180000											
WTR YR 2004 b	-184000											

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: 1904–09 (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 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<sup>3</sup>/s, July 1, 1935; no flow at times in most years.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	418	330	0.74	0.00	8.2	847	600	560	551	769	854	802
2	81	255	0.00	23	0.46	391	956	731	480	906	639	537
3	98	199	0.00	609	0.41	416	996	810	493	792	669	256
4	193	184	0.00	66	0.39	187	967	302	661	820	712	177
5	350	220	0.00	0.17	25	1.0	1110	321	589	762	863	282
6	507	232	0.00	0.16	0.27	0.95	1100	661	763	681	988	517
7	118	430	0.00	0.15	0.29	0.83	1130	752	665	579	977	765
8	314	194	0.00	0.15	0.28	25	1280	717	496	618	702	504
9	366	238	0.00	0.15	115	11	731	783	1220	798	650	550
10	366	155	0.00	0.14	11	0.78	503	654	974	928	723	715
11	510	5.7	0.00	0.15	3.4	0.77	572	787	586	1010	865	425
12	534	0.24	18	21	0.08	0.75	642	661	473	977	857	732
13	575	0.13	0.03	28	0.09	0.72	521	846	561	921	789	679
14	729	131	0.05	0.29	0.10	0.74	572	791	460	876	521	493
15	406	14	0.63	25	0.20	0.73	404	464	725	902	634	587
16	229	0.00	0.03	0.17	13	1.3	438	736	767	910	745	624
17	492	0.00	0.00	0.16	0.12	460	942	426	862	977	813	323
18	422	8.0	0.00	0.14	0.21	456	955	799	1100	846	824	509
19	408	0.00	0.00	0.13	354	459	585	658	554	741	682	778
20	666	0.00	0.00	0.14	311	450	884	490	661	943	757	478
21	501	0.00	6.0	0.13	65	449	789	445	791	e771	430	534
22	338	121	0.00	0.13	23	464	324	582	794	e858	124	300
23	317	148	63	0.12	3.9	462	676	432	532	1070	704	383
24	400	283	99	254	3.7	447	889	526	1080	e558	514	474
25	501	215	27	339	0.00	448	617	725	1280	919	729	212
26	451	0.00	0.00	217	0.00	1140	370	1200	1110	1040	733	363
27	411	0.00	0.00	190	5.6	1140	447	767	981	621	659	248
28	343	773	66	306	0.22	1210	392	411	759	902	801	219
29	371	556	111	369	334	510	435	748	836	510	770	58
30	268	481	20	2.3	---	435	757	907	714	779	589	298
31	98	---	0.00	246	---	573	---	554	---	775	490	---
TOTAL	11781	5173.07	411.48	2697.78	1278.92	10988.57	21584	20246	22518	25559	21807	13822
MEAN	380	172	13.3	87.0	44.1	354	719	653	751	824	703	461
MAX	729	773	111	609	354	1210	1280	1200	1280	1070	988	802
MIN	81	0.00	0.00	0.00	0.00	0.72	324	302	460	510	124	58
AC-FT	23370	10260	816	5350	2540	21800	42810	40160	44660	50700	43250	27420

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2004, BY WATER YEAR (WY)

MEAN	249	104	75.3	54.5	86.4	300	652	816	884	794	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	0.00	0.00	0.00	0.00	0.00	0.00	220	224	450	186	12.1	0.00
(WY)	1913	1910	1910	1910	1920	1938	1991	1977	1926	1919	1918	1917

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1909 - 2004

ANNUAL TOTAL	153064.51	157866.82		
ANNUAL MEAN	419	431	428	
HIGHEST ANNUAL MEAN			570	1980
LOWEST ANNUAL MEAN			198	1910
HIGHEST DAILY MEAN	1120	May 16	1280	Apr 8
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Nov 16
ANNUAL SEVEN-DAY MINIMUM	0.00	Feb 8	0.00	Dec 2
ANNUAL RUNOFF (AC-FT)	303600	313100	309900	
10 PERCENT EXCEEDS	911	893	1000	
50 PERCENT EXCEEDS	387	448	384	
90 PERCENT EXCEEDS	0.00	0.13	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. 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<sup>3</sup>/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<sup>3</sup>/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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1090	0.45	4.4	1.0	55	0.00	842	1460	820	883	1570	1590
2	453	0.60	65	6.0	196	0.00	1660	1500	1230	1930	1510	1210
3	866	0.63	179	37	102	0.00	1360	1710	666	1780	1750	914
4	816	0.77	220	18	66	0.00	1450	1550	1100	1770	1880	929
5	428	0.68	52	98	35	0.00	1510	1340	1070	1760	1950	1030
6	929	0.58	50	18	21	0.00	1480	1420	1340	2010	1410	1710
7	527	0.24	17	15	233	0.00	1430	1760	1050	1900	1540	1670
8	382	0.26	46	14	13	0.00	1100	1420	1300	2040	1580	1220
9	387	0.21	28	43	81	24	990	1380	1820	1940	1380	1080
10	1120	0.24	38	15	16	93	1110	1740	1410	2230	1670	1180
11	1060	0.52	15	8.0	15	834	1130	1240	1840	2000	1950	22
12	1250	0.65	132	1.0	15	1270	1320	1100	1580	2020	1840	0.46
13	816	0.33	47	1.0	90	971	1240	1130	1760	1420	1710	462
14	1340	0.42	22	44	53	1430	1280	1250	1800	1540	1200	657
15	1190	0.46	55	36	18	1880	1460	1050	1850	1760	1730	1100
16	860	0.61	7.7	129	289	2040	1280	1520	1940	1960	1900	816
17	894	0.42	1.0	19	180	1510	834	1480	1860	1710	1900	353
18	984	0.59	53	15	504	1560	865	1270	1540	2150	1340	204
19	1420	0.47	3.7	14	1150	1570	1170	1300	1590	2140	1200	495
20	1400	0.51	9.4	26	1370	2230	1070	1370	1710	2180	1410	475
21	1240	0.80	2.2	20	1210	1480	809	1720	1760	2180	1230	386
22	1090	0.99	36	19	1210	1900	1010	1090	1810	1940	870	81
23	356	0.99	15	34	711	2310	1240	931	1770	1540	1320	77
24	245	1.0	7.9	19	566	2260	1470	1300	1720	1510	1690	185
25	162	0.98	0.97	19	362	2040	1580	1090	1820	1340	1480	153
26	574	0.97	1.0	17	132	1920	1790	1510	1780	1620	1170	17
27	422	0.90	1.0	18	64	1630	1430	1340	1830	1900	949	21
28	310	0.76	1.0	18	0.00	1060	1180	1230	2010	2040	1110	159
29	300	0.83	1.0	16	0.00	584	1400	969	1530	1840	1370	131
30	75	5.9	0.99	17	---	611	1660	987	1250	2170	1440	183
31	0.41	---	1.0	15	---	877	---	1270	---	1830	1760	---
TOTAL	22986.41	23.76	1113.26	770.0	8757.00	32084.00	38150	41427	46556	57033	46809	18510.46
MEAN	741	0.79	35.9	24.8	302	1035	1272	1336	1552	1840	1510	617
MAX	1420	5.9	220	129	1370	2310	1790	1760	2010	2230	1950	1710
MIN	0.41	0.21	0.97	1.0	0.00	0.00	809	931	666	883	870	0.46
AC-FT	45590	47	2210	1530	17370	63640	75670	82170	92340	113100	92850	36720

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 2004, BY WATER YEAR (WY)

MEAN	309	140	131	78.1	131	486	1026	1249	1356	1310	1097	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	0.00	0.00	0.00	0.00	0.00	0.00	2.72	90.3	27.4	71.0	0.00	25.4
(WY)	1901	1901	1900	1900	1905	1973	1900	1977	1900	1914	1901	1901

## SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1899 - 2004	
ANNUAL TOTAL	285402.45		314219.89			
ANNUAL MEAN	782		859		672	
HIGHEST ANNUAL MEAN					1082	
LOWEST ANNUAL MEAN					54.3	
HIGHEST DAILY MEAN	2690	Jul 11	2310	Mar 23	3400	May 24 1984
LOWEST DAILY MEAN	0.00	Jan 6	0.00	Feb 28	0.00	Nov 14 1899
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 6	0.00	Feb 28	0.00	Nov 14 1899
ANNUAL RUNOFF (AC-FT)	566100		623300		487100	
10 PERCENT EXCEEDS	1880		1840		1690	
50 PERCENT EXCEEDS	657		970		474	
90 PERCENT EXCEEDS	0.42		0.95		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<sup>2</sup>.

## 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 332 ft<sup>3</sup>/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<sup>3</sup>/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<sup>3</sup>/s, Jan. 3, 1997; minimum daily, 0.45 ft<sup>3</sup>/s, Nov. 2, 1970.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	219	234	228	221	223	242	1110	628	158	107	104	127
2	219	246	231	223	223	255	1090	627	145	106	103	107
3	221	247	228	225	223	442	1100	629	153	105	115	107
4	221	242	228	224	223	555	1100	633	140	105	101	111
5	221	243	229	222	222	566	980	635	132	106	101	112
6	224	243	230	222	221	930	820	632	132	106	101	111
7	219	254	230	221	221	1120	837	632	135	107	103	112
8	222	228	228	222	220	1120	833	633	136	108	103	112
9	223	229	230	223	220	1100	823	636	135	109	104	112
10	225	229	231	222	222	1100	820	637	137	109	102	112
11	224	228	230	223	222	1110	817	639	137	110	102	113
12	225	225	235	223	220	1100	819	637	135	111	101	113
13	226	228	234	223	220	1100	1060	639	133	111	104	112
14	226	226	230	223	220	1100	1380	602	143	112	105	111
15	227	225	227	222	219	1100	1380	481	149	113	107	110
16	464	223	224	224	218	1110	1400	358	150	112	107	109
17	469	220	224	223	219	2710	1440	257	150	111	107	109
18	473	227	224	221	220	2810	1440	196	130	111	107	109
19	474	226	222	221	218	2820	1420	200	109	111	107	108
20	467	228	223	222	217	2230	1430	200	110	113	107	108
21	376	227	224	223	216	1700	1440	201	108	111	108	108
22	373	232	221	222	218	1320	1260	202	115	108	109	108
23	375	224	224	222	219	1020	983	204	105	109	108	108
24	377	225	224	222	218	837	708	203	105	106	108	107
25	377	220	223	223	219	722	629	207	103	103	108	107
26	278	220	222	223	220	621	638	206	104	103	109	106
27	276	220	223	225	218	571	644	207	105	102	111	106
28	281	242	222	224	215	571	631	208	106	101	111	106
29	282	229	223	225	230	571	627	207	107	101	111	106
30	279	228	220	224	---	575	627	209	106	103	110	112
31	232	---	219	224	---	921	---	173	---	105	111	---
TOTAL	9195	6918	7011	6907	6384	34049	30286	12758	3813	3335	3295	3299
MEAN	297	231	226	223	220	1098	1010	412	127	108	106	110
MAX	474	254	235	225	230	2820	1440	639	158	113	115	127
MIN	219	220	219	221	215	242	627	173	103	101	101	106
AC-FT	18240	13720	13910	13700	12660	67540	60070	25310	7560	6610	6540	6540

## SAN JOAQUIN RIVER BASIN

## 11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	652	363	864	1488	1874	1806	1551	1376	674	426	237	483
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 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1971 - 2004
ANNUAL TOTAL	104408	127250	
ANNUAL MEAN	286	348	979
HIGHEST ANNUAL MEAN			4786 1983
LOWEST ANNUAL MEAN			84.3 1989
HIGHEST DAILY MEAN	1340	Apr 20	2820 Mar 19
LOWEST DAILY MEAN	173	Mar 19	101 Jul 28
ANNUAL SEVEN-DAY MINIMUM	176	Mar 14	102 Aug 4
MAXIMUM PEAK FLOW			3100 Mar 17
MAXIMUM PEAK STAGE			9.23 Mar 17
ANNUAL RUNOFF (AC-FT)	207100	252400	708900
10 PERCENT EXCEEDS	524	837	3130
50 PERCENT EXCEEDS	227	222	249
90 PERCENT EXCEEDS	183	106	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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1730	564	233	222	286	1090	2550	2650	1530	1760	2520	2520
2	753	502	296	252	419	646	3710	2860	1860	2950	2250	1860
3	1180	447	407	871	325	858	3460	3150	1310	2680	2540	1280
4	1230	427	448	308	289	742	3520	2480	1900	2700	2690	1220
5	999	464	281	320	282	567	3600	2300	1790	2630	2910	1420
6	1660	476	280	240	242	931	3400	2710	2230	2800	2500	2340
7	864	684	247	236	454	1120	3400	3140	1860	2590	2620	2550
8	918	422	274	236	233	1140	3210	2770	1940	2770	2380	1830
9	976	467	258	266	416	1140	2540	2800	3180	2850	2130	1740
10	1720	384	269	237	249	1190	2430	3030	2520	3270	2490	2010
11	1790	234	245	231	240	1940	2520	2670	2570	3120	2920	560
12	2000	226	385	245	235	2370	2780	2400	2180	3110	2800	845
13	1620	228	281	252	310	2070	2820	2620	2450	2450	2600	1250
14	2300	357	252	267	273	2530	3230	2640	2400	2530	1820	1260
15	1830	239	283	283	237	2980	3240	1990	2730	2770	2470	1800
16	1550	224	232	353	520	3150	3120	2620	2860	2980	2750	1550
17	1860	220	225	242	399	4680	3220	2170	2870	2800	2820	785
18	1880	236	277	236	724	4830	3260	2270	2770	3110	2270	822
19	2300	226	226	235	1720	4850	3180	2160	2250	2990	1990	1380
20	2540	229	232	248	1900	4910	3380	2060	2480	3230	2280	1060
21	2120	228	232	243	1500	3630	3040	2360	2660	e3060	1770	1030
22	1800	354	257	241	1450	3680	2590	1870	2720	e2910	1100	489
23	1050	373	302	256	934	3790	2900	1560	2400	2720	2130	568
24	1020	509	331	495	788	3550	3070	2030	2900	e2180	2310	766
25	1040	436	251	581	581	3210	2830	2030	3200	2360	2320	472
26	1300	221	223	457	352	3680	2800	2920	2990	2760	2010	486
27	1110	221	224	433	288	3340	2520	2320	2920	2620	1720	375
28	934	1020	289	548	215	2840	2200	1850	2880	3040	2020	484
29	953	786	335	610	564	1660	2470	1930	2480	2450	2250	295
30	622	715	241	243	---	1620	3050	2100	2070	3050	2140	593
31	330	---	220	485	---	2370	---	1990	---	2700	2360	---
TOTAL	43979	12119	8536	10372	16425	77104	90040	74450	72900	85940	71880	35640
MEAN	1419	404	275	335	566	2487	3001	2402	2430	2772	2319	1188
MAX	2540	1020	448	871	1900	4910	3710	3150	3200	3270	2920	2550
MIN	330	220	220	222	215	567	2200	1560	1310	1760	1100	295
AC-FT	87230	24040	16930	20570	32580	152900	178600	147700	144600	170500	142600	70690

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2004, BY WATER YEAR (WY)

MEAN	1340	760	1225	1673	2087	2671	3199	3245	2916	3052	2545	1776
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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1971 - 2004

ANNUAL TOTAL	542860	599385		
ANNUAL MEAN	1487	1638		2217
HIGHEST ANNUAL MEAN				6186
LOWEST ANNUAL MEAN				442
HIGHEST DAILY MEAN	4000	Jul 19	4910	Mar 20
LOWEST DAILY MEAN	182	Jan 29	215	Feb 28
ANNUAL SEVEN-DAY MINIMUM	198	Jan 25	229	Nov 15
ANNUAL RUNOFF (AC-FT)	1077000		1189000	1606000
10 PERCENT EXCEEDS	3010		3060	4550
50 PERCENT EXCEEDS	1410		1780	1890
90 PERCENT EXCEEDS	232		242	246

e Estimated.

## 11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA—Continued

## WATER-QUALITY RECORDS

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 Oct. 1, Oct. 30 to Nov. 4, which are rated good. 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, 15.5°C, June 22; minimum recorded, 10.0°C, many days in December, March and April.

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.5	12.0	12.5	11.5	12.0	11.5	11.5	11.0	11.0	10.5	11.0	10.5
2	13.0	12.0	12.0	11.5	12.0	11.5	11.5	11.0	11.0	10.5	11.0	10.5
3	13.0	12.0	12.0	11.5	12.0	11.5	11.5	11.0	11.0	10.5	11.0	10.5
4	13.0	12.0	12.0	11.0	12.0	11.5	11.5	10.5	11.0	10.5	11.0	10.0
5	13.0	12.0	12.5	11.5	12.0	11.5	11.0	10.5	11.0	10.5	11.0	10.0
6	13.0	12.0	12.0	11.5	12.0	12.0	11.0	10.5	11.0	10.5	11.5	10.5
7	13.5	12.0	12.5	12.0	12.5	11.5	11.5	11.0	11.5	10.5	11.5	10.5
8	13.0	12.0	12.0	12.0	11.5	11.0	12.0	11.0	11.0	10.5	11.5	10.5
9	13.0	12.0	12.5	12.0	11.5	11.0	11.5	11.0	11.0	10.5	11.5	10.5
10	13.0	12.0	12.5	12.0	11.5	11.0	11.5	11.0	11.0	10.5	11.5	10.5
11	13.0	11.5	12.5	11.5	11.5	11.0	11.0	11.0	11.5	10.5	11.0	10.5
12	13.0	12.0	12.0	11.5	11.5	11.0	11.5	11.0	11.5	10.5	11.0	10.0
13	13.0	11.5	12.5	12.0	12.0	11.5	11.0	11.0	11.0	10.5	11.5	10.5
14	13.0	11.5	12.5	12.0	12.0	11.0	11.0	11.0	11.0	10.5	11.0	10.5
15	13.0	12.0	12.0	11.5	11.5	11.0	11.0	11.0	11.5	10.5	11.0	10.5
16	13.0	11.5	12.0	11.5	11.5	10.5	11.0	11.0	11.0	11.0	11.0	10.5
17	12.5	12.0	12.5	12.0	11.0	10.5	11.0	10.5	11.0	10.5	11.0	10.5
18	13.0	12.0	12.0	11.5	11.5	11.0	11.0	10.5	11.0	10.5	11.0	10.5
19	13.0	12.0	12.0	11.5	11.5	11.0	11.0	11.0	11.5	10.5	11.0	10.0
20	13.0	12.0	12.0	11.5	11.5	11.0	11.0	10.5	11.0	10.5	11.0	10.0
21	13.0	12.0	12.0	11.0	11.5	11.5	11.0	10.5	11.0	10.5	11.0	10.0
22	13.0	12.0	11.5	11.0	12.0	11.5	11.0	10.5	11.0	10.5	11.0	10.0
23	13.0	12.0	11.5	11.0	11.5	11.5	11.0	10.5	11.0	10.5	11.0	10.0
24	13.0	12.0	11.5	11.0	11.5	11.5	11.0	10.5	11.0	10.5	11.0	10.0
25	13.0	12.0	11.5	11.0	11.5	11.0	11.0	10.5	11.0	10.5	10.5	10.0
26	13.0	12.0	11.5	11.0	11.5	10.5	11.0	10.5	11.0	10.5	11.0	10.0
27	13.0	12.0	11.5	11.0	11.0	10.5	11.0	10.5	11.5	10.5	11.5	10.0
28	13.0	12.0	12.0	11.0	11.0	10.0	11.0	10.5	11.5	10.5	11.5	10.0
29	13.0	12.0	11.5	11.0	11.0	10.5	11.0	10.5	11.5	10.5	11.5	10.0
30	12.5	11.5	11.5	11.5	11.5	10.5	11.0	10.5	---	---	11.0	10.0
31	12.0	11.5	---	---	11.5	11.0	11.0	10.5	---	---	11.0	10.0
MONTH	13.5	11.5	12.5	11.0	12.5	10.0	12.0	10.5	11.5	10.5	11.5	10.0

## 11289650 TUOLUMNE RIVER BELOW LA GRANGE DAM, NEAR LA GRANGE, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.0	10.0	12.0	10.5	13.0	10.5	14.0	11.5	14.0	11.5	14.0	11.5
2	11.0	10.0	12.0	10.5	13.5	11.0	13.5	11.5	14.0	11.5	14.0	12.0
3	11.0	10.0	12.0	10.5	13.0	11.0	14.0	11.5	15.0	11.5	13.5	11.5
4	11.0	10.0	12.0	10.5	13.5	11.0	14.0	11.0	14.0	11.5	13.5	11.5
5	11.0	10.0	12.0	10.5	13.5	10.5	14.5	11.5	14.0	11.5	14.0	11.5
6	11.0	10.0	11.5	10.5	13.5	11.0	14.5	11.5	14.0	11.5	14.0	11.5
7	11.5	10.0	12.0	10.5	13.5	11.0	14.0	11.5	14.0	11.5	14.0	11.5
8	11.5	10.0	12.0	10.5	13.0	11.0	14.0	11.5	14.0	11.5	14.0	11.5
9	11.5	10.0	12.0	10.5	13.0	11.0	14.0	11.5	14.0	11.5	14.0	11.5
10	11.5	10.0	12.0	10.5	13.5	11.0	14.0	11.5	14.0	11.5	14.0	11.5
11	11.5	10.0	12.0	10.5	13.0	11.0	14.0	11.0	14.0	11.5	13.5	11.5
12	11.5	10.0	12.0	10.5	13.5	11.0	14.0	11.5	13.5	11.5	14.0	12.5
13	11.0	10.0	12.0	10.5	13.5	11.0	14.0	11.5	14.0	11.5	13.5	12.0
14	11.0	10.0	12.0	10.5	13.5	11.0	14.0	11.5	14.0	11.5	13.5	11.5
15	11.0	10.0	12.0	10.5	13.5	11.0	14.0	11.0	14.0	11.5	13.5	11.5
16	11.0	10.0	12.0	10.5	13.5	11.0	14.0	11.5	14.0	11.5	13.5	11.5
17	11.0	10.0	12.5	10.5	13.5	11.0	14.0	11.5	14.0	11.5	14.0	11.5
18	11.0	10.0	12.5	10.5	13.5	11.0	14.0	11.5	14.0	11.5	13.0	12.0
19	11.0	10.5	13.0	10.5	14.0	11.0	14.5	11.5	14.0	11.5	12.5	11.5
20	11.0	10.5	13.0	10.5	14.0	11.0	14.5	11.5	14.0	11.5	13.5	11.5
21	11.5	10.5	12.5	10.5	14.0	11.0	14.5	11.5	14.0	11.5	13.5	11.5
22	11.5	10.5	13.0	10.5	15.5	11.0	14.0	11.5	13.0	11.5	13.5	11.5
23	11.5	10.5	13.0	10.5	14.0	11.0	14.5	11.5	14.0	11.5	13.5	12.0
24	11.5	10.5	12.5	10.5	14.0	11.0	14.5	11.5	14.0	11.5	13.5	12.0
25	11.5	10.5	13.0	10.5	14.0	11.0	14.5	11.5	14.0	11.5	13.5	11.5
26	12.0	10.5	13.0	11.0	14.0	11.0	14.0	11.5	14.0	11.5	13.5	12.0
27	12.0	10.5	13.0	11.0	14.0	11.0	14.5	11.5	14.0	11.5	13.5	11.5
28	12.0	10.5	12.0	11.0	14.0	11.5	14.0	11.5	14.0	11.5	13.5	12.0
29	11.5	10.5	13.0	10.5	14.0	11.5	14.0	11.5	14.0	11.5	13.5	11.5
30	11.5	10.5	13.0	10.5	14.0	11.5	14.0	11.5	14.0	11.5	13.5	12.0
31	---	---	13.0	11.0	---	---	14.0	11.5	14.0	11.5	---	---
MONTH	12.0	10.0	13.0	10.5	15.5	10.5	14.5	11.0	15.0	11.5	14.0	11.5

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DATE	TIME	Depth at sample location, feet (81903)	Temperature, water, deg C (00010)	Location in X-sect. looking downstrm ft from l bank (00009)
MAY				
21...*	0920	1.00	11.3	6.00
21...*	0921	4.50	10.9	19.0
21...*	0923	6.50	10.9	32.0
21...*	0925	6.20	10.9	45.0
21...*	0927	6.20	10.9	58.0
21...*	0929	5.60	10.9	71.0
21...*	0931	4.60	10.9	84.0
21...*	0933	3.50	11.1	97.0
21...*	0935	2.40	11.1	110
21...*	0937	1.20	11.5	123
AUG				
10...*	1030	2.20	12.3	6.00
10...*	1033	5.90	12.1	17.0
10...*	1035	5.80	12.0	28.0
10...*	1037	5.50	12.0	39.0
10...*	1039	5.50	12.0	50.0
10...*	1040	5.20	12.0	61.0
10...*	1042	4.10	12.0	72.0
10...*	1043	3.00	12.1	83.0
10...*	1044	2.20	12.2	94.0
10...*	1046	1.40	12.3	105

\* Instantaneous discharge at time of cross-sectional measurement: May 21, 199 ft<sup>3</sup>/s; Aug. 10, 104 ft<sup>3</sup>/s.

## 11290000 TUOLUMNE RIVER AT MODESTO, CA

LOCATION.—Lat 37°37'37", long 120°59'13", in SE 1/4 SW 1/4 sec.33, T.3 S., R.9 E., Stanislaus County, Hydrologic Unit 18040002, on left bank, 100 ft west of bridge on Ninth Street in Modesto, and 0.25 mi downstream from Dry Creek.

DRAINAGE AREA.—1,884 mi<sup>2</sup>.

## 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 and crest-stage gage. Datum of gage is NGVD of 1929 (levels by Modesto Irrigation District). Prior to July 11, 1947, at site 1,600 ft downstream at same datum; July 11, 1947, to Nov. 16, 1953, at site 900 ft downstream at same datum. Nov. 17, 1953 to Apr. 28, 2004, at site 100 ft upstream, 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, 1941–2004).—Maximum discharge observed, 57,000 ft<sup>3</sup>/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<sup>3</sup>/s, Aug. 6, 1977.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	362	361	e310	369	312	411	1380	e705	e323	239	264	230
2	364	328	301	489	342	398	1670	e703	e343	239	265	221
3	360	328	303	695	343	398	1650	e765	e315	243	262	234
4	369	329	304	456	331	493	1670	789	304	238	264	246
5	344	326	311	402	398	599	1620	755	296	248	270	228
6	331	334	308	367	369	610	e1340	e769	291	248	e255	231
7	317	333	326	353	347	991	e1160	e794	280	249	256	215
8	305	337	313	341	335	1230	e1220	e842	265	244	251	208
9	316	358	304	333	323	1260	e1180	e858	259	248	247	216
10	304	325	328	328	316	1250	e1130	e882	249	250	239	230
11	340	350	342	326	316	1500	e1010	815	243	252	235	227
12	346	317	314	323	313	1650	e1080	785	257	253	231	238
13	336	311	310	319	307	1700	e1140	773	252	245	235	255
14	339	309	339	317	304	1710	e1400	781	256	247	237	245
15	359	308	325	317	304	1640	e1510	776	245	248	230	216
16	364	309	314	316	339	1460	e1470	667	237	244	230	209
17	510	306	309	320	315	1530	e1520	572	237	243	230	207
18	584	310	308	317	360	2570	e1570	446	233	251	226	220
19	535	305	343	315	947	2780	e1710	e409	234	242	e224	273
20	545	303	329	316	718	2830	e1660	e327	228	233	e219	291
21	527	301	317	317	447	2330	e1630	349	233	231	240	223
22	464	302	312	315	392	1890	e1660	341	214	232	253	221
23	446	307	313	311	367	1530	e1240	355	217	218	249	219
24	504	304	341	318	358	1170	e1050	346	217	223	228	217
25	652	302	364	315	410	1020	e810	337	226	227	232	217
26	509	297	343	313	888	977	e770	e325	230	235	223	214
27	415	293	323	315	1600	831	e826	e338	236	242	221	223
28	401	296	324	325	928	846	e820	e336	238	256	233	217
29	377	313	352	316	487	787	e813	369	236	257	232	212
30	352	308	354	313	---	755	e702	373	242	258	248	218
31	356	---	339	312	---	756	---	e372	---	261	237	---
TOTAL	12633	9510	10023	10789	13516	39902	38411	18054	7636	7544	7466	6821
MEAN	408	317	323	348	466	1287	1280	582	255	243	241	227
MAX	652	361	364	695	1600	2830	1710	882	343	261	270	291
MIN	304	293	301	311	304	398	702	325	214	218	219	207
AC-FT	25060	18860	19880	21400	26810	79150	76190	35810	15150	14960	14810	13530

e Estimated.

## 11290000 TUOLUMNE RIVER AT MODESTO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	845	955	1488	1864	2113	2048	1882	1868	1512	630	374	554
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 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1940 - 2004
ANNUAL TOTAL	145938	182305	
ANNUAL MEAN	400	498	1333
HIGHEST ANNUAL MEAN			5518
LOWEST ANNUAL MEAN			185
HIGHEST DAILY MEAN	1470	Apr 20	2830
LOWEST DAILY MEAN	265	Feb 8	207
ANNUAL SEVEN-DAY MINIMUM	267	Feb 5	217
MAXIMUM PEAK FLOW			2950
MAXIMUM PEAK STAGE			43.73
ANNUAL RUNOFF (AC-FT)	289500	361600	965900
10 PERCENT EXCEEDS	661	1160	3550
50 PERCENT EXCEEDS	337	318	559
90 PERCENT EXCEEDS	279	230	186

## 11290000 TUOLUMNE RIVER AT MODESTO, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1965–79, 1985–95, 2001 to current year.

CHEMICAL DATA: Water years 1985–88, 1993–95.

SPECIFIC CONDUCTANCE: Water years 1985–95, 2001 to current year.

WATER TEMPERATURE: Water years 1965–79, 1985–95, 2001 to current year.

SEDIMENT: Water years 1985–88, 1993–95.

PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: October 1985 to September 1988, December 1988 to March 1995, December 2000 to current year.

WATER TEMPERATURE: July 1965 to April 1979, October 1985 to March 1995, December 2000 to current year.

INSTRUMENTATION.—Water-quality monitor since December 2000.

REMARKS.—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 records rated excellent except for Oct. 21 to Nov. 1, Dec. 21 to Jan. 2, June 16 to July 8, July 29 to Aug. 5, Aug. 14–16, Sept. 21–29, which are rated good; Nov. 2–10, Dec. 12–20, May 11–14, Aug. 17, 18, Sept. 30, which are rated fair; and Nov. 11 to Dec. 11, Aug. 19–25, which are rated poor. Water-temperature records rated excellent except for June 8 to July 8, Aug. 30 to Sept. 16, which are rated good. Interruptions in record were due to malfunction of the recording instrument.

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, 227 microsiemens, Jan. 2; minimum recorded, 40 microsiemens, Mar. 20.

WATER TEMPERATURE: Maximum recorded, 30.0°C, July 4, 6, 23, 27; minimum recorded, 8.5°C, several days during November, December and January.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	123	120	107	102	---	142	155	120	159	157	160	152
2	120	112	117	107	144	142	227	148	162	126	161	157
3	118	113	118	112	144	142	187	147	154	149	161	153
4	117	110	115	111	143	141	156	148	160	151	155	125
5	118	113	111	109	145	139	163	156	160	154	125	100
6	120	117	111	107	145	108	165	160	159	155	100	92
7	124	119	120	107	145	130	164	163	164	159	97	88
8	129	124	114	108	149	141	164	162	165	162	89	79
9	129	127	112	107	145	144	163	161	168	164	79	70
10	131	128	117	109	146	118	161	156	165	162	70	68
11	130	120	120	116	143	101	160	159	166	162	75	69
12	120	116	142	120	148	141	159	159	163	161	75	64
13	120	115	151	117	148	145	175	159	163	162	66	64
14	120	116	117	114	149	104	159	158	166	162	74	65
15	120	113	116	115	151	144	159	158	163	162	73	64
16	122	106	120	116	154	148	159	159	162	128	80	72
17	122	90	147	120	160	150	159	158	163	153	80	76
18	93	76	148	112	160	153	159	158	155	130	78	61
19	77	74	147	112	153	115	159	159	169	130	61	45
20	77	72	191	147	161	146	160	159	142	130	50	40
21	80	75	198	189	163	156	159	158	159	142	50	42
22	85	79	200	179	163	158	159	---	167	156	47	43
23	91	80	179	124	167	153	159	158	170	162	51	46
24	92	75	130	123	162	124	159	154	168	162	---	51
25	82	69	146	124	150	112	158	157	166	100	---	---
26	82	69	141	139	201	138	158	157	162	112	---	---
27	96	82	143	141	206	150	159	156	136	111	---	---
28	97	91	143	142	206	162	158	154	136	111	---	---
29	103	95	143	136	186	120	158	155	152	136	---	---
30	107	103	143	139	152	135	158	157	---	---	---	---
31	106	103	---	---	155	152	158	154	---	---	---	---
MONTH	131	69	200	102	---	101	227	---	170	100	---	---

## 11290000 TUOLUMNE RIVER AT MODESTO, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	160	151	191	171	184	148	---	---
2	---	---	---	---	168	144	194	167	180	159	---	---
3	---	---	---	---	179	164	195	164	174	164	---	---
4	---	---	---	---	194	179	207	175	176	165	---	---
5	---	---	---	---	202	178	183	165	179	---	---	---
6	---	---	---	---	196	173	220	174	182	---	---	---
7	---	---	---	---	191	154	187	168	183	147	---	---
8	---	---	---	---	188	173	197	157	183	164	---	---
9	---	---	---	---	187	180	181	158	186	163	---	---
10	---	---	---	---	197	182	183	157	197	165	---	---
11	---	---	74	---	200	196	189	156	192	163	---	---
12	---	---	73	70	199	159	185	153	186	160	---	---
13	---	---	74	71	190	175	189	174	174	154	---	---
14	---	---	74	69	181	158	188	179	161	134	---	---
15	---	---	75	71	204	173	188	166	164	139	---	---
16	---	---	85	75	208	203	186	170	165	147	---	---
17	---	---	109	82	212	199	182	170	157	132	180	162
18	---	---	---	111	199	191	172	135	158	132	180	163
19	---	---	---	---	199	169	165	146	152	136	164	137
20	---	---	161	---	194	174	175	162	143	122	162	136
21	---	---	158	132	195	161	169	158	137	105	192	162
22	---	---	160	134	194	176	172	144	134	106	192	183
23	---	---	155	132	197	140	180	160	139	103	183	171
24	---	---	152	137	173	157	176	161	136	113	180	168
25	---	---	158	144	182	173	180	163	199	116	184	171
26	---	---	159	150	184	170	175	149	---	---	193	184
27	---	---	158	131	184	158	192	166	---	---	195	177
28	---	---	158	126	188	165	179	151	---	---	193	182
29	---	---	145	123	198	172	175	157	---	---	195	188
30	---	---	136	124	198	158	177	159	---	---	192	182
31	---	---	151	133	---	---	185	143	---	---	---	---
MONTH	---	---	---	---	212	140	220	135	---	---	---	---

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	1	21.5	20.0	15.0	14.0	12.0	11.0	10.0	9.5	11.0	10.0	13.5
2	21.0	19.5	14.0	12.5	12.0	11.5	10.5	9.0	11.0	10.5	14.5	12.0
3	21.5	19.0	14.0	12.5	12.5	12.0	9.5	9.0	11.0	10.0	14.0	12.5
4	21.0	19.5	13.0	11.5	12.5	12.0	9.5	8.5	11.5	10.5	14.5	12.0
5	21.0	19.0	13.5	12.0	13.0	12.5	9.5	8.5	11.5	9.5	14.0	12.0
6	21.5	19.0	14.0	12.5	13.5	12.5	9.5	8.5	11.5	10.0	14.5	12.5
7	21.5	19.5	14.5	13.0	13.5	12.5	10.5	9.0	12.0	10.5	15.0	13.0
8	21.5	19.5	14.5	13.0	12.5	11.5	11.0	10.0	12.0	10.0	14.5	12.5
9	21.0	19.0	15.5	14.0	12.0	11.5	11.5	10.5	12.0	10.5	15.0	13.0
10	19.5	17.5	14.5	13.5	12.5	11.5	12.0	11.0	12.0	10.5	15.5	13.5
11	19.5	17.0	14.5	13.5	12.0	10.5	12.0	11.5	12.0	10.5	15.0	13.5
12	19.0	17.0	14.0	13.0	11.5	10.0	12.0	11.5	12.5	10.5	15.0	13.5
13	18.5	16.5	14.5	13.5	12.0	11.0	11.5	11.0	12.0	11.0	15.5	13.5
14	18.5	16.0	14.0	13.0	12.0	11.0	11.0	10.5	13.0	11.0	15.5	14.0
15	18.0	16.5	14.0	13.0	11.5	10.0	11.0	10.5	13.0	11.5	15.5	14.0
16	18.0	16.5	13.5	12.5	11.0	10.0	11.0	10.5	13.0	12.0	16.0	14.0
17	18.0	16.5	14.5	13.5	10.5	10.0	10.5	10.5	14.0	12.0	15.5	13.5
18	17.5	16.0	13.5	12.5	10.5	9.5	11.0	10.5	14.0	12.5	14.0	12.5
19	17.5	16.0	13.5	12.5	10.5	10.0	10.5	10.5	13.0	11.5	14.0	12.5
20	17.5	16.0	14.0	12.5	11.0	10.5	11.0	10.0	13.5	12.5	13.5	12.0
21	17.5	16.0	13.5	12.0	11.5	11.0	10.5	9.0	14.0	12.5	14.0	12.0
22	17.5	16.0	12.0	10.5	12.0	11.5	11.0	---	13.5	13.0	14.5	13.0
23	18.0	16.0	11.0	10.0	12.0	11.5	10.8	9.8	14.5	12.5	15.0	12.9
24	17.5	16.0	10.5	10.0	12.5	12.0	11.0	10.0	14.5	13.0	---	13.0
25	17.5	16.0	10.0	9.0	12.0	11.0	11.5	10.5	14.0	12.0	---	---
26	17.5	16.0	10.0	8.5	11.0	10.0	10.5	9.5	13.0	10.5	---	---
27	17.5	15.5	10.0	8.5	10.5	9.5	11.0	10.5	12.5	11.5	---	---
28	17.5	15.5	10.5	9.5	9.5	8.5	11.5	10.5	13.0	11.5	---	---
29	17.5	16.0	10.5	10.0	9.5	8.5	11.5	10.0	13.5	12.0	---	---
30	16.5	15.0	11.0	10.5	10.0	9.0	11.5	10.5	---	---	---	---
31	15.5	14.5	---	---	10.5	9.5	11.5	10.0	---	---	---	---
MONTH	21.5	14.5	15.5	8.5	13.5	8.5	12.0	---	14.5	9.5	---	---

## SAN JOAQUIN RIVER BASIN

11290000 TUOLUMNE RIVER AT MODESTO, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	26.0	22.0	28.0	23.5	27.4	24.1	27.5	23.5
2	---	---	---	---	26.5	22.5	28.5	24.5	27.0	23.6	27.0	24.0
3	---	---	---	---	26.0	23.0	29.0	25.0	27.6	23.0	25.0	22.0
4	---	---	---	---	26.5	22.5	30.0	25.0	28.2	23.9	25.5	21.5
5	---	---	---	---	26.5	22.5	29.5	26.0	---	23.5	26.5	22.0
6	---	---	---	---	26.5	23.0	30.0	26.0	27.0	---	26.5	23.0
7	---	---	---	---	26.0	22.5	29.5	25.5	27.5	23.5	27.0	23.0
8	---	---	---	---	25.5	21.5	29.0	25.0	29.0	24.5	27.5	23.5
9	---	---	---	---	26.0	21.5	28.0	24.0	28.5	24.5	27.5	23.5
10	---	---	19.0	---	26.5	22.0	28.0	23.5	29.0	24.0	26.5	23.5
11	---	---	19.0	16.0	26.5	22.5	28.5	23.5	29.0	25.0	26.5	23.0
12	---	---	19.0	16.0	26.0	22.0	28.5	24.5	29.5	25.5	26.0	23.0
13	---	---	19.5	16.0	26.5	23.0	29.0	24.0	28.5	25.0	25.0	22.0
14	---	---	20.0	16.5	25.5	23.0	28.5	24.0	27.5	24.0	24.5	21.5
15	---	---	20.0	17.0	28.0	24.0	28.5	23.5	27.0	23.5	25.0	21.5
16	---	---	20.5	17.5	29.0	25.0	29.0	24.5	28.0	24.0	26.0	22.0
17	---	---	21.0	17.5	28.5	24.5	29.0	24.5	28.0	24.0	25.5	22.0
18	---	---	---	17.5	28.0	24.0	27.5	24.5	28.5	24.5	22.0	20.0
19	---	---	---	---	27.0	23.5	28.0	24.5	28.5	25.0	20.0	19.0
20	---	---	22.5	---	28.0	23.5	29.0	25.0	28.0	24.5	20.5	18.0
21	---	---	22.5	19.0	27.0	23.0	29.5	25.0	27.5	24.0	22.0	18.0
22	---	---	23.5	19.5	28.0	24.0	29.5	25.0	25.5	23.0	22.0	18.5
23	---	---	23.0	19.5	27.0	23.0	30.0	25.5	26.0	22.5	22.5	19.0
24	---	---	23.5	20.0	27.5	23.0	29.5	25.5	27.0	23.5	23.0	19.5
25	---	---	23.5	20.0	27.5	23.0	29.5	25.0	26.5	23.0	23.0	19.5
26	---	---	24.5	21.0	28.0	23.5	29.5	25.5	26.5	23.0	23.0	19.5
27	---	---	25.0	21.5	28.0	23.0	30.0	26.0	27.0	23.0	22.5	19.5
28	---	---	23.5	21.5	29.0	24.5	29.0	25.0	27.5	23.5	22.5	19.5
29	---	---	24.0	20.5	28.5	24.5	28.5	25.0	27.5	24.0	22.0	19.5
30	---	---	25.0	21.0	27.5	24.0	29.0	24.5	27.0	23.5	22.0	19.5
31	---	---	24.5	21.5	---	---	28.0	25.0	27.0	23.5	---	---
MONTH	---	---	---	---	29.0	21.5	30.0	23.5	---	---	27.5	18.0

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DATE	TIME	Depth at sample location, feet (81903)	Specif. conductance, uS/cm 25 degC (00095)	Temperature, deg C (00010)	Location in X-sect. looking dwnstrm ft from l bank (00009)
MAY					
20...*	1338	1.20	141	21.2	6.00
20...*	1339	2.20	141	21.2	18.0
20...*	1340	2.70	141	21.3	30.0
20...*	1342	2.50	141	21.3	42.0
20...*	1343	2.40	141	21.3	54.0
20...*	1344	2.30	141	21.3	66.0
20...*	1345	2.40	141	21.3	78.0
20...*	1346	2.20	141	21.3	90.0
20...*	1347	2.10	141	21.3	102
20...*	1348	1.90	141	21.3	114
AUG					
11...*	1035	1.00	179	25.2	6.00
11...*	1036	1.50	179	25.2	18.0
11...*	1037	2.30	179	25.2	30.0
11...*	1038	2.00	179	25.2	42.0
11...*	1039	2.00	179	25.2	54.0
11...*	1040	2.00	179	25.2	66.0
11...*	1041	1.80	179	25.2	78.0
11...*	1042	2.00	179	25.2	90.0
11...*	1043	1.50	179	25.2	102
11...*	1044	1.00	179	25.2	114

\* Instantaneous discharge at time of cross-sectional measurement: May 20, 327 ft<sup>3</sup>/s, estimated; Aug. 11, 236 ft<sup>3</sup>/s.





## 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<sup>2</sup>.

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.

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, 15,300 acre-ft, several days in May and June, maximum gage height, 136.91 ft, May 28; minimum, 2,260 acre-ft, Mar. 7–9, minimum gage height, 56.69 ft, Mar. 8.

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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6760	6120	5160	4370	3320	2460	5010	11200	15300	14800	13300	10000
2	6730	6080	5130	4320	3300	2420	5120	11600	15300	14900	13200	9920
3	6710	6040	5120	4270	3260	2380	5240	12200	15300	14900	13100	9830
4	6700	6000	5120	4250	3220	2350	5430	12800	15200	15000	13000	9700
5	6680	5960	5120	4230	3180	2310	5680	13500	15200	15000	12900	9600
6	6670	5930	5130	4210	3150	2280	5920	14000	15300	15000	12800	9500
7	6640	5890	5130	4190	3110	2260	6120	14400	15200	15000	12700	9400
8	6630	5850	5130	4160	3070	2260	6370	14700	15100	15000	12600	9300
9	6610	5830	5140	4130	3040	2260	6640	15100	15100	15000	12500	9200
10	6600	5800	5110	4100	3000	2290	6890	15300	15100	14900	12400	9090
11	6570	5770	5070	4070	2960	2320	7110	15200	15100	14900	12300	8990
12	6550	5740	5040	4040	2920	2350	7340	15200	15100	14800	12200	8880
13	6540	5710	5010	4030	2880	2390	7580	15200	15200	14800	12000	8780
14	6520	5670	4970	4010	2840	2450	7760	15200	15200	14700	11900	8670
15	6500	5650	4940	3960	2810	2540	7890	15200	15200	14700	11800	8570
16	6480	5620	4900	3930	2810	2640	7980	15200	15200	14600	11700	8470
17	6460	5580	4860	3890	2790	2730	8050	15200	15200	14500	11700	8390
18	6440	5560	4820	3860	2780	2850	8110	15200	15100	14500	11600	8310
19	6430	5530	4780	3820	2760	3000	8150	15200	15100	14400	11500	8230
20	6400	5500	4750	3780	2730	3170	8190	15200	15100	14300	11400	8160
21	6380	5470	4720	3740	2700	3380	8240	15200	15100	14300	11300	8090
22	6370	5440	4680	3700	2670	3610	8270	15200	15100	14200	11200	8010
23	6350	5410	4640	3660	2640	3850	8340	15200	15100	14100	11100	7960
24	6330	5370	4630	3630	2610	4060	8470	15200	15100	14000	11000	7910
25	6300	5340	4600	3590	2600	4230	8700	15200	15000	13900	10900	7860
26	6290	5320	4570	3550	2580	4350	9060	15200	15000	13900	10800	7820
27	6270	5280	4530	3510	2550	4430	9520	15300	15000	13800	10600	7770
28	6260	5250	4500	3470	2520	4510	9990	15300	14900	13700	10500	7720
29	6230	5210	4480	3440	2490	4620	10400	15200	14800	13600	10400	7680
30	6200	5180	4440	3400	---	4750	10800	15200	14700	13500	10300	7630
31	6160	---	4410	3360	---	4880	---	15200	---	13400	10200	---
MAX	6760	6120	5160	4370	3320	4880	10800	15300	15300	15000	13300	10000
MIN	6160	5180	4410	3360	2490	2260	5010	11200	14700	13400	10200	7630
a	87.32	80.57	75.01	66.65	58.75	78.46	113.76	136.37	133.75	127.30	110.99	97.06
b	-620	-980	-770	-1050	-870	+2390	+5920	+4400	-500	-1300	-3200	-2570

CAL YR 2003 MAX 15400 MIN 1580 b +2840  
WTR YR 2004 MAX 15300 MIN 2260 b +850

a Gage height, in feet, at end of month.  
b Change in contents, in acre-feet.



## 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<sup>2</sup>.

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 5, 6, gage height, 4,915.60 ft, June 6; minimum, 5,980 acre-ft, Mar. 6, 7, gage height, 4,734.065 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32800	23100	23800	18900	10300	7090	11900	28600	63800	63800	56400	45200
2	32500	22900	23900	18500	10000	6740	11900	30200	63900	63400	56300	44700
3	32400	22700	24000	18200	9750	6580	11900	32200	64000	63100	56200	44500
4	32400	22400	23900	17600	9450	6540	12200	34300	64100	62700	55900	44200
5	32300	22300	23800	17000	9430	6130	12800	36300	64200	62300	55600	43800
6	31800	22200	24200	16200	9140	5980	13300	38000	64200	61900	55300	43300
7	31200	22200	24600	15900	9340	5980	13900	39900	64100	61700	54900	42900
8	30900	22200	24500	15600	9100	6100	14700	41900	64100	61500	55000	42400
9	30200	22100	24300	15300	9180	6330	16000	43200	63800	61600	54100	42000
10	29800	21900	23700	15300	9100	6510	17100	44900	63500	62000	53500	41700
11	29500	21900	23200	15400	9020	6690	18000	46400	63200	61900	52900	41300
12	28800	21800	23000	15100	8730	6720	18900	47300	62100	61500	52400	40900
13	28500	21900	22800	14700	8370	6730	19800	48300	62700	61400	52200	40500
14	27700	22000	22800	14400	8440	6720	20400	49700	62700	61200	52200	40100
15	27200	22200	22500	14100	8420	7000	20600	51100	63300	60900	52100	39800
16	26600	22100	22400	13800	8540	7050	20600	52400	63900	60700	51700	39500
17	26000	22200	22300	13800	8880	7040	20900	53700	63900	60600	51200	39200
18	26000	22400	22100	13700	9240	7180	21200	54900	63800	60500	50800	39000
19	25800	22500	22100	13600	9340	7500	20900	55700	63600	60300	50400	39000
20	25600	22600	22000	13400	9210	7940	20600	56400	63300	60000	49900	39100
21	25400	22700	21700	13000	9190	8620	20300	56700	63000	59700	49600	38800
22	25300	22800	21400	12400	8960	9400	19900	56800	62900	59300	49700	38600
23	25300	22900	20700	12200	8670	10200	20000	57000	63100	59100	49600	38200
24	24900	23000	21100	12000	8370	10900	20500	57200	63200	59000	49200	37800
25	24800	23100	21400	11800	8300	11400	21000	57400	63300	58700	48700	37700
26	24600	23200	21200	11400	7940	11600	22000	57200	63400	58200	48200	37300
27	24200	23300	20600	11000	7740	11400	23400	58300	63600	57700	47800	36800
28	24000	23400	20000	10700	7840	11300	24900	60300	63600	57200	47300	36600
29	23800	23600	19500	10400	7430	11300	26200	61600	63600	56900	46800	36400
30	23500	23700	19000	10100	---	11400	27200	62400	63900	56800	46300	36200
31	23300	---	18900	10300	---	11700	---	63000	---	56500	45800	---
MAX	32800	23700	24600	18900	10300	11700	27200	63000	64200	63800	56400	45200
MIN	23300	21800	18900	10100	7430	5980	11900	28600	62100	56500	45800	36200
a	4803.95	4802.12	4789.38	4758.31	4746.78	4763.36	4816.12	4912.84	4914.94	4897.08	4869.32	4842.89
b	-10000	+400	-4800	-8600	-2870	+4270	+15500	+35800	+900	-7400	-10700	-9600

CAL YR 2003 b +12330

WTR YR 2004 b +2900

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<sup>2</sup>.

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, 1973–79.

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<sup>3</sup>/s, Jan. 2, 1997, gage height, 18.02 ft, from rating curve extended above 5,200 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 12.20 ft; minimum daily, 3.3 ft<sup>3</sup>/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<sup>3</sup>/s, by slope-area measurement.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	38	23	54	48	101	299	200	56	60	39	37
2	39	38	24	52	51	98	265	209	258	54	39	36
3	39	40	23	47	53	94	274	216	431	50	39	36
4	39	38	23	43	49	93	301	215	347	47	39	36
5	39	37	26	43	48	92	317	203	337	44	39	36
6	39	19	41	43	47	97	313	172	350	41	39	36
7	39	22	107	45	48	118	291	149	366	37	39	36
8	39	22	48	49	47	150	304	140	247	40	40	35
9	38	33	35	51	46	193	311	131	156	40	40	35
10	38	26	38	52	46	230	304	122	48	40	39	35
11	38	23	38	52	46	239	284	109	41	41	39	35
12	38	22	33	53	47	242	283	100	37	40	39	35
13	37	22	43	53	48	242	277	94	35	39	39	35
14	37	22	50	53	48	272	254	90	33	38	39	35
15	37	26	42	54	48	322	233	86	43	38	39	35
16	37	25	36	53	106	330	208	82	42	38	39	34
17	36	24	34	52	197	331	190	79	41	37	39	34
18	36	24	34	53	165	367	172	76	41	37	39	34
19	36	23	34	53	130	381	164	72	40	37	38	37
20	36	23	40	52	115	385	175	69	38	37	38	38
21	36	23	48	50	103	424	186	66	37	36	38	37
22	36	23	43	49	97	451	180	64	37	36	38	37
23	36	23	40	48	94	449	171	61	41	36	38	37
24	38	23	90	49	90	420	183	59	41	36	38	37
25	38	23	115	48	120	375	204	57	40	35	38	37
26	38	23	69	47	161	312	227	59	39	35	38	37
27	38	23	54	49	123	271	244	55	39	35	37	37
28	38	23	50	49	110	269	243	76	39	35	37	37
29	38	23	50	49	104	297	220	70	40	35	37	37
30	38	23	51	49	---	312	196	62	39	35	37	37
31	38	---	51	49	---	306	---	58	---	35	37	---
TOTAL	1168	777	1433	1543	2435	8263	7273	3301	3379	1224	1193	1080
MEAN	37.7	25.9	46.2	49.8	84.0	267	242	106	113	39.5	38.5	36.0
MAX	39	40	115	54	197	451	317	216	431	60	40	38
MIN	36	19	23	43	46	92	164	55	33	35	37	34
AC-FT	2320	1540	2840	3060	4830	16390	14430	6550	6700	2430	2370	2140
a	10760	2770	12400	15870	11760	33300	34210	28230	33540	17600	14800	12120

a Diversion, in acre-feet, through Donnell Powerplant (station 11292610), provided by Oakdale and South San Joaquin Irrigation District.

## SAN JOAQUIN RIVER BASIN

## 11292700 MIDDLE FORK STANISLAUS RIVER AT HELLS HALF ACRE BRIDGE, NEAR PINECREST, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	37.8	44.4	81.7	154	159	210	293	812	960	266	45.8	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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1958 - 2004	
ANNUAL TOTAL	70546		33069			
ANNUAL MEAN	193		90.4		258	
HIGHEST ANNUAL MEAN					868	
LOWEST ANNUAL MEAN					18.4	
HIGHEST DAILY MEAN	2630	Jun 3	451	Mar 22	17300	Jan 2 1997
LOWEST DAILY MEAN	19	Nov 6	19	Nov 6	3.3	Nov 9 1957
ANNUAL SEVEN-DAY MINIMUM	23	Nov 19	23	Nov 19	3.7	Nov 7 1957
MAXIMUM PEAK FLOW			586	Jun 3	24600	Jan 2 1997
MAXIMUM PEAK STAGE			5.75	Jun 3	18.02	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	139900		65590		187100	
TOTAL DIVERSION (AC-FT) a	237800		227400		257300	
10 PERCENT EXCEEDS	457		260		579	
50 PERCENT EXCEEDS	60		42		48	
90 PERCENT EXCEEDS	36		34		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<sup>2</sup>.

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, 95,300 acre-ft, July 6, gage height, 3,393.46 ft; minimum, 34,900 acre-ft, Mar. 9, gage height, 3,293.64 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72000	75600	71000	65100	48200	37000	57300	70500	75200	92500	86700	71000
2	72100	75600	70800	64600	47800	36800	58200	70500	76100	93300	86500	70500
3	72000	75700	70600	64100	47300	36400	59100	70400	77300	93900	85300	69800
4	71800	75800	70600	63700	46800	36000	59900	70400	78400	94600	84800	69200
5	71800	75800	70700	63500	46000	35800	60900	70700	79400	95000	84200	68800
6	72000	75800	70800	63400	45500	35500	61800	70700	80500	95300	83700	68400
7	72400	75600	71000	62800	44500	35200	62600	70700	81600	95100	83200	67900
8	72500	75600	71100	62200	44000	35000	63200	70400	82500	94500	82600	67400
9	72900	75700	71400	61800	43200	34900	63400	70400	83200	93900	82300	66900
10	73200	75700	72100	60900	42400	35200	63900	70300	83700	93600	82000	66300
11	73200	75600	72600	59900	41800	35500	64300	70100	84200	93900	81800	65800
12	73800	75600	72800	59400	41400	36000	64800	70100	84700	94400	81400	65400
13	73900	75300	73000	59000	40900	36500	65400	70100	85200	94700	80600	64900
14	74400	75100	73100	58500	40100	37200	65900	70000	85600	95000	79800	64700
15	74800	74900	73400	57900	39400	38000	66600	69800	85600	95000	79000	64100
16	75200	74800	73500	57400	38900	39200	67200	69700	85500	94500	78500	63500
17	75500	74400	73500	56600	38700	40300	67300	69700	86200	93900	78100	62900
18	75300	74300	73300	56000	38500	41600	67400	69700	86800	93400	77600	62100
19	75300	74000	72300	55300	38300	42800	68000	69800	87300	92800	77200	61200
20	75300	73800	71500	54700	38100	44000	68500	70000	87900	92400	76800	60200
21	75400	73500	70400	54300	37900	45300	69100	70600	88400	92200	76200	59700
22	75300	73300	70400	54000	37800	46700	69800	71100	88600	91800	75200	58900
23	75100	73000	70100	53400	37800	48100	70000	71700	88900	91300	74500	58400
24	75200	72800	69200	52900	37800	49300	70000	72200	89500	90600	73900	57800
25	75100	72500	68400	52300	37700	50500	70100	72800	90100	90100	73600	57100
26	75200	72300	67800	51900	37900	51600	70200	73300	90500	89900	73200	56600
27	75400	72000	67500	51400	37700	52500	70300	73400	90900	89600	72600	56100
28	75400	71800	67200	50900	37200	53400	70500	73600	91400	89200	72300	55300
29	75300	71500	67000	50400	37100	54400	70500	73600	91900	88700	71900	54700
30	75400	71300	66500	49900	---	55400	70700	74100	92100	88000	71600	54000
31	75500	---	65800	48900	---	56300	---	74700	---	87500	71200	---
MAX	75500	75800	73500	65100	48200	56300	70700	74700	92100	95300	86700	71000
MIN	71800	71300	65800	48900	37100	34900	57300	69700	75200	87500	71200	54000
a	3364.45	3357.85	3349.02	3320.21	3297.87	3333.31	3356.90	3363.12	3388.90	3382.35	3357.70	3329.18
b	+3900	-4200	-5500	-16900	-11800	+19200	+14400	+4000	+17400	-4600	-16300	-17200

CAL YR 2003 b +33500

WTR YR 2004 b -17600

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<sup>2</sup>.

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<sup>3</sup>/s, from rating curve extended above 5,400 ft<sup>3</sup>/s, on basis of spillway computation at Beardsley Dam, Jan. 2, 1997, gage height, 19.31 ft; minimum daily, 3.0 ft<sup>3</sup>/s, Oct. 10, 11, 1958. Combined flow, maximum daily discharge, 23,100 ft<sup>3</sup>/s, Jan. 2, 1997; minimum daily, 25 ft<sup>3</sup>/s, Oct. 23, 1986.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	143	142	142	142	142	141	140	140	141	139	141
2	142	143	142	142	142	142	142	140	139	140	140	35
3	142	143	142	142	142	142	143	140	139	140	140	127
4	142	141	142	142	142	142	143	140	140	140	140	142
5	142	140	142	141	142	142	143	140	147	141	141	141
6	142	140	142	142	142	142	143	141	146	139	141	140
7	142	140	142	142	142	142	143	139	144	141	141	140
8	142	141	142	142	142	142	142	140	144	142	140	141
9	142	140	142	142	142	142	143	140	143	141	140	140
10	142	138	142	142	142	142	142	139	139	140	140	140
11	142	138	142	142	142	142	141	139	140	140	139	140
12	142	141	142	141	142	142	142	140	140	140	140	140
13	142	141	142	142	142	142	142	140	140	140	140	140
14	142	139	142	142	142	142	142	142	140	141	140	140
15	142	141	142	142	142	142	143	142	140	142	141	139
16	142	138	142	142	142	142	141	142	140	142	140	140
17	142	140	142	142	142	142	140	142	140	142	140	140
18	143	141	142	142	142	142	140	142	141	142	140	143
19	143	140	142	142	142	142	140	141	139	142	140	144
20	141	140	142	142	142	143	140	139	139	141	140	145
21	140	140	142	142	142	143	140	140	140	139	140	142
22	140	142	142	142	142	143	141	140	138	141	140	142
23	140	142	142	142	142	143	140	140	140	142	140	141
24	140	141	142	142	142	143	141	140	139	141	140	140
25	140	142	142	142	142	142	140	139	139	141	139	140
26	140	142	142	142	142	143	141	139	139	142	139	141
27	141	142	142	142	142	143	141	138	139	142	140	142
28	142	142	142	142	142	143	142	140	140	141	140	142
29	142	142	142	142	142	143	141	140	141	141	140	140
30	142	142	142	142	---	143	140	140	141	140	140	141
31	143	---	142	142	---	143	---	140	---	139	141	---
TOTAL	4391	4225	4402	4400	4118	4413	4243	4344	4216	4366	4341	4109
MEAN	142	141	142	142	142	142	141	140	141	141	140	137
MAX	143	143	142	142	142	143	143	142	147	142	141	145
MIN	140	138	142	141	142	142	140	138	138	139	139	35
AC-FT	8710	8380	8730	8730	8170	8750	8420	8620	8360	8660	8610	8150
a	9550	5450	22410	37530	30580	34510	37070	32930	23880	24420	34330	377

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 - 2004, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	119	122	121	236	155	190	192	577	802	320	128	120						
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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1987 - 2004

ANNUAL TOTAL	79201	51568	
ANNUAL MEAN	217	141	257
HIGHEST ANNUAL MEAN			735 1995
LOWEST ANNUAL MEAN			76.6 1988
HIGHEST DAILY MEAN	2580 Jun 3	147 Jun 5	23100 Jan 2 1997
LOWEST DAILY MEAN	135 Jan 23	35 Sep 2	25 Oct 23 1986
ANNUAL SEVEN-DAY MINIMUM	135 Jan 22	123 Aug 28	44 Jan 19 1995
MAXIMUM PEAK FLOW		153 Nov 13	28200 Jan 2 1997
MAXIMUM PEAK STAGE		3.78 Nov 13	19.31 Jan 2 1997
ANNUAL RUNOFF (AC-FT)	157100	102300	186200
TOTAL DIVERSION (AC-FT) a	291100	293100	296300
10 PERCENT EXCEEDS	155	142	355
50 PERCENT EXCEEDS	141	142	142
90 PERCENT EXCEEDS	137	140	58

a Diversion, in acre-feet, through Beardsley Powerplant (station 11292820), provided by Oakdale and South San Joaquin Irrigation District.

## SAN JOAQUIN RIVER BASIN

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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	143	142	644	635	598	634	653	522	141	568	561
2	142	143	142	695	684	595	645	668	521	140	567	562
3	142	143	142	631	637	597	646	682	521	140	572	553
4	142	141	142	668	638	591	610	774	520	489	563	555
5	142	140	142	700	624	588	649	664	518	270	573	554
6	142	140	289	665	619	585	651	659	519	385	569	551
7	142	140	142	668	572	585	653	521	516	544	566	553
8	142	141	142	668	614	582	652	522	518	650	565	559
9	142	140	142	666	670	582	655	520	518	562	570	557
10	142	138	142	633	620	582	655	518	521	140	570	556
11	142	138	142	665	613	586	655	520	521	140	569	557
12	142	141	142	698	612	584	654	522	518	140	572	557
13	142	141	142	655	620	586	657	523	518	140	571	554
14	142	139	142	660	536	586	658	524	518	141	572	413
15	142	141	142	655	609	588	659	522	519	358	570	556
16	142	138	142	654	611	596	673	523	514	570	569	551
17	142	140	142	623	516	601	648	523	413	570	571	552
18	143	141	455	652	513	603	661	523	462	570	569	553
19	143	140	687	650	501	606	681	523	468	579	566	549
20	141	140	664	688	495	607	668	522	464	537	564	551
21	140	140	679	650	502	610	665	522	468	501	565	549
22	140	142	708	651	500	615	552	522	469	562	561	548
23	140	142	681	653	502	618	621	522	254	564	561	550
24	140	141	643	622	510	620	648	522	208	566	563	550
25	140	142	710	654	551	620	667	522	139	562	564	551
26	140	142	732	691	619	626	684	520	139	563	562	554
27	141	142	679	666	609	629	670	521	139	564	563	553
28	142	142	699	683	602	629	667	518	140	564	563	554
29	142	142	722	640	597	631	669	522	141	570	563	548
30	142	142	692	630	---	634	664	524	141	570	561	546
31	143	---	384	591	---	633	---	522	---	568	563	---
TOTAL	4391	4225	11696	20369	16931	18693	19571	17143	12347	13360	17565	16457
MEAN	142	141	377	657	584	603	652	553	412	431	567	549
MAX	143	143	732	700	684	634	684	774	522	650	573	562
MIN	140	138	142	591	495	582	552	518	139	140	561	413
AC-FT	8710	8380	23200	40400	33580	37080	38820	34000	24490	26500	34840	32640

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2004, BY WATER YEAR (WY)

MEAN	388	270	406	435	391	518	604	1042	1326	789	573	499
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	431	471	124
(WY)	1989	1989	1989	1989	1991	1991	1988	1990	1987	2004	1994	1988

## SUMMARY STATISTICS

FOR 2003 CALENDAR YEAR

FOR 2004 WATER YEAR

WATER YEARS 1986 - 2004

ANNUAL TOTAL	184009	172748		
ANNUAL MEAN	504	472	604	
HIGHEST ANNUAL MEAN			1165	1995
LOWEST ANNUAL MEAN			221	1988
HIGHEST DAILY MEAN	3190	Jun 3	774	May 4
LOWEST DAILY MEAN	137	Feb 15	138	Nov 10
ANNUAL SEVEN-DAY MINIMUM	139	Nov 10	139	Nov 10
ANNUAL RUNOFF (AC-FT)	365000	342600	437700	
10 PERCENT EXCEEDS	733	665	1080	
50 PERCENT EXCEEDS	466	556	506	
90 PERCENT EXCEEDS	142	141	138	

## 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<sup>2</sup>.

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<sup>3</sup>/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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	55	---	59	52
2	---	---	---	---	---	---	---	---	55	---	59	66
3	---	---	---	---	---	---	---	---	55	---	59	52
4	---	---	---	---	---	---	---	---	55	---	59	52
5	---	---	---	---	---	---	---	---	55	---	59	52
6	---	---	---	---	---	---	---	---	55	---	59	53
7	---	---	---	---	---	---	---	55	55	---	59	52
8	---	---	---	---	---	---	---	55	55	---	59	53
9	---	---	---	---	---	---	---	55	55	---	59	53
10	---	---	---	---	---	---	---	55	55	---	56	53
11	---	---	---	---	---	---	---	55	55	---	52	53
12	---	---	---	---	---	---	---	55	55	---	52	53
13	---	---	---	---	---	---	---	55	55	---	52	53
14	---	---	---	---	---	---	---	55	55	---	52	52
15	---	---	---	---	---	---	---	55	55	---	52	52
16	---	---	---	---	---	---	---	55	---	59	52	52
17	---	---	---	---	---	---	---	55	---	59	52	52
18	---	---	---	---	---	---	---	55	---	59	52	52
19	---	---	---	---	56	---	---	55	---	66	52	52
20	---	---	---	---	39	---	---	55	---	59	52	52
21	---	---	---	---	37	---	---	55	---	58	52	52
22	---	---	---	---	37	---	---	55	---	59	52	52
23	---	---	---	---	37	---	---	55	---	59	52	53
24	---	---	---	---	36	---	---	55	---	59	53	54
25	---	---	---	---	---	---	---	55	---	59	52	54
26	---	---	---	---	---	---	---	55	---	59	53	54
27	---	---	---	---	---	---	---	55	---	59	53	54
28	---	---	---	---	---	---	---	55	---	59	53	54
29	---	---	---	---	---	---	---	55	---	59	52	54
30	---	---	---	---	---	---	---	55	---	59	53	54
31	---	---	---	---	---	---	---	55	---	59	52	---
TOTAL	---	---	---	---	---	---	---	---	---	---	1684	1596
MEAN	---	---	---	---	---	---	---	---	---	---	54.3	53.2
MAX	---	---	---	---	---	---	---	---	---	---	59	66
MIN	---	---	---	---	---	---	---	---	---	---	52	52
AC-FT	---	---	---	---	---	---	---	---	---	---	3340	3170
a	0	0	0	18640	28310	30770	29720	30950	15410	15990	30960	29380

CAL YR 2003 a 252900

WTR YR 2004 a 230100

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<sup>2</sup>.

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 2003 TO SEPTEMBER 2004

## DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	3130	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	2457	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	1738	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	1882
8	---	---	---	---	---	---	---	---	---	2956	---	---
9	1442	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	2319	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	2240	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	787	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	2744	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	3086	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	1164	---	---	---	---	---	---	---	---	---	---	---
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<sup>2</sup>.

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, 2,520 acre-ft, several days during March–May, maximum gage height, 43.43 ft, Apr. 27, May 4; minimum, 1,070 acre-ft, Jan. 22, 23, minimum gage height, 36.38 ft, Jan. 23.

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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2250	2110	1640	1440	1120	1500	2480	2510	2460	2300	2210	2070
2	2250	2090	1620	1430	1150	1500	2480	2520	2460	2300	2200	2060
3	2250	2090	1590	1410	1160	1510	2500	2520	2460	2300	2200	2050
4	2250	2080	1570	1390	1160	1520	2510	2520	2450	2300	2200	2050
5	2250	2060	1570	1370	1160	1520	2520	2510	2440	2300	2190	2050
6	2240	2040	1620	1350	1170	1530	2500	2500	2430	2300	2180	2040
7	2240	2030	1640	1340	1180	1550	2510	2490	2420	2290	2180	2040
8	2240	2020	1620	1320	1180	1580	2510	2490	2400	2290	2170	2030
9	2240	2040	1610	1300	1180	1620	2510	2490	2390	2290	2170	2030
10	2240	2030	1620	1290	1180	1660	2500	2480	2380	2280	2160	2020
11	2240	2010	1610	1270	1190	1700	2500	2470	2370	2280	2160	2020
12	2230	2000	1590	1250	1190	1730	2510	2470	2360	2270	2160	2010
13	2230	1980	1580	1230	1200	1770	2490	2480	2360	2270	2150	2010
14	2230	1980	1590	1210	1200	1810	2490	2480	2360	2270	2140	2000
15	2230	1970	1570	1200	1210	1870	2480	2480	2360	2270	2140	2000
16	2230	1960	1550	1180	1250	1990	2480	2480	2360	2260	2140	2000
17	2230	1950	1530	1160	1290	2270	2470	2480	2350	2260	2130	1990
18	2220	1930	1510	1140	1340	2500	2470	2470	2350	2260	2130	1990
19	2220	1900	1500	1130	1350	2500	2460	2460	2340	2260	2120	1990
20	2220	1880	1490	1110	1360	2510	2470	2460	2330	2250	2120	1990
21	2220	1860	1480	1090	1370	2510	2470	2460	2320	2250	2110	1980
22	2220	1840	1460	1070	1380	2520	2470	2460	2320	2240	2110	1980
23	2210	1810	1450	1070	1390	2510	2480	2460	2310	2240	2100	1980
24	2200	1790	1470	1080	1400	2510	2490	2460	2310	2240	2100	1970
25	2200	1770	1470	1080	1440	2490	2510	2460	2300	2240	2100	1970
26	2200	1740	1450	1090	1470	2470	2520	2460	2300	2230	2090	1970
27	2180	1720	1430	1100	1480	2470	2520	2460	2300	2230	2090	1960
28	2170	1700	1420	1110	1480	2480	2510	2490	2300	2230	2080	1960
29	2150	1670	1440	1110	1490	2490	2500	2470	2300	2220	2080	1960
30	2130	1650	1420	1120	---	2490	2500	2460	2300	2220	2080	1950
31	2120	---	1400	1120	---	2500	---	2460	---	2210	2070	---
MAX	2250	2110	1640	1440	1490	2520	2520	2520	2460	2300	2210	2070
MIN	2120	1650	1400	1070	1120	1500	2460	2460	2300	2210	2070	1950
a	41.62	39.49	38.26	36.71	38.68	43.26	43.28	43.03	42.37	41.99	41.39	40.87
b	-130	-470	-250	-280	+370	+1010	0	-40	-160	-90	-140	-120

CAL YR 2003 MAX 2580 MIN 1040 b +360  
WTR YR 2004 MAX 2520 MIN 1070 b -300

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<sup>2</sup>.

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, 4,190 acre-ft, Apr. 27, May 2–5, maximum gage height, 42.51 ft, May 4; minimum, 2,220 acre-ft, Mar. 6–8, minimum gage height, 29.92 ft, Mar. 7, 8.

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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3140	2830	2590	2570	2340	2260	3380	4180	4150	3990	3650	3280
2	3140	2820	2580	2570	2350	2250	3440	4190	4150	3990	3640	3270
3	3120	2820	2570	2560	2350	2240	3500	4190	4140	3980	3630	3250
4	3110	2810	2560	2550	2340	2240	3580	4190	4140	3980	3610	3240
5	3110	2800	2570	2540	2330	2230	3690	4190	4140	3970	3600	3230
6	3100	2790	2600	2540	2320	2220	3790	4180	4140	3960	3590	3220
7	3080	2780	2600	2540	2320	2220	3880	4180	4130	3950	3580	3200
8	3080	2780	2590	2530	2310	2220	3990	4180	4130	3940	3560	3190
9	3070	2790	2590	2520	2300	2240	4100	4180	4130	3930	3550	3180
10	3060	2780	2600	2510	2290	2230	4170	4170	4120	3920	3540	3170
11	3050	2770	2600	2500	2280	2250	4180	4160	4120	3910	3530	3160
12	3040	2760	2590	2490	2280	2260	4180	4160	4120	3900	3510	3150
13	3020	2750	2590	2480	2270	2280	4170	4170	4120	3880	3500	3140
14	3010	2740	2590	2470	2260	2300	4170	4170	4110	3870	3490	3120
15	3010	2740	2590	2470	2260	2340	4160	4170	4110	3860	3480	3110
16	2990	2730	2580	2460	2270	2380	4150	4170	4100	3850	3470	3100
17	2980	2720	2570	2450	2280	2420	4150	4170	4100	3840	3450	3090
18	2970	2710	2560	2440	2280	2470	4150	4160	4090	3830	3440	3080
19	2960	2700	2550	2430	2280	2530	4150	4160	4080	3820	3430	3060
20	2960	2700	2550	2420	2270	2600	4150	4160	4070	3800	3420	3050
21	2940	2690	2540	2420	2260	2680	4150	4160	4060	3790	3400	3040
22	2940	2680	2540	2410	2260	2780	4150	4160	4060	3780	3390	3030
23	2920	2670	2530	2400	2250	2870	4160	4160	4050	3760	3380	3020
24	2910	2660	2560	2390	2250	2960	4170	4160	4040	3750	3370	3010
25	2900	2650	2560	2380	2270	3040	4180	4150	4030	3740	3360	3000
26	2890	2640	2550	2380	2280	3070	4180	4150	4020	3730	3350	2990
27	2880	2630	2540	2380	2280	3100	4190	4160	4010	3720	3340	2980
28	2860	2620	2530	2370	2270	3130	4180	4170	4000	3700	3320	2970
29	2850	2610	2560	2360	2260	3180	4170	4160	4000	3690	3310	2950
30	2840	2600	2550	2360	---	3230	4180	4160	3990	3680	3300	2950
31	2840	---	2540	2350	---	3300	---	4150	---	3660	3290	---
MAX	3140	2830	2600	2570	2350	3300	4190	4190	4150	3990	3650	3280
MIN	2840	2600	2530	2350	2250	2220	3380	4150	3990	3660	3290	2950
a	34.20	32.58	32.21	30.85	30.23	37.16	42.43	42.27	41.34	39.40	37.09	34.90
b	-320	-240	-60	-190	-90	+1040	+880	-30	-160	-330	-370	-340

CAL YR 2003 MAX 4220 MIN 2480 b -20  
WTR YR 2004 MAX 4190 MIN 2220 b -210

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, 105 acre-ft, Apr. 27, elevation, 6,693.78 ft; minimum, 11 acre-ft, many days during October and July–September, 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e11	29	31	32	22	26	55	76	44	e12	e11	e11
2	e11	29	31	32	22	25	59	89	44	13	e11	e11
3	e11	e29	31	31	22	25	70	90	43	e12	e11	e11
4	e11	29	31	31	21	25	80	94	41	e12	e11	e11
5	e11	29	33	31	20	27	85	83	40	e11	e11	e11
6	e11	29	41	31	20	31	70	67	39	e11	e11	e11
7	e11	29	34	31	20	34	76	63	38	e11	e11	e11
8	e11	29	32	32	20	38	82	63	36	e11	e11	e11
9	e11	30	31	32	20	39	79	60	34	e11	e11	e11
10	e11	30	31	32	20	40	81	55	32	e11	e11	e11
11	e11	30	31	32	22	40	85	51	30	e11	e11	e11
12	e11	30	31	32	24	39	87	50	30	e11	e11	e11
13	e11	30	31	32	25	41	70	53	29	e11	e11	e11
14	e11	30	31	32	24	44	64	55	29	e11	e11	e11
15	e11	30	31	32	24	45	e58	55	29	e11	e11	e11
16	e11	30	31	32	38	45	52	54	29	e11	e11	e11
17	e11	30	31	32	35	46	49	53	28	e11	e11	e11
18	e11	30	32	32	32	63	47	50	27	e11	e11	e11
19	e11	30	32	32	31	67	45	47	25	e11	e11	e11
20	e11	30	33	32	31	75	52	47	22	e11	e11	e11
21	e11	30	33	32	30	80	55	46	19	e12	e11	e11
22	e11	30	32	32	30	83	55	45	e17	e11	e11	e11
23	e11	30	32	29	29	78	62	46	e17	e11	e11	e11
24	e12	30	32	27	28	76	74	46	e16	e11	e11	e11
25	e12	30	32	25	28	58	88	44	e15	e11	e11	e11
26	e12	30	32	24	28	47	100	45	e15	e11	e11	e11
27	18	30	31	23	28	47	105	47	e14	e11	e11	e11
28	25	30	32	22	27	53	82	66	e14	e11	e11	e11
29	28	30	32	22	26	60	64	51	e13	e11	e11	e11
30	28	30	32	24	---	62	69	47	e13	e11	e11	e11
31	29	---	32	23	---	65	---	46	---	e11	e11	---
MAX	29	30	41	32	38	83	105	94	44	13	11	11
MIN	11	29	31	22	20	25	45	44	13	11	11	11
a	6684.34	6684.81	6685.08	6682.88	6683.60	6690.05	6690.46	6687.27				
b	+25	+1	+2	-9	+3	+39	+4	-23	-33	-2	0	0
CAL YR 2003	MAX 132	MIN 4.0	b +4									
WTR YR 2004	MAX 105	MIN 11	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<sup>2</sup>.

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<sup>3</sup>/s, May 16, 1996, gage height, 7.92 ft, from rating curve extended above 120 ft<sup>3</sup>/s, on basis of computation of peak flow over diversion dam; minimum daily, 2.3 ft<sup>3</sup>/s, Oct. 18–20, 22, 23, 1992.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	19	20	21	18	19	26	28	23	12	11	11
2	10	19	20	21	18	19	25	28	23	13	11	11
3	10	20	20	21	18	19	27	29	23	13	11	11
4	10	20	20	21	17	19	28	29	22	12	11	11
5	10	20	21	21	17	19	29	29	22	12	11	11
6	10	20	23	21	17	20	28	28	22	12	11	11
7	10	20	22	21	17	21	28	27	22	11	11	11
8	10	20	21	21	17	22	28	27	21	11	11	10
9	10	20	20	21	17	22	28	27	21	11	11	10
10	10	20	20	21	17	22	28	26	21	11	11	10
11	10	20	20	21	17	22	29	24	20	11	11	10
12	10	20	20	21	18	22	29	24	20	11	11	10
13	10	20	20	21	19	22	28	24	20	11	11	10
14	10	20	21	21	19	23	27	25	20	11	11	10
15	10	20	20	21	18	23	26	25	20	11	11	10
16	10	20	20	21	20	23	25	25	19	11	11	11
17	10	20	20	21	22	23	24	25	19	11	11	11
18	10	20	21	21	21	24	23	24	19	11	11	11
19	10	20	21	21	21	28	23	24	19	11	11	11
20	9.1	20	21	21	20	28	24	24	18	11	11	11
21	11	20	21	21	20	29	25	23	17	12	11	11
22	11	20	21	21	20	29	25	23	15	12	11	11
23	12	20	21	20	20	29	25	23	15	11	11	11
24	12	20	21	19	20	29	27	23	14	11	10	11
25	12	20	21	19	20	27	28	23	13	11	10	11
26	12	20	21	18	20	25	29	23	13	11	11	11
27	13	20	21	18	19	24	30	23	12	11	11	11
28	17	20	21	18	19	24	34	27	12	11	10	11
29	19	20	21	17	19	26	28	25	12	11	10	11
30	19	20	21	18	---	27	27	24	12	11	10	11
31	19	---	21	18	---	27	---	24	---	11	11	---
TOTAL	357.1	598	642	627	545	736	811	783	549	351	336	322
MEAN	11.5	19.9	20.7	20.2	18.8	23.7	27.0	25.3	18.3	11.3	10.8	10.7
MAX	19	20	23	21	22	29	34	29	23	13	11	11
MIN	9.1	19	20	17	17	19	23	23	12	11	10	10
AC-FT	708	1190	1270	1240	1080	1460	1610	1550	1090	696	666	639
a	4.5	43	425	315	146	8570	14210	10050	715	0	0	0

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 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	14.8	18.3	14.7	16.8	17.4	22.4	31.0	39.6	26.8	14.2	12.0	13.9
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1988 - 2004	
ANNUAL TOTAL	7477.5		6657.1			
ANNUAL MEAN	20.5		18.2		20.1	
HIGHEST ANNUAL MEAN					32.6	
LOWEST ANNUAL MEAN					13.0	
HIGHEST DAILY MEAN	90	May 28	34	Apr 28	1840	May 16 1996
LOWEST DAILY MEAN	9.1	Oct 20	9.1	Oct 20	2.3	Oct 18 1992
ANNUAL SEVEN-DAY MINIMUM	9.9	Oct 14	9.9	Oct 14	2.3	Oct 17 1992
MAXIMUM PEAK FLOW			220		3220	
MAXIMUM PEAK STAGE			4.33		7.92	
ANNUAL RUNOFF (AC-FT)	14830		13200		14600	
ANNUAL DIVERSION (AC-FT) a	43180		34480			
10 PERCENT EXCEEDS	28		27		27	
50 PERCENT EXCEEDS	20		20		17	
90 PERCENT EXCEEDS	11		11		8.1	

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.

## 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<sup>2</sup>.

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, 169,100 acre-ft, June 7, elevation, 6,603.57 ft; minimum, 85,300 acre-ft, Feb. 14, 15, elevation, 6,552.47 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125800	110400	96800	93300	85900	87200	109200	142800	168200	164300	152300	139900
2	125000	110100	96300	93100	86100	87100	110100	144400	168300	164000	151900	139400
3	124400	109700	96000	92700	86100	87100	111100	146100	168600	163700	151400	139000
4	123900	109300	95700	92200	86000	87000	112400	147900	168700	163300	151000	138600
5	123300	108900	95600	91900	85900	87000	113800	149500	168800	163100	150700	138000
6	122800	108500	96200	91600	85900	87000	115100	150900	169000	162700	150300	137500
7	122300	108200	96300	91400	85800	87200	116400	152100	169100	162500	149800	136700
8	121800	107800	96200	91000	85800	87400	117800	153200	169000	162100	149300	136200
9	121300	107500	96000	90600	85700	87700	119200	154300	169000	161700	148800	135800
10	120800	106900	95900	90300	85700	88000	120600	155300	169000	161500	148300	135400
11	120400	106400	95500	90100	85600	88300	121900	155900	168700	161100	147900	134900
12	120000	105800	95000	89900	85500	88700	123300	156500	168700	160700	147500	134500
13	119700	105200	94700	89700	85400	89100	124600	157100	168700	160300	147100	134200
14	119500	104800	94700	89400	85300	89500	125800	157800	168600	159900	146700	133700
15	119100	104600	94600	89200	85300	90200	126700	158600	168500	159600	146300	133400
16	118800	104100	94300	88900	85700	90900	127500	159300	168300	159300	145900	133000
17	118400	103700	94000	88600	86000	91500	128200	160000	168200	158900	145600	132600
18	118100	103300	93700	88300	86300	92300	128700	160600	168100	158600	145100	132100
19	117600	102900	93400	88000	86300	93400	129100	161300	167800	158100	144700	131800
20	116600	102300	93200	87900	86400	94700	129700	161700	167700	157500	144400	131400
21	115800	101700	93200	87700	86500	96300	130400	162200	167400	156800	144100	130900
22	115100	101100	93100	87500	86600	98100	130900	162700	167200	156100	143600	130600
23	114700	100500	93100	87200	86600	99700	131600	163200	166900	155600	143200	130200
24	114200	99900	93300	87000	86600	101300	132500	163600	166700	155300	143000	129900
25	113700	99300	93400	86700	86900	102700	133600	164100	166400	154900	142600	129400
26	113300	98800	93300	86400	87000	103600	135300	164600	166100	154500	142200	129100
27	112700	98500	93300	86300	87000	104200	137100	164900	165600	154200	141900	128800
28	112200	98200	93200	86100	87000	104900	138800	166200	e165100	153900	141500	128500
29	111600	97900	93400	86000	87100	105900	140100	166800	164800	153500	141000	128100
30	111100	97300	93300	86000	---	107000	141500	167400	164600	153100	140700	127900
31	110800	---	93000	85900	---	108100	---	167800	---	152800	140200	---
MAX	125800	110400	96800	93300	87100	108100	141500	167800	169100	164300	152300	139900
MIN	110800	97300	93000	85900	85300	87000	109200	142800	164600	152800	140200	127900
a	6570.18	6561.51	6558.46	6552.96	6553.88	6568.47	6588.68	6602.96	6601.37	6595.09	6588.00	6581.05
b	-15600	-13500	-4300	-7100	+1200	+21000	+33400	+26300	-3200	-11800	-12600	-12300
c	16010	13920	8920	10480	2570	2390	1250	1570	8560	11790	12030	11490

CAL YR 2003 MAX 180800 MIN 93000 b -7900 c 133400

WTR YR 2004 MAX 169100 MIN 85300 b +1500 c 101000

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<sup>2</sup>.

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. October 1952 to November 1986, at site 900 ft upstream at different datum. December 1986 to September 1990 at site 1,400 ft downstream 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<sup>3</sup>/s, Jan. 31, 1963, gage height, 11.88 ft, site and datum then in use, from rating curve extended above 1,200 ft<sup>3</sup>/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<sup>3</sup>/s.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	338	198	304	125	43	24	21	21	109	157	200	186
2	353	201	237	142	42	46	21	21	143	157	202	186
3	332	201	179	223	40	63	21	21	143	157	202	186
4	285	201	151	305	50	63	21	21	142	157	202	196
5	262	203	151	196	60	63	21	21	120	157	201	244
6	262	182	141	197	60	48	21	22	118	157	202	286
7	262	149	82	199	60	20	21	22	112	157	222	353
8	261	197	76	233	60	20	21	22	113	157	253	254
9	262	293	119	251	60	45	22	22	111	157	252	166
10	246	333	212	239	60	71	22	22	118	165	249	183
11	200	250	250	159	66	71	22	22	121	160	198	189
12	166	268	251	132	70	71	22	22	121	187	198	189
13	164	277	215	144	70	71	22	21	124	199	201	186
14	164	249	133	182	70	71	22	22	125	199	201	184
15	164	200	126	200	70	39	21	22	130	186	201	184
16	164	202	142	199	49	21	21	22	135	164	201	184
17	164	203	186	199	25	36	21	22	138	164	200	184
18	165	203	204	199	22	70	21	22	138	173	200	184
19	293	234	205	179	22	40	21	22	145	226	199	183
20	476	290	190	149	21	22	21	22	147	317	169	183
21	473	301	63	149	19	22	21	22	147	349	166	187
22	355	300	75	159	20	21	22	22	147	349	164	188
23	209	300	76	176	20	21	21	22	146	304	163	178
24	220	300	70	176	61	21	21	22	147	178	164	164
25	239	300	44	176	62	21	20	22	153	171	163	164
26	262	246	67	176	22	21	20	23	202	165	164	164
27	286	155	75	153	22	21	19	41	256	165	180	165
28	286	156	75	106	24	21	19	39	253	165	187	165
29	285	162	95	76	25	21	19	37	159	165	187	165
30	266	263	151	43	---	21	20	47	155	179	186	165
31	208	---	151	43	---	21	---	59	---	201	186	---
TOTAL	8072	7017	4496	5285	1295	1207	628	790	4318	5944	6063	5795
MEAN	260	234	145	170	44.7	38.9	20.9	25.5	144	192	196	193
MAX	476	333	304	305	70	71	22	59	256	349	253	353
MIN	164	149	44	43	19	20	19	21	109	157	163	164
AC-FT	16010	13920	8920	10480	2570	2390	1250	1570	8560	11790	12030	11490

## SAN JOAQUIN RIVER BASIN

## 11294000 HIGHLAND CREEK BELOW NEW SPICER MEADOW RESERVOIR, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	76.8	61.4	79.2	71.3	96.6	124	206	356	274	142	101	89.2
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	0.00	0.00	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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1953 - 2004	
ANNUAL TOTAL	67250		50910			
ANNUAL MEAN	184		139		140	
HIGHEST ANNUAL MEAN					333 1997	
LOWEST ANNUAL MEAN					25.3 1977	
HIGHEST DAILY MEAN	710	May 10	476	Oct 20	5040	Dec 23 1955
LOWEST DAILY MEAN	20	Mar 14	19	Feb 21	0.00	Sep 28 1964
ANNUAL SEVEN-DAY MINIMUM	20	Mar 14	20	Apr 24	0.00	Sep 28 1964
MAXIMUM PEAK FLOW					9860 Jan 31 1963	
MAXIMUM PEAK STAGE					11.88 Jan 31 1963	
ANNUAL RUNOFF (AC-FT)	133400		101000		101400	
10 PERCENT EXCEEDS	339		261		393	
50 PERCENT EXCEEDS	180		157		56	
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<sup>2</sup>.

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 3,388.30 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<sup>3</sup>/s, Jan. 31, 1963, gage height, 15.00 ft, from floodmarks, from rating curve extended above 14,000 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 13.8 ft; minimum daily, 5.5 ft<sup>3</sup>/s, Dec. 6, 7, 1929.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	364	238	324	280	129	241	716	591	178	174	207	195
2	402	239	316	209	143	228	580	633	237	176	208	195
3	405	249	204	298	144	257	638	676	239	175	208	194
4	330	243	186	362	127	256	789	679	232	173	208	194
5	309	244	192	338	143	262	848	652	213	169	205	229
6	299	245	276	291	145	277	838	575	192	169	206	280
7	302	197	508	299	148	310	742	482	179	166	206	322
8	301	185	169	320	142	376	827	447	173	161	254	368
9	300	363	125	371	145	477	849	417	170	161	258	183
10	298	402	237	374	140	622	826	380	168	163	257	176
11	261	311	318	308	144	624	760	322	174	170	225	199
12	202	297	306	266	165	605	771	290	168	167	201	199
13	186	315	347	255	167	606	756	282	164	209	205	199
14	181	314	277	282	163	675	655	280	167	208	205	194
15	180	270	198	323	162	775	576	273	165	206	207	193
16	181	243	189	323	358	741	479	261	167	174	206	193
17	181	240	221	319	571	726	417	254	172	165	205	194
18	180	232	273	324	455	851	359	239	171	166	202	195
19	200	234	277	319	321	885	334	218	171	199	204	198
20	478	285	335	273	276	848	373	204	177	283	187	196
21	563	315	278	265	242	965	458	192	177	357	166	195
22	417	314	170	260	227	1030	457	178	173	357	160	199
23	282	316	154	284	222	1020	418	168	170	359	160	199
24	220	316	370	289	217	970	488	158	167	223	160	176
25	267	320	339	283	442	873	584	150	166	177	165	172
26	260	316	188	278	445	664	675	147	174	168	169	171
27	294	188	179	273	299	527	750	139	273	166	171	171
28	305	174	165	236	260	530	748	247	280	165	195	172
29	319	174	178	204	249	630	652	218	230	165	195	172
30	314	217	237	153	---	719	557	179	171	163	195	173
31	269	---	253	134	---	705	---	165	---	201	195	---
TOTAL	9050	7996	7789	8793	6791	19275	18920	10096	5658	6135	6195	6096
MEAN	292	267	251	284	234	622	631	326	189	198	200	203
MAX	563	402	508	374	571	1030	849	679	280	359	258	368
MIN	180	174	125	134	127	228	334	139	164	161	160	171
AC-FT	17950	15860	15450	17440	13470	38230	37530	20030	11220	12170	12290	12090

## SAN JOAQUIN RIVER BASIN

## 11294500 NORTH FORK STANISLAUS RIVER NEAR AVERY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	91.0	142	230	268	344	512	953	1410	754	185	102	93.7
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1915 - 2004	
ANNUAL TOTAL	145136		112794			
ANNUAL MEAN	398		308		424	
HIGHEST ANNUAL MEAN					1019 1983	
LOWEST ANNUAL MEAN					54.3 1924	
HIGHEST DAILY MEAN	1450	May 23	1030	Mar 22	23400	Dec 23 1955
LOWEST DAILY MEAN	125	Dec 9	125	Dec 9	5.5	Dec 6 1929
ANNUAL SEVEN-DAY MINIMUM	171	Jul 2	138	Jan 31	7.4	Dec 2 1929
MAXIMUM PEAK FLOW			1360	Mar 22	36000	Jan 31 1963
MAXIMUM PEAK STAGE			4.99	Mar 22	15.00	Jan 31 1963
ANNUAL RUNOFF (AC-FT)	287900		223700		306800	
10 PERCENT EXCEEDS	715		631		1170	
50 PERCENT EXCEEDS	304		240		156	
90 PERCENT EXCEEDS	186		165		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<sup>2</sup>.

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; 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, many days during November–March, maximum elevation, 4,192.90 ft, Mar. 22; minimum, 1 acre-ft, several days during August–September, 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	10	10	12	12	12	12	12	12	10	10	e1.0
2	10	10	10	13	12	12	12	12	12	10	10	e1.0
3	10	10	10	12	12	12	12	12	12	10	10	e10
4	10	10	10	11	13	12	12	12	10	10	10	10
5	10	10	10	12	12	12	12	12	10	10	10	10
6	10	10	13	12	12	12	12	12	10	10	10	10
7	10	10	12	13	12	12	12	12	10	10	10	10
8	10	10	12	13	12	12	12	12	10	10	10	10
9	10	13	10	13	12	13	12	12	10	10	10	10
10	10	10	11	13	12	12	12	12	10	10	10	10
11	10	10	10	13	11	12	12	12	10	10	10	10
12	10	10	10	13	12	12	12	12	10	10	10	10
13	10	10	13	13	12	12	12	12	10	10	10	10
14	10	10	13	12	12	12	12	12	10	10	10	10
15	10	10	12	12	12	12	12	12	10	10	10	10
16	10	10	10	12	12	12	12	12	10	10	10	10
17	10	10	10	12	12	12	12	12	10	10	10	10
18	10	10	10	13	12	13	12	12	10	10	10	10
19	10	10	10	13	12	12	12	12	10	10	10	10
20	10	10	13	13	12	12	12	12	10	10	10	10
21	10	10	12	13	12	13	12	12	10	10	10	10
22	e10	10	12	12	12	13	12	12	10	10	10	10
23	10	10	13	13	12	12	12	12	10	10	10	10
24	10	10	13	12	12	12	12	12	10	10	10	10
25	10	10	12	12	12	12	12	12	10	10	10	10
26	10	10	13	12	12	12	12	12	10	10	10	10
27	10	10	13	12	12	12	12	12	10	10	e1.0	10
28	10	10	13	13	12	12	12	12	10	10	e1.0	10
29	10	10	12	13	12	12	12	12	10	10	e1.0	10
30	10	10	13	12	---	12	12	12	10	10	e1.0	10
31	10	---	12	12	---	12	---	12	---	10	e1.0	---
MAX	10	13	13	13	13	13	12	12	12	10	10	10
MIN	10	10	10	11	11	12	12	12	10	10	1.0	1.0
a	4187.05	4187.06	4191.02	4190.91	4190.22	4190.20	4190.13	4190.44	4187.17	4186.91	---	4186.87
b	0	0	+2	0	0	0	0	0	-2	0	-9	+9

CAL YR 2003 MAX 13 MIN 1.0 b 0

WTR YR 2004 MAX 13 MIN 1.0 b 0

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<sup>2</sup>.

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<sup>3</sup>/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<sup>3</sup>/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<sup>3</sup>/s, Jan. 1, 1997; minimum daily, 1.2 ft<sup>3</sup>/s, Dec. 22, 1994.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	6.6	7.3	19	19	19	19	19	19	9.0	4.9	e3.2
2	5.0	6.3	8.2	19	19	19	19	19	19	9.1	4.9	e3.2
3	5.2	7.3	7.6	19	19	21	19	19	19	8.9	4.9	e3.2
4	5.2	5.9	7.3	19	19	19	19	19	18	8.3	4.8	5.5
5	5.1	6.1	10	19	19	19	19	19	17	8.0	4.7	5.7
6	5.0	6.8	20	19	19	19	19	19	16	7.7	4.7	5.7
7	5.0	7.9	42	19	19	19	19	19	15	7.5	4.7	4.6
8	4.9	7.9	19	19	18	19	19	19	15	7.2	4.6	3.5
9	4.9	18	18	19	19	19	19	19	15	7.1	4.4	3.5
10	5.0	16	17	19	19	19	19	19	15	7.1	4.3	3.5
11	5.1	9.0	16	19	19	19	19	19	14	7.0	4.2	3.5
12	5.1	8.0	14	19	19	19	19	19	14	6.7	4.2	3.5
13	5.0	7.6	19	19	19	19	19	19	14	6.5	4.2	3.6
14	5.0	7.9	19	19	19	19	19	19	13	6.4	4.2	3.7
15	5.0	14	19	19	19	19	19	19	13	6.3	4.1	3.7
16	5.0	11	17	19	20	18	19	19	12	6.1	4.1	3.6
17	5.0	9.0	15	19	19	18	19	19	12	6.0	4.1	3.7
18	4.9	9.0	14	19	19	24	19	19	11	5.9	4.0	3.8
19	4.8	8.5	14	19	18	23	19	19	11	5.8	4.0	4.6
20	4.9	8.0	19	19	19	18	19	19	11	5.8	4.0	5.3
21	4.8	7.8	19	19	19	20	19	19	11	5.7	4.0	4.8
22	4.8	7.6	19	19	19	30	19	19	10	5.5	4.0	4.5
23	4.8	7.2	19	19	19	35	19	19	9.9	5.4	4.3	4.3
24	4.7	7.3	27	19	19	18	19	19	9.7	5.3	4.3	4.2
25	4.8	7.0	19	19	19	18	19	19	9.4	5.2	4.3	4.0
26	4.8	7.0	19	19	19	18	19	19	9.2	5.0	4.2	4.0
27	4.8	7.0	20	19	19	18	19	19	9.0	5.0	e3.6	3.9
28	4.8	7.3	19	19	19	17	19	19	8.9	4.9	e4.1	3.9
29	4.8	7.2	19	19	19	18	19	19	9.0	4.9	e4.1	4.0
30	4.9	7.1	19	19	---	17	19	19	8.9	4.8	e4.1	4.1
31	5.5	---	19	19	---	18	---	19	---	4.9	e3.2	---
TOTAL	153.5	253.3	540.4	589	550	615	570	589	388.0	199.0	132.2	122.3
MEAN	4.95	8.44	17.4	19.0	19.0	19.8	19.0	19.0	12.9	6.42	4.26	4.08
MAX	5.5	18	42	19	20	35	19	19	19	9.1	4.9	5.7
MIN	4.7	5.9	7.3	19	18	17	19	19	8.9	4.8	3.2	3.2
AC-FT	304	502	1070	1170	1090	1220	1130	1170	770	395	262	243
a	0	0	405	44	1600	7340	5410	1510	2	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 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.28	10.7	26.0	71.0	38.6	53.1	42.3	53.0	29.6	11.9	7.89	6.50
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1990 - 2004	
ANNUAL TOTAL	5194.8		4701.7			
ANNUAL MEAN	14.2		12.8		30.7	
HIGHEST ANNUAL MEAN					102	
LOWEST ANNUAL MEAN					9.86	
HIGHEST DAILY MEAN	137	May 26	42	Dec 7	3570	Jan 2 1997
LOWEST DAILY MEAN	4.7	Sep 29	3.2	Aug 31	1.2	Dec 22 1994
ANNUAL SEVEN-DAY MINIMUM	4.8	Oct 21	3.5	Sep 8	2.0	Oct 1 1991
MAXIMUM PEAK FLOW			210	Mar 22	6020	Jan 1 1997
ANNUAL RUNOFF (AC-FT)	10300		9330		22270	
ANNUAL DIVERSION (AC-FT) a	22060		16300			
10 PERCENT EXCEEDS	19		19		32	
50 PERCENT EXCEEDS	18		15		17	
90 PERCENT EXCEEDS	4.8		4.2		4.4	

a Diversion, in acre-feet, through tunnel and penstock (station 11295210) to McKay's Point Reservoir, provided by Northern California Power Agency.

## SAN JOAQUIN RIVER BASIN

## 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<sup>3</sup>/s, Oct. 17, 1989; no flow for many days in most years.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	31	0.00	27	37	0.00	36	39	40	43	44	44
2	36	26	0.00	27	34	0.00	37	38	40	44	45	e26
3	36	25	0.00	22	29	0.00	37	38	40	44	46	e35
4	36	25	0.00	19	25	0.00	37	38	40	44	47	e63
5	36	25	0.00	19	26	0.00	37	39	41	44	47	e39
6	36	28	5.8	23	26	9.7	37	41	42	48	47	e60
7	36	29	24	31	25	15	37	41	42	52	47	e49
8	36	29	29	35	25	16	38	41	42	52	46	44
9	36	29	27	35	25	17	37	41	42	52	44	44
10	38	29	26	35	25	18	37	41	41	52	44	44
11	40	30	25	35	25	20	37	41	41	52	44	44
12	41	29	25	35	25	22	37	41	40	52	44	44
13	41	29	26	35	25	23	37	40	40	47	44	44
14	41	29	24	35	25	24	37	40	40	42	44	44
15	39	29	22	35	27	24	37	40	40	43	44	44
16	37	29	22	35	28	26	37	40	40	43	44	44
17	37	29	28	36	19	26	37	40	40	43	44	44
18	29	29	35	37	4.7	26	37	40	40	43	44	44
19	32	29	36	37	0.00	26	37	40	40	42	44	44
20	36	30	36	37	0.00	30	37	40	40	42	44	44
21	36	31	36	37	0.00	34	37	40	40	42	44	43
22	36	31	36	37	0.00	34	37	40	40	42	44	41
23	36	31	34	37	8.7	31	37	40	42	42	44	41
24	36	31	31	38	14	28	37	40	42	42	44	41
25	36	31	19	39	0.00	28	37	40	42	42	44	41
26	36	31	12	39	0.00	24	37	40	42	42	44	41
27	36	32	23	39	0.00	23	37	40	42	42	44	41
28	36	31	30	39	0.00	23	38	40	42	42	44	41
29	36	31	30	39	0.00	23	41	40	42	42	44	41
30	36	10	28	39	---	23	41	40	42	42	44	41
31	36	---	26	39	---	27	---	40	---	42	44	---
TOTAL	1137	858	695.80	1052	478.40	620.70	1119	1239	1227	1386	1381	1300
MEAN	36.7	28.6	22.4	33.9	16.5	20.0	37.3	40.0	40.9	44.7	44.5	43.3
MAX	42	32	36	39	37	34	41	41	42	52	47	63
MIN	29	10	0.00	19	0.00	0.00	36	38	40	42	44	26
AC-FT	2260	1700	1380	2090	949	1230	2220	2460	2430	2750	2740	2580

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2004, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	38.9	32.6	36.5	34.1	30.2	32.2	34.4	47.3	52.5	48.9	44.3	41.6			
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	0.00	0.00	0.00	0.00	0.00	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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1990 - 2004

ANNUAL TOTAL	11837.80	12493.90		
ANNUAL MEAN	32.4	34.1	39.5	
HIGHEST ANNUAL MEAN			59.8	1990
LOWEST ANNUAL MEAN			14.3	2002
HIGHEST DAILY MEAN	53	Jun 4	63	Sep 4
LOWEST DAILY MEAN	0.00	Jan 13	0.00	Dec 1
ANNUAL SEVEN-DAY MINIMUM	0.47	Apr 25	0.00	Feb 25
ANNUAL RUNOFF (AC-FT)	23480	24780	28630	
10 PERCENT EXCEEDS	46	44	74	
50 PERCENT EXCEEDS	36	37	41	
90 PERCENT EXCEEDS	14	22	0.00	

e Estimated.

## 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 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<sup>3</sup>/s, May 8, 2000; no flow for many days most years.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	242	194	208	214	87	378	777	513	118	106	77	152
2	174	132	196	313	143	246	728	317	139	116	70	119
3	287	258	187	254	88	190	602	687	150	103	115	83
4	134	233	182	160	117	171	602	507	162	85	146	165
5	155	236	263	224	120	308	700	751	77	184	171	107
6	332	199	195	268	97	190	884	591	78	73	152	149
7	215	273	432	313	53	161	814	412	96	76	137	162
8	171	213	271	196	59	571	794	387	115	70	91	125
9	155	146	201	205	108	531	847	274	150	74	137	204
10	169	239	160	186	113	548	849	398	97	68	141	91
11	131	185	218	193	114	662	629	363	103	90	105	75
12	169	204	274	182	95	640	742	347	123	117	134	54
13	236	232	149	265	104	440	652	199	89	95	130	88
14	220	210	123	270	57	628	645	354	149	91	87	129
15	260	168	268	258	88	911	592	151	163	123	83	170
16	265	123	211	226	209	874	458	112	92	136	134	172
17	130	239	195	161	616	776	451	189	102	91	115	130
18	95	201	179	201	648	707	339	92	68	86	141	60
19	76	237	156	228	215	968	551	112	51	235	84	65
20	153	235	118	177	235	853	218	129	61	138	150	74
21	168	208	133	229	144	955	226	82	118	267	35	125
22	166	218	192	205	319	1020	503	105	93	168	57	84
23	187	180	235	216	226	1100	682	104	98	109	121	117
24	169	244	273	129	279	878	462	132	127	151	172	135
25	157	204	217	98	261	960	376	89	171	133	131	60
26	195	176	116	194	439	953	617	88	118	194	86	99
27	250	162	111	200	241	461	558	89	135	160	124	110
28	194	161	105	182	390	416	701	72	136	185	60	101
29	184	178	211	114	297	768	773	91	49	115	101	88
30	130	206	190	78	---	608	554	95	125	126	104	70
31	218	---	173	70	---	653	---	148	---	48	108	---
TOTAL	5787	6094	6142	6209	5962	19525	18326	7980	3353	3813	3499	3363
MEAN	187	203	198	200	206	630	611	257	112	123	113	112
MAX	332	273	432	313	648	1100	884	751	171	267	172	204
MIN	76	123	105	70	53	161	218	72	49	48	35	54
AC-FT	11480	12090	12180	12320	11830	38730	36350	15830	6650	7560	6940	6670

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2004, BY WATER YEAR (WY)

MEAN	186	144	198	272	402	584	683	672	403	273	234	218
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	112
(WY)	1993	1992	1992	1992	1991	1991	1994	1992	1992	1994	1992	2004

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1990 - 2004

ANNUAL TOTAL	126224.0	90053	
ANNUAL MEAN	346	246	366
HIGHEST ANNUAL MEAN			696
LOWEST ANNUAL MEAN			115
HIGHEST DAILY MEAN	1560	May 24	1100
LOWEST DAILY MEAN	9.0	Jul 6	35
ANNUAL SEVEN-DAY MINIMUM	83	Jul 1	81
ANNUAL RUNOFF (AC-FT)	250400	178600	265200
10 PERCENT EXCEEDS	726	616	960
50 PERCENT EXCEEDS	233	171	224
90 PERCENT EXCEEDS	118	85	16

## 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<sup>2</sup>.

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, 2,020 acre-ft, Oct. 30, elevation, 3,363.30 ft; minimum, 302 acre-ft, Oct. 17, elevation unknown.

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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1340	1880	1620	1520	1680	1270	1510	1320	1680	1680	1490	1500
2	1550	1920	1820	1200	1560	1220	1230	1850	1700	1640	1590	1510
3	1530	e1820	1800	1150	1560	1310	1290	1700	1730	1630	1590	1560
4	1710	1620	1770	1400	1480	1440	1610	1930	1710	1640	1550	1400
5	1800	1470	1590	1480	1410	1320	1830	1620	1800	1470	1460	1470
6	1540	1400	1700	1380	1390	1440	1710	1490	1870	1490	1400	1500
7	1500	1100	1760	1200	1460	1680	1580	1520	1870	1500	1360	1620
8	1540	896	1460	1270	1510	1280	1570	1550	1850	1520	1500	1890
9	1620	1150	1210	1430	1460	1180	1490	1730	1750	1520	1570	1680
10	1660	1280	1230	1620	1400	1330	1350	1610	1740	1550	1630	1680
11	1700	1360	1300	1680	1350	1270	1550	1440	1740	1540	1700	1750
12	1580	1380	1240	1680	1360	1220	1570	1230	1680	1480	1680	1850
13	1310	1390	1500	1490	1360	1570	1690	1270	1680	1530	1660	1890
14	1060	1440	1690	1360	1430	1700	1670	1010	1580	1600	1730	1850
15	710	1490	1440	1330	1450	1460	1610	1130	1450	1610	1800	1720
16	352	1560	1290	1360	1650	1250	1630	1280	1450	1540	1780	1600
17	e302	1420	1210	1510	1560	1220	1520	1290	1440	1540	1790	1550
18	336	1360	1250	1590	1230	1560	1560	1430	1500	1550	1740	1650
19	426	1240	1330	1610	1450	1420	1110	1500	1580	1320	1820	1730
20	876	1220	1610	1640	1530	1480	1380	1510	1650	1440	1740	1800
21	1410	1320	1770	1550	1690	1550	1800	1590	1620	1450	1850	1770
22	1740	1390	1600	1490	1500	1610	1650	1600	1620	1650	1900	1830
23	1780	1530	1330	1460	1450	1460	1080	1590	1620	1970	1840	1810
24	1740	1550	1450	1610	1290	1700	1070	1520	1540	1950	1680	1730
25	1780	1650	1670	1800	1650	1580	1390	1520	1390	1890	1590	1800
26	1770	1800	1740	1800	1740	1070	1410	1500	1360	1690	1600	1780
27	1710	1730	1750	1780	1880	1270	1690	1480	1460	1560	1520	1750
28	1760	1640	1730	1730	1640	1540	1690	1680	1580	1390	1590	1730
29	1850	1510	1540	1740	1530	1300	1350	1780	1760	1340	1600	1740
30	2020	1450	1500	1750	---	1540	1260	1800	1710	1270	1600	1780
31	1950	---	1530	1730	---	1660	---	1700	---	1410	1590	---
MAX	2020	1920	1820	1800	1880	1700	1830	1930	1870	1970	1900	1890
MIN	302	896	1210	1150	1230	1070	1070	1010	1360	1270	1360	1400
a	3361.10	3345.13	3347.84	3354.47	3347.98	3352.22	3338.07	3353.49	3353.66	3343.57	3349.95	3355.90
b	+610	-500	+80	+200	-200	+130	-400	+440	+10	-300	+180	+190
CAL YR 2003	MAX 2070	MIN 302	b -200									
WTR YR 2004	MAX 2020	MIN 302	b +440									

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<sup>2</sup>.

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<sup>3</sup>/s, Jan. 2, 1997; minimum daily, 3.4 ft<sup>3</sup>/s, Nov. 25, 1989.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	20	20	18	18	18	18	18	18	18	22	25
2	22	21	19	18	18	18	18	19	18	18	22	26
3	22	20	19	18	18	18	18	18	18	18	22	27
4	22	21	19	18	18	18	18	18	18	19	22	25
5	22	21	18	19	18	18	18	18	19	19	22	25
6	22	20	18	18	18	18	18	18	19	19	22	24
7	22	19	18	18	18	18	18	18	18	19	22	24
8	22	19	18	18	18	18	18	18	18	20	23	24
9	22	19	17	18	19	18	18	18	18	20	23	23
10	22	19	18	19	18	18	18	18	18	20	23	23
11	22	19	18	18	18	18	18	18	19	20	23	24
12	22	19	18	18	18	18	18	18	19	20	23	24
13	22	19	18	18	18	18	18	18	18	20	23	24
14	22	19	19	18	19	18	18	18	18	20	23	23
15	22	18	18	18	19	18	18	18	18	21	23	23
16	22	19	18	18	19	18	18	19	18	21	23	23
17	22	19	17	18	18	18	18	18	19	21	23	23
18	23	18	18	18	18	18	18	18	19	21	23	23
19	22	18	18	18	18	18	18	18	19	21	23	22
20	23	19	18	18	19	18	18	18	18	21	23	22
21	23	19	18	18	19	18	19	18	19	21	23	22
22	22	19	18	18	18	18	18	19	18	22	23	23
23	22	20	18	18	18	18	18	19	18	22	23	23
24	22	19	18	18	18	18	18	19	18	22	22	23
25	22	20	18	19	18	18	18	18	18	22	23	23
26	23	20	19	18	18	18	18	18	18	22	23	23
27	22	20	19	18	18	18	18	18	19	22	25	23
28	22	19	19	18	18	18	18	18	18	22	27	23
29	22	20	18	18	18	18	18	18	19	22	27	23
30	22	20	18	18	---	18	18	19	18	22	27	23
31	22	---	18	18	---	18	---	19	---	22	26	---
TOTAL	686	582	565	561	528	558	541	565	550	637	722	706
MEAN	22.1	19.4	18.2	18.1	18.2	18.0	18.0	18.2	18.3	20.5	23.3	23.5
MAX	23	21	20	19	19	18	19	19	19	22	27	27
MIN	22	18	17	18	18	18	18	18	18	18	22	22
AC-FT	1360	1150	1120	1110	1050	1110	1070	1120	1090	1260	1430	1400

## SAN JOAQUIN RIVER BASIN

## 11295270 NORTH FORK STANISLAUS RIVER BELOW McKAY'S POINT DAM, NEAR AVERY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22.1	20.4	32.1	131	26.4	39.5	31.3	63.2	25.1	19.9	20.8	22.3
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 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1989 - 2004	
ANNUAL TOTAL	7233	7201		
ANNUAL MEAN	19.8	19.7	38.2	
HIGHEST ANNUAL MEAN			173	1997
LOWEST ANNUAL MEAN			16.9	1990
HIGHEST DAILY MEAN	26	Aug 16	21600	Jan 2 1997
LOWEST DAILY MEAN	17	May 15	3.4	Nov 25 1989
ANNUAL SEVEN-DAY MINIMUM	18	May 11	4.2	Nov 15 1989
MAXIMUM PEAK FLOW		28	28000	Jan 2 1997
MAXIMUM PEAK STAGE		27.68	Aug 30	
ANNUAL RUNOFF (AC-FT)	14350	14280	27650	
10 PERCENT EXCEEDS	22	23	24	
50 PERCENT EXCEEDS	19	18	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<sup>2</sup>.

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<sup>3</sup>/s, Jan. 2, 1997; minimum daily, 5.1 ft<sup>3</sup>/s, Dec. 22, 1994.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	27	27	38	37	37	37	37	37	27	27	e28
2	27	27	27	37	37	37	37	38	37	27	27	e29
3	27	27	27	37	37	39	37	37	37	27	27	e30
4	27	27	27	37	37	38	37	37	37	27	27	30
5	27	27	29	37	37	37	37	37	35	27	27	30
6	27	27	38	37	37	37	37	37	35	27	27	30
7	27	27	61	37	38	37	37	37	34	27	27	29
8	27	26	37	37	36	37	37	37	33	27	27	27
9	27	37	35	38	38	37	37	37	33	27	27	27
10	27	34	35	38	37	37	37	37	34	27	27	27
11	27	28	34	38	37	37	37	37	33	27	27	27
12	27	27	32	38	37	37	37	37	33	27	27	27
13	27	27	37	37	38	37	37	37	32	27	27	27
14	27	27	38	37	38	37	37	37	31	27	27	27
15	27	33	37	37	38	37	37	37	31	27	27	27
16	27	29	35	37	39	36	37	38	30	27	27	27
17	27	28	32	37	38	36	37	37	30	27	27	27
18	27	27	32	38	37	42	37	37	30	27	27	27
19	27	27	32	38	37	41	37	37	30	27	27	27
20	27	27	37	38	38	36	37	37	29	27	27	27
21	27	27	38	38	38	38	38	38	29	27	27	27
22	27	27	37	37	37	48	37	38	29	27	27	27
23	27	27	37	37	37	53	37	38	28	27	27	27
24	27	27	45	37	37	36	37	38	28	27	27	27
25	27	27	37	38	37	35	37	37	28	27	27	27
26	27	27	38	38	37	35	37	37	27	27	27	27
27	27	27	38	38	38	36	37	37	28	27	e29	27
28	27	27	38	38	37	36	37	38	27	27	e31	27
29	27	27	38	38	37	36	37	38	28	27	e31	27
30	27	27	37	38	---	36	37	38	27	27	e31	27
31	27	---	38	38	---	36	---	38	---	27	29	---
TOTAL	837	836	1110	1163	1083	1174	1111	1157	940	837	853	827
MEAN	27.0	27.9	35.8	37.5	37.3	37.9	37.0	37.3	31.3	27.0	27.5	27.6
MAX	27	37	61	38	39	53	38	38	37	27	31	30
MIN	27	26	27	37	36	35	37	37	27	27	27	27
AC-FT	1660	1660	2200	2310	2150	2330	2200	2290	1860	1660	1690	1640

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2004, BY WATER YEAR (WY)

MEAN	29.3	32.0	60.0	211	65.0	92.6	73.7	116	54.7	31.8	29.4	29.0
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	27.0	26.1	25.9
(WY)	1991	1991	1991	1991	1991	1990	1990	1992	1992	2004	1990	1990

## SUMMARY STATISTICS

## FOR 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1990 - 2004

ANNUAL TOTAL	12395	11928		
ANNUAL MEAN	34.0	32.6		
HIGHEST ANNUAL MEAN			70.4	
LOWEST ANNUAL MEAN			275	1997
HIGHEST DAILY MEAN			31.7	1992
LOWEST DAILY MEAN	155	May 26	61	Dec 7
ANNUAL SEVEN-DAY MINIMUM	26	Sep 29	26	Nov 8
ANNUAL RUNOFF (AC-FT)	27	Sep 23	27	Nov 2
10 PERCENT EXCEEDS	24590	23660	51020	
50 PERCENT EXCEEDS	39	38	53	
90 PERCENT EXCEEDS	36	34	36	
	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<sup>2</sup>.

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 since 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.

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, May 28, elevation, 5,617.90 ft; minimum, 3,260 acre-ft, Mar. 6, minimum elevation, 5,547.55 ft.

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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12400	6710	3470	4090	3740	3420	10300	18100	18300	17700	16700	14900
2	12200	6530	3440	4070	3720	3400	10500	18200	18300	17700	16700	14800
3	12000	6360	3410	4060	3680	3350	10800	18200	18300	17600	16700	14700
4	11800	6180	3380	4040	3650	3310	11200	18200	18300	17600	16600	14600
5	11600	6000	3510	4030	3610	3270	11600	18200	18300	17600	16600	14500
6	11500	5830	3860	4010	3570	3260	11900	18100	18300	17500	16600	14400
7	11300	5670	4020	4000	3540	3290	12200	18100	18300	17500	16600	14300
8	11100	5500	4030	4000	3500	3390	12700	18100	18300	17500	16600	14200
9	10900	5380	4020	3990	3470	3530	13100	18100	18300	17400	16600	14000
10	10800	5240	4010	3990	3430	3680	13500	18000	18300	17400	16500	13900
11	10600	5120	4000	4000	3400	3810	13900	18000	18300	17400	16500	13800
12	10400	4990	3990	4000	3370	3920	14300	18000	18300	17400	16500	13600
13	10200	4870	4000	4010	3350	4050	14600	18000	18300	17400	16500	13500
14	10000	4740	4000	4010	3310	4220	14900	18100	18300	17300	16500	13400
15	9830	4640	3990	4020	3280	4450	15100	18100	18300	17300	16400	13300
16	9640	4520	3970	4020	3430	4730	15200	18100	18300	17300	16400	13200
17	9410	4420	3960	4020	3510	5050	15400	18300	18300	17200	16300	13000
18	9220	4310	3960	4030	3550	5450	15500	18300	18300	17200	16200	12900
19	9030	4200	3970	4030	3560	5840	15600	18300	18200	17100	16100	12800
20	8850	4120	4020	4020	3560	6290	15600	18300	18200	17100	16000	12700
21	8680	4070	4030	4010	3540	6810	15800	18200	18200	17000	15800	12500
22	8500	4010	4030	4000	3520	7350	15900	18200	18200	17000	15700	12400
23	8330	3950	4020	3990	3500	7860	16100	18200	18200	17000	15600	12300
24	8150	3890	4100	3980	3480	8340	16400	18300	18100	16900	15600	12200
25	7970	3830	4130	3970	3500	8740	16600	18300	18100	16900	15500	12000
26	7790	3770	4130	3940	3500	9000	16900	18300	18000	16900	15400	11900
27	7620	3710	4120	3910	3490	9170	17500	18300	17900	16800	15300	11800
28	7440	3650	4110	3870	3460	9360	18000	18400	17900	16800	15200	11700
29	7260	3580	4110	3840	3440	9610	18100	18300	17800	16800	15200	11600
30	7060	3520	4100	3810	---	9880	18100	18300	17700	16700	15100	11400
31	6890	---	4090	3780	---	10100	---	18300	---	16700	15000	---
MAX	12400	6710	4130	4090	3740	10100	18100	18400	18300	17700	16700	14900
MIN	6890	3520	3380	3780	3280	3260	10300	18000	17700	16700	15000	11400
a	5572.40	5549.90	5554.75	5552.14	5549.18	5586.58	5616.72	5617.54	5615.52	5611.80	5605.43	5591.78
b	-5610	-3370	+570	-310	-340	+6660	+8000	+200	-600	-1000	-1700	-3600
CAL YR 2003	MAX 18400	MIN 3380	b -1270									
WTR YR 2004	MAX 18400	MIN 3260	b -1100									

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<sup>2</sup>.

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 5,235.10 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<sup>3</sup>/s, Jan. 2, 1997, gage height, 12.34 ft, from rating curve extended above 1,100 ft<sup>3</sup>/s, on basis of contracted-opening measurement of peak flow at bridge 0.3 mi downstream from station; minimum daily, 1.3 ft<sup>3</sup>/s, Nov. 22, 1946.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	78	30	32	39	42	101	468	265	48	16	52
2	88	78	21	32	40	43	91	541	266	46	16	51
3	88	79	21	31	40	51	105	619	269	45	15	51
4	89	78	21	31	40	50	124	656	241	28	15	52
5	89	78	21	31	39	50	135	677	201	14	15	52
6	91	77	31	31	39	50	134	592	188	11	15	52
7	91	76	36	31	39	52	128	467	173	12	15	52
8	90	78	34	31	39	56	147	456	136	13	15	65
9	89	80	32	32	39	62	162	457	102	15	15	67
10	90	74	32	32	39	69	161	439	77	15	15	67
11	89	66	32	32	39	72	153	321	74	14	16	66
12	88	66	31	32	39	75	158	271	76	14	17	66
13	88	66	32	32	39	78	148	298	79	14	17	66
14	88	65	31	32	39	84	129	299	86	14	17	66
15	90	65	31	32	39	96	115	340	86	13	17	66
16	89	65	31	32	43	78	96	349	84	13	20	66
17	86	64	30	32	49	69	86	281	71	13	29	66
18	87	64	30	32	50	80	79	302	60	14	32	66
19	86	64	31	32	46	89	78	267	52	17	32	65
20	81	47	33	32	44	92	80	265	45	17	35	65
21	77	33	32	32	44	103	86	235	42	16	41	65
22	76	32	31	32	43	115	89	214	44	17	42	65
23	77	32	31	32	43	117	93	243	47	16	43	64
24	79	32	35	32	43	110	114	254	45	16	45	63
25	79	32	34	32	45	92	145	236	44	16	44	62
26	78	32	32	36	45	68	177	216	45	16	44	62
27	77	32	32	40	43	71	214	266	47	16	44	62
28	78	31	31	40	42	73	240	583	46	16	43	62
29	79	31	32	40	42	88	400	381	49	16	43	62
30	79	31	32	41	---	99	415	261	50	16	49	65
31	79	---	31	40	---	101	---	280	---	16	52	---
TOTAL	2623	1726	944	1031	1210	2375	4383	11534	3090	567	874	1851
MEAN	84.6	57.5	30.5	33.3	41.7	76.6	146	372	103	18.3	28.2	61.7
MAX	91	80	36	41	50	117	415	677	269	48	52	67
MIN	76	31	21	31	39	42	78	214	42	11	15	51
AC-FT	5200	3420	1870	2040	2400	4710	8690	22880	6130	1120	1730	3670

## SAN JOAQUIN RIVER BASIN

## 11296500 SOUTH FORK STANISLAUS RIVER AT STRAWBERRY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	61.6	52.7	58.4	56.4	54.1	67.8	131	420	375	110	48.0	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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1938 - 2004	
ANNUAL TOTAL	43184		32208			
ANNUAL MEAN	118		88.0		125	
HIGHEST ANNUAL MEAN					259	
LOWEST ANNUAL MEAN					26.6	
HIGHEST DAILY MEAN	1240	May 29	677	May 5	4680	Jan 2 1997
LOWEST DAILY MEAN	11	Aug 9	11	Jul 6	1.3	Nov 22 1946
ANNUAL SEVEN-DAY MINIMUM	12	Aug 7	13	Jul 5	2.3	Nov 9 1942
MAXIMUM PEAK FLOW			801	May 5	7820	Jan 2 1997
MAXIMUM PEAK STAGE			4.42	May 5	12.34	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	85660		63880		90390	
10 PERCENT EXCEEDS	204		222		320	
50 PERCENT EXCEEDS	60		52		61	
90 PERCENT EXCEEDS	28		17		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<sup>2</sup>.

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<sup>3</sup>/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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	46	10	9.7	5.0	4.9	---	---	---	11	7.7	49
2	45	46	6.2	9.0	6.3	4.7	---	---	---	8.3	15	49
3	45	47	5.1	8.1	5.6	5.1	---	---	---	7.3	17	49
4	45	46	5.0	11	5.1	5.0	---	---	---	9.9	17	49
5	46	46	5.7	7.5	5.0	5.1	---	---	---	11	17	49
6	47	45	12	7.6	4.4	5.7	---	---	---	7.9	17	49
7	48	45	16	7.9	4.4	8.8	---	---	---	7.8	17	49
8	47	46	10	8.1	4.7	12	---	---	---	8.6	17	50
9	47	---	8.9	7.9	4.5	19	---	---	---	11	17	---
10	46	50	9.2	7.8	4.7	28	---	---	39	9.8	17	50
11	46	47	8.7	7.8	5.0	32	---	---	32	8.2	17	50
12	46	47	7.6	8.0	4.7	35	---	---	33	8.0	17	50
13	45	46	9.3	8.0	4.1	38	---	---	36	8.5	17	49
14	45	46	9.3	8.1	4.9	44	---	---	45	7.8	17	49
15	46	47	7.6	8.2	5.0	---	---	---	45	7.6	17	49
16	46	45	7.1	8.2	9.5	45	47	---	43	7.5	18	49
17	45	44	6.9	8.3	15	26	34	---	29	7.4	28	49
18	47	44	6.9	8.5	18	37	26	---	18	7.4	27	48
19	47	43	7.4	8.5	5.1	49	25	---	16	7.3	26	48
20	46	25	9.8	8.5	4.4	---	26	---	16	7.3	28	48
21	45	6.3	9.5	8.4	4.5	---	32	---	12	7.3	37	48
22	44	4.7	8.1	8.2	4.6	---	36	---	8.3	7.4	36	47
23	45	4.6	7.9	8.2	4.6	---	39	---	10	7.3	37	47
24	47	4.5	15	8.4	4.3	---	---	---	8.5	7.5	38	47
25	47	4.4	14	8.4	9.0	---	---	---	7.5	7.5	38	47
26	47	4.5	11	8.0	6.1	23	---	---	9.5	7.5	38	47
27	46	5.3	8.8	8.0	4.7	23	---	---	10	7.4	38	46
28	46	5.2	8.0	6.4	4.8	25	---	---	10	7.4	38	46
29	47	5.0	9.1	4.6	4.9	41	---	---	13	7.5	38	46
30	47	5.0	9.3	5.1	---	---	---	---	14	7.8	44	46
31	47	---	8.3	5.3	---	---	---	---	---	7.7	49	---
TOTAL	1428	---	277.7	245.7	172.9	---	---	---	---	251.9	801.7	---
MEAN	46.1	---	8.96	7.93	5.96	---	---	---	---	8.13	25.9	---
MAX	48	---	16	11	18	---	---	---	---	11	49	---
MIN	44	---	5.0	4.6	4.1	---	---	---	---	7.3	7.7	---
AC-FT	2830	---	551	487	343	---	---	---	---	500	1590	---
a	3010	2000	1470	1720	2440	3580	3570	3670	3280	914	170	1020

CAL YR 2003 a 31490

WTR YR 2004 a 26850

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<sup>2</sup>.

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 since 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.

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, 5,530 acre-ft, May 28, gage height, 90.13 ft; minimum, 1,260 acre-ft, Aug. 30, gage height, 55.80 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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1630	2410	2860	3140	3230	3960	4000	4920	5470	4350	2330	1270
2	1640	2440	2850	3160	3240	3960	3980	5150	5500	4310	2270	1270
3	1650	2470	2820	3160	3240	3950	3990	5350	5470	4260	2210	1270
4	1660	2500	2800	3150	3240	3950	4000	5410	5410	4200	2160	1270
5	1670	2530	2790	3140	3250	3950	4010	5360	5380	4140	2100	1280
6	1680	2560	2800	3140	3250	3950	4010	5210	5380	4090	2050	1280
7	1690	2590	2850	3130	3250	3950	4000	5070	5380	4020	2000	1280
8	1700	2620	2850	3140	3250	3950	4010	5170	5330	3960	1950	1280
9	1710	2690	2840	3150	3250	3960	4020	5210	5290	3890	1900	1290
10	1720	2730	2860	3170	3250	3970	4020	5200	5230	3830	1850	1290
11	1730	2780	2860	3190	3240	3970	4010	5050	5170	3750	1800	1290
12	1740	2820	2840	3200	3240	3970	4010	4910	5100	3680	1750	1300
13	1800	2860	2840	3210	3230	3970	4020	4890	5050	3620	1700	1300
14	1870	2910	2880	3220	3250	3980	4010	4960	5020	3560	1650	1310
15	1940	2970	2870	3250	3240	3990	4000	5080	5030	3490	1590	1310
16	2010	3010	2860	3250	3280	3970	3990	5230	5030	3420	1540	1320
17	2080	3050	2840	3250	3340	3960	3990	5300	5030	3360	1500	1330
18	2140	3090	2810	3250	3590	3960	3980	5350	4990	3290	1470	1340
19	2160	3130	2790	3250	3700	3970	3970	5370	4960	3220	1430	1350
20	2170	3160	2810	3250	3760	3970	3930	5370	4920	3160	1400	1360
21	2190	3140	2820	3250	3800	3980	3890	5340	4870	3080	1380	1360
22	2200	3110	2810	3260	3840	3980	3870	5300	4820	3020	1360	1380
23	2210	3080	2800	3260	3880	3990	3860	5350	4760	2950	1350	1390
24	2220	3060	2930	3230	3910	3980	3880	5450	4710	2890	1340	1400
25	2230	3030	3050	3230	4080	3990	3930	5470	4660	2820	1320	1420
26	2250	3000	3070	3230	4010	3990	3980	5450	4600	2750	1310	1430
27	2270	2970	3070	3240	3990	3980	4040	5480	4550	2680	1300	1440
28	2290	2940	3070	3250	3970	3980	4140	5530	4490	2610	1290	1450
29	2320	2910	3090	3240	3970	3980	4410	5400	4450	2540	1270	1470
30	2350	2880	3090	3240	---	3990	4660	5340	4400	2470	1260	1490
31	2380	---	3100	3230	---	4000	---	5420	---	2400	1270	---
MAX	2380	3160	3100	3260	4080	4000	4660	5530	5500	4350	2330	1490
MIN	1630	2410	2790	3130	3230	3950	3860	4890	4400	2400	1260	1270
a	68.07	72.39	74.09	75.13	80.36	80.55	84.81	89.47	83.19	68.28	55.84	58.74
b	+750	+500	+220	+130	+740	+30	+660	+760	-1020	-2000	-1130	+220
CAL YR 2003	MAX 5510	MIN 1490	b -860									
WTR YR 2004	MAX 5530	MIN 1260	b -140									

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<sup>2</sup>.

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<sup>3</sup>/s, Jan. 2, 1997, gage height, 13.03 ft, from rating curve extended above 2,400 ft<sup>3</sup>/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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	2.6	2.5	2.8	3.0	35	26	257	191	2.9	2.7	2.6
2	2.7	2.6	2.6	2.8	3.0	29	21	358	211	2.7	2.7	2.6
3	2.7	2.6	2.6	2.8	2.9	24	20	458	261	2.7	2.7	2.6
4	2.7	2.6	2.6	2.8	2.9	21	32	570	254	2.7	2.7	2.6
5	2.7	2.6	2.7	2.8	2.8	19	53	655	182	2.7	2.7	2.6
6	2.7	2.6	2.7	2.8	2.8	17	67	646	131	2.7	2.6	2.7
7	2.6	2.6	2.7	2.8	2.7	18	50	493	115	2.6	2.6	2.7
8	2.6	2.6	2.8	2.8	2.7	18	60	365	91	2.7	2.6	2.7
9	2.6	2.6	2.8	2.8	2.7	22	92	412	42	2.7	2.6	2.6
10	2.6	2.6	2.8	2.8	2.7	27	107	431	27	2.7	2.7	2.6
11	2.6	2.6	2.7	2.8	2.7	31	87	396	24	2.8	2.8	2.6
12	2.6	2.6	2.7	2.8	2.7	31	85	335	23	2.8	2.8	2.6
13	3.5	2.6	2.7	2.8	2.7	31	86	254	24	2.9	2.8	2.6
14	3.7	2.6	2.7	2.9	2.9	31	53	225	14	2.7	2.7	2.5
15	3.7	2.6	2.7	2.9	2.9	41	37	201	4.7	2.5	2.8	2.5
16	3.7	2.6	2.7	3.0	3.0	50	23	194	4.6	2.7	2.7	2.5
17	3.7	2.6	2.7	3.0	3.0	21	12	211	4.4	2.7	2.7	2.5
18	3.7	2.6	2.7	3.0	3.2	20	5.0	211	3.3	2.7	2.7	2.5
19	3.6	2.6	2.7	3.0	3.0	24	3.9	213	3.2	2.7	2.7	2.5
20	3.6	2.6	2.7	3.0	3.0	27	5.0	215	3.1	2.7	2.7	2.5
21	3.6	2.6	2.7	3.0	3.0	28	6.2	206	3.0	2.6	2.7	2.7
22	3.6	2.6	2.7	3.0	3.0	38	6.2	179	3.0	2.6	2.7	2.9
23	3.1	2.6	2.7	3.0	3.0	49	6.2	133	2.8	2.6	2.7	2.8
24	2.8	2.6	2.7	3.0	3.0	42	6.2	113	2.7	2.6	2.8	2.8
25	2.8	2.6	2.7	3.0	126	35	12	164	2.7	2.8	2.9	2.8
26	2.8	2.6	2.7	3.0	274	31	39	175	2.9	2.9	2.8	2.8
27	2.8	2.5	2.8	3.0	135	9.4	62	180	3.0	2.8	2.7	2.7
28	2.7	2.5	2.7	3.0	74	7.0	92	498	2.8	2.7	2.7	2.8
29	2.7	2.5	2.8	3.0	46	9.4	151	496	2.6	2.6	2.6	2.8
30	2.6	2.5	2.8	3.0	---	20	205	258	2.6	2.6	2.6	2.8
31	2.6	---	2.8	3.0	---	24	---	183	---	2.7	2.6	---
TOTAL	93.1	77.6	83.9	90.2	724.3	829.8	1510.7	9685	1641.4	83.8	83.8	79.5
MEAN	3.00	2.59	2.71	2.91	25.0	26.8	50.4	312	54.7	2.70	2.70	2.65
MAX	3.7	2.6	2.8	3.0	274	50	205	655	261	2.9	2.9	2.9
MIN	2.6	2.5	2.5	2.8	2.7	7.0	3.9	113	2.6	2.5	2.6	2.5
AC-FT	185	154	166	179	1440	1650	3000	19210	3260	166	166	158
a	1670	1260	1410	1380	1240	2020	2230	2370	2160	2310	2440	2250

a Diversion, in acre-feet, to Tuolumne Canal (station 11297500), provided by Pacific Gas & Electric Co.

## SAN JOAQUIN RIVER BASIN

## 11298000 SOUTH FORK STANISLAUS RIVER NEAR LONG BARN, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.48	10.0	23.1	37.3	45.9	55.1	97.8	363	312	61.5	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	0.00	0.02	0.08	0.01	0.00	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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1938 - 2004	
ANNUAL TOTAL	26470.2		14983.1			
ANNUAL MEAN	72.5		40.9		83.8	
HIGHEST ANNUAL MEAN					234	
LOWEST ANNUAL MEAN					1.50	
HIGHEST DAILY MEAN	1320	May 30	655	May 5	6040	Jan 2 1997
LOWEST DAILY MEAN	2.3	Jul 28	2.5	Nov 27	0.00	Oct 1 1937
ANNUAL SEVEN-DAY MINIMUM	2.4	Jul 24	2.5	Sep 14	0.00	Oct 1 1937
MAXIMUM PEAK FLOW			749	May 28	12900	Jan 2 1997
MAXIMUM PEAK STAGE			4.18	May 28	13.03	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	52500		29720		60750	
ANNUAL DIVERSION (AC-FT) a	23360		22740			
10 PERCENT EXCEEDS	158		155		280	
50 PERCENT EXCEEDS	2.8		2.8		2.6	
90 PERCENT EXCEEDS	2.5		2.6		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<sup>2</sup>.

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 5.8 ft<sup>3</sup>/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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	5.7	1.3	---	5.8	---	---	---	5.5	5.2	5.1	5.2
2	5.3	5.7	1.7	---	---	---	---	5.7	5.5	5.2	5.2	5.1
3	5.3	5.5	1.6	---	---	---	---	5.7	5.5	5.2	5.3	5.2
4	5.4	---	1.5	---	---	---	---	5.7	5.4	5.2	5.3	5.2
5	5.4	5.7	1.7	---	---	5.8	---	5.6	5.4	5.2	5.3	5.2
6	5.5	5.6	1.9	---	---	5.8	---	5.7	5.6	5.1	5.3	5.1
7	5.8	5.6	---	---	---	5.8	---	5.8	5.6	5.1	5.3	5.1
8	---	5.6	5.5	---	---	5.7	---	5.8	5.6	5.1	5.3	5.1
9	5.3	5.6	5.6	---	---	5.8	---	5.8	5.5	5.1	5.3	5.1
10	5.2	5.6	5.5	---	---	5.8	5.8	5.8	5.5	5.2	5.3	5.1
11	5.4	5.7	5.8	---	5.8	5.8	5.8	5.8	5.4	5.1	5.2	5.1
12	5.5	5.6	5.3	---	5.8	5.8	---	5.8	5.1	5.1	5.2	5.1
13	5.5	5.7	5.5	---	5.8	5.8	---	5.7	5.3	5.2	5.2	5.1
14	5.5	5.6	---	---	5.8	5.8	---	5.5	5.4	5.3	5.2	5.2
15	5.5	5.7	5.5	---	5.8	5.8	5.8	5.6	5.4	5.3	5.2	5.4
16	5.4	5.7	5.8	---	---	5.8	5.8	5.5	5.4	5.2	5.3	5.5
17	5.4	5.6	---	---	---	5.8	5.8	5.5	5.2	5.2	5.3	5.5
18	5.4	5.6	---	---	---	5.8	---	5.7	5.1	5.2	5.2	5.5
19	5.5	5.5	5.6	---	---	5.8	---	---	5.1	5.3	5.2	5.4
20	5.5	5.5	5.6	---	---	5.8	5.8	5.8	5.1	5.2	5.2	5.4
21	5.4	5.5	5.6	---	5.8	5.8	5.8	5.8	5.1	5.2	5.2	5.4
22	5.4	5.5	5.6	---	---	5.8	---	5.8	5.2	5.2	5.2	5.4
23	5.4	5.5	5.6	---	---	5.8	5.8	5.8	5.2	5.2	5.3	5.5
24	5.4	5.5	---	---	---	5.8	5.8	---	5.2	5.2	5.3	5.4
25	5.3	5.6	---	5.8	---	---	5.8	---	5.2	5.2	5.3	5.5
26	5.4	5.6	---	5.7	---	---	5.8	5.8	5.1	5.2	5.3	5.5
27	5.4	5.6	5.4	---	---	---	5.8	5.8	5.1	5.2	5.3	5.4
28	4.6	5.6	---	5.7	---	5.8	5.8	5.6	5.1	5.2	5.3	5.5
29	4.6	5.6	---	5.6	---	5.8	5.3	5.6	5.1	5.2	5.2	5.5
30	5.6	3.1	---	5.6	---	5.8	5.7	5.6	5.2	5.1	5.1	5.5
31	5.6	---	---	5.5	---	---	---	5.5	---	5.1	5.1	---
TOTAL	---	---	---	---	---	---	---	---	159.1	160.7	162.5	159.2
MEAN	---	---	---	---	---	---	---	---	5.30	5.18	5.24	5.31
MAX	---	---	---	---	---	---	---	---	5.6	5.3	5.3	5.5
MIN	---	---	---	---	---	---	---	---	5.1	5.1	5.1	5.1
AC-FT	---	---	---	---	---	---	---	---	316	319	322	316

## 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<sup>2</sup>.

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 1129995) 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, 1,501,000 acre-ft, Apr. 8, 10–13, elevation, 1,003.23 ft, Apr. 10; minimum, 1,110,000 acre-ft, Sept. 30, elevation, 957.20 ft.

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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1280000	1267000	1276000	1323000	1379000	1445000	1497000	1467000	1392000	1299000	1203000	1139000
2	1279000	1267000	1276000	1326000	1381000	1448000	1497000	1465000	1391000	1295000	1200000	1137000
3	1279000	1269000	1276000	1329000	1384000	1450000	1498000	1464000	1388000	1291000	1198000	1135000
4	1277000	1269000	1276000	1331000	1386000	1453000	1499000	1463000	1386000	1287000	1196000	1132000
5	1278000	1268000	1277000	1333000	1387000	1456000	1499000	1462000	1383000	1284000	1193000	1130000
6	1277000	1267000	1276000	1336000	1389000	1458000	1499000	1461000	1381000	1280000	1191000	1128000
7	1278000	1268000	1278000	1338000	1390000	1460000	1500000	1460000	1379000	1277000	1188000	1126000
8	1277000	1269000	1279000	1340000	1391000	1463000	1501000	1458000	1377000	1274000	1185000	1124000
9	1276000	1270000	1279000	1342000	1391000	1464000	1500000	1455000	1375000	1272000	1182000	1122000
10	1276000	1270000	1282000	1343000	1393000	1467000	1501000	1454000	1373000	1268000	1181000	1120000
11	1274000	1271000	1283000	1345000	1394000	1469000	1501000	1452000	1371000	1264000	1178000	1118000
12	1275000	1271000	1284000	1347000	1395000	1472000	1501000	1450000	1368000	1261000	1176000	1117000
13	1272000	1272000	1286000	1349000	1395000	1473000	1501000	1447000	1366000	1258000	1174000	1116000
14	1273000	1271000	1288000	1352000	1395000	1477000	1500000	1444000	1363000	1254000	1171000	1115000
15	1271000	1271000	1287000	1354000	1397000	1481000	1499000	1440000	1361000	1251000	1168000	1114000
16	1272000	1271000	1288000	1354000	1400000	1482000	1498000	1435000	1358000	1248000	1166000	1115000
17	1273000	1272000	1289000	1356000	1401000	1484000	1497000	1431000	1354000	1246000	1164000	1114000
18	1273000	1273000	1290000	1358000	1405000	1484000	1496000	1426000	1350000	1243000	1161000	1114000
19	1274000	1272000	1291000	1360000	1408000	1486000	1495000	1423000	1346000	1239000	1160000	1115000
20	1275000	1272000	1293000	1362000	1412000	1487000	1493000	1419000	1342000	1235000	1158000	1115000
21	1273000	1273000	1295000	1362000	1414000	1490000	1493000	1416000	1338000	1233000	1156000	1114000
22	1271000	1273000	1295000	1364000	1417000	1490000	1492000	1413000	1334000	1231000	1154000	1113000
23	1272000	1273000	1297000	1364000	1416000	1491000	1488000	1410000	1331000	1227000	1153000	1114000
24	1271000	1273000	1301000	1366000	1418000	1492000	1485000	1408000	1327000	1224000	1151000	1114000
25	1269000	1274000	1306000	1368000	1422000	1494000	1482000	1407000	1322000	1222000	1151000	1112000
26	1268000	1275000	1308000	1370000	1430000	1495000	1480000	1405000	1318000	1219000	1150000	1113000
27	1269000	1275000	1310000	1372000	1435000	1495000	1477000	1402000	1314000	1216000	1148000	1112000
28	1268000	1274000	1312000	1374000	1439000	1496000	1477000	1401000	1310000	1213000	1147000	1111000
29	1267000	1275000	1315000	1376000	1442000	1496000	1474000	1399000	1306000	1210000	1145000	1111000
30	1266000	1276000	1318000	1375000	---	1496000	1471000	1397000	1302000	1208000	1142000	1110000
31	1266000	---	1318000	1377000	---	1496000	---	1395000	---	1205000	1141000	---
MAX	1280000	1276000	1318000	1377000	1442000	1496000	1501000	1467000	1392000	1299000	1203000	1139000
MIN	1266000	1267000	1276000	1323000	1379000	1445000	1471000	1395000	1302000	1205000	1141000	1110000
a	976.61	977.77	982.72	989.55	996.80	1002.73	999.93	991.57	980.90	969.19	961.17	957.20
b	-14000	+10000	+42000	+59000	+65000	+54000	-25000	-76000	-93000	-97000	-64000	-31000
c	3584	1355	1025	662	1462	2598	4064	5486	6310	6859	5998	4772
d	28670	9770	11610	10300	12680	47630	109400	139500	121500	116600	100500	66870
CAL YR 2003 b	-40000											
WTR YR 2004 b	-170000											

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<sup>2</sup>.

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<sup>3</sup>/s, Feb. 19, 1986, gage height, 9.10 ft, from rating curve extended above 2,500 ft<sup>3</sup>/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<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 25	0730	86	3.30	Feb. 18	1200	101	3.40
Jan. 1	1400	388	4.04	Feb. 26	0530	765	4.51

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	93	1.8	20	1.8	0.28	0.03	0.00	0.00	0.00
2	0.00	0.00	0.00	24	4.8	24	1.7	0.26	0.02	0.00	e0.00	0.00
3	0.00	0.00	0.00	11	16	16	1.6	0.24	0.01	0.00	e0.00	0.00
4	0.00	0.00	0.00	7.4	11	13	1.5	0.21	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	6.3	7.0	10	1.5	0.19	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	5.5	5.6	8.7	1.5	0.17	0.00	0.00	0.00	0.00
7	0.00	0.00	0.12	4.9	5.1	7.8	1.5	0.17	0.00	0.00	0.00	0.00
8	0.00	0.00	0.19	4.0	4.2	6.9	1.5	0.16	0.00	0.00	0.00	0.00
9	0.00	0.00	0.08	3.5	3.9	6.3	1.4	0.16	0.00	0.00	0.00	0.00
10	0.00	0.00	0.49	3.0	3.5	5.7	1.2	0.15	0.00	0.00	0.00	0.00
11	0.00	0.00	0.94	2.8	3.2	5.1	1.0	0.16	0.00	0.00	0.00	0.00
12	0.00	0.00	0.42	2.5	3.0	4.7	0.96	0.16	0.00	0.00	0.00	0.00
13	0.00	0.00	0.77	2.3	2.7	4.3	0.90	0.15	0.00	0.00	0.00	0.00
14	0.00	0.00	2.3	2.2	2.5	4.1	0.88	0.13	0.00	0.00	0.00	0.00
15	0.00	0.00	0.96	2.1	2.4	3.9	0.88	0.12	0.00	0.00	0.00	0.00
16	0.00	0.00	0.48	2.0	3.9	3.6	0.90	0.12	0.00	0.00	0.00	0.00
17	0.00	0.00	0.38	1.9	3.4	3.4	0.90	0.11	0.00	0.00	0.00	0.00
18	0.00	0.00	0.31	1.8	59	3.2	0.84	0.10	0.00	0.00	0.00	0.00
19	0.00	0.00	0.29	1.7	21	2.8	0.85	0.11	0.00	0.00	0.00	0.00
20	0.00	0.00	0.26	1.7	12	2.6	0.88	0.10	0.00	0.00	0.00	0.00
21	0.00	0.00	0.06	1.6	9.6	2.5	0.87	0.09	0.00	0.00	0.00	0.00
22	0.00	0.00	0.05	1.5	8.7	2.6	0.75	0.09	0.00	0.00	0.00	0.00
23	0.00	0.00	0.05	1.4	7.3	2.4	0.68	0.08	0.00	0.00	0.00	0.00
24	0.00	0.00	6.6	1.7	6.9	2.3	0.61	0.08	0.00	0.00	0.00	0.00
25	0.00	0.00	40	1.5	36	3.0	0.58	0.08	0.00	0.00	0.00	0.00
26	0.00	0.00	5.3	1.3	203	4.2	0.49	0.08	0.00	0.00	0.00	0.00
27	0.00	0.00	1.3	1.9	66	2.2	0.42	0.07	0.00	0.00	0.00	0.00
28	0.00	0.00	0.65	3.3	31	2.1	0.36	0.08	0.00	0.00	0.00	0.00
29	0.00	0.00	1.8	2.2	20	2.0	0.31	0.12	0.00	0.00	0.00	0.00
30	0.00	0.00	2.2	2.0	---	1.9	0.29	0.07	0.00	0.00	0.00	0.00
31	0.00	---	1.1	1.9	---	1.9	---	0.05	---	0.00	0.00	---
TOTAL	0.00	0.00	67.10	203.9	564.5	183.2	29.55	4.14	0.06	0.00	0.00	0.00
MEAN	0.00	0.00	2.16	6.58	19.5	5.91	0.98	0.13	0.00	0.00	0.00	0.00
MAX	0.00	0.00	40	93	203	24	1.8	0.28	0.03	0.00	0.00	0.00
MIN	0.00	0.00	0.00	1.3	1.8	1.9	0.29	0.05	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	133	404	1120	363	59	8.2	0.1	0.00	0.00	0.00

e Estimated.

## SAN JOAQUIN RIVER BASIN

## 11299600 BLACK CREEK NEAR COPPEROPOLIS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.12	3.58	9.97	29.6	40.4	19.7	5.05	2.18	0.41	0.04	0.00	0.01
MAX	1.80	53.1	98.8	144	171	96.6	32.4	13.6	3.63	0.46	0.01	0.11
(WY)	1992	1984	1997	1997	1998	1995	1998	1998	1998	1998	1998	1983
MIN	0.00	0.00	0.00	0.00	0.16	0.62	0.62	0.13	0.00	0.00	0.00	0.00
(WY)	1986	1991	1991	1991	1991	1988	1988	2004	1988	1984	1984	1984

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1983 - 2004	
ANNUAL TOTAL	468.02		1052.45			
ANNUAL MEAN	1.28		2.88		9.10	
HIGHEST ANNUAL MEAN					28.6 1998	
LOWEST ANNUAL MEAN					0.32 1988	
HIGHEST DAILY MEAN	40	Dec 25	203	Feb 26	1400	Feb 17 1986
LOWEST DAILY MEAN	0.00	Jun 24	0.00	Oct 1	0.00	Sep 16 1983
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 24	0.00	Oct 1	0.00	Jun 28 1984
MAXIMUM PEAK FLOW			765	Feb 26	5200	Feb 19 1986
MAXIMUM PEAK STAGE			4.51	Feb 26	9.10	Feb 19 1986
ANNUAL RUNOFF (AC-FT)	928		2090		6590	
10 PERCENT EXCEEDS	3.2		5.1		12	
50 PERCENT EXCEEDS	0.09		0.00		0.21	
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<sup>2</sup>.

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, 66,300 acre-ft, June 21, elevation, 509.43 ft; minimum, 53,600 acre-ft, Nov. 13, Feb. 22, elevation, 498.439ft.

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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61700	55400	54400	57200	55100	56400	57700	61500	65100	64800	65500	65100
2	61200	54700	54900	57200	54900	56200	57500	61400	64800	65100	65100	65100
3	61700	54100	54400	57000	54800	56000	57900	61400	64800	65500	65200	65100
4	61800	53900	55400	56700	54700	55700	57700	62100	65000	65600	64600	64700
5	60300	55000	55000	56400	55100	55400	57900	62100	65500	65400	64400	64900
6	60500	56100	57000	56100	54800	55200	58100	62500	65600	65700	64800	64700
7	59100	56400	56600	55700	54400	54900	58300	62500	65600	65900	65000	65400
8	59900	55700	56100	55400	54800	54300	58200	62700	64900	65900	65400	65500
9	60000	55100	55700	55100	56100	55700	59100	62700	64800	65400	65800	65500
10	58600	54900	55300	56200	55500	55100	58800	62800	64900	65500	65200	65500
11	59500	54300	54900	55800	54800	56100	58800	62800	64800	66100	64900	65500
12	58000	54200	54500	55400	55300	56100	59500	62800	64900	65800	64400	65300
13	60200	53600	54100	55000	55500	56600	59100	62900	64900	65200	64500	64900
14	59000	54600	53900	54500	56100	55500	59100	62400	65100	65300	64500	64800
15	61000	56000	55100	54100	55300	54200	59400	62500	65200	65000	65000	64700
16	60600	55500	54700	55400	54500	55500	59800	62900	65200	66000	65200	64100
17	60200	54900	54300	55000	56400	55100	59700	63400	64900	64100	65200	63900
18	59800	54400	54500	54600	56300	56500	59600	64200	65300	64300	66200	63500
19	59300	55800	54700	54200	55700	56800	60000	64000	65500	65200	65200	61900
20	57600	56300	54300	53800	55000	56600	60100	64100	66100	65800	65200	62200
21	58600	55800	54000	55900	54300	55000	59600	64400	66300	65100	65000	62700
22	58700	55900	55500	55500	53600	56400	58900	65000	66200	64800	65300	62700
23	57000	55300	55100	56500	55500	56700	60300	65400	65800	65300	65300	60800
24	57200	55500	54900	56100	55200	56500	61000	64900	65700	65600	65800	60900
25	57500	55000	55100	55600	55400	56500	60700	64900	65800	64800	64500	61800
26	57600	54500	54900	55200	56500	56700	60700	64800	65800	65400	64600	61100
27	55700	54000	54500	54800	56700	57200	61200	64800	65800	65200	64700	61700
28	55000	55500	54100	54400	56700	57000	58700	64600	65600	66000	64600	61900
29	54900	55100	53900	54000	56500	57600	59100	65000	65800	66000	65000	61000
30	55500	54500	54400	56000	---	58200	60700	65200	65700	65400	65400	61500
31	56100	---	55300	55500	---	58100	---	64800	---	65800	65200	---
MAX	61800	56400	57000	57200	56700	58200	61200	65400	66300	66100	66200	65500
MIN	54900	53600	53900	53800	53600	54200	57500	61400	64800	64100	64400	60800
a	500.70	499.29	500.01	500.22	501.09	502.53	504.79	508.24	509.02	509.03	508.55	505.50
b	-6000	-1600	+800	+200	+1000	+1600	+2600	+4100	+900	+100	-600	-3700
c	43910	18270	15670	14320	19610	49910	98700	115000	111400	115800	104000	68450

CAL YR 2003 b +1100

WTR YR 2004 b -600

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<sup>2</sup>.

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 Nov. 2 to Nov. 19, which are rated good; and Oct. 1, which is rated fair. 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, 13.5°C, Oct. 1–14; minimum recorded, 9.5°C, Feb. 8.

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.5	13.0	12.5	12.5	12.5	12.0	11.0	10.5	10.0	10.0	10.0	10.0
2	13.5	13.0	12.5	12.5	12.5	12.0	11.0	10.5	10.0	10.0	10.5	10.0
3	13.5	13.0	12.5	12.5	12.0	12.0	10.5	10.5	10.0	10.0	10.5	10.0
4	13.5	13.0	12.5	12.5	12.0	12.0	10.5	10.5	10.0	10.0	10.5	10.0
5	13.5	13.0	13.0	12.5	12.0	12.0	10.5	10.5	10.0	10.0	10.5	10.0
6	13.5	13.0	12.5	12.5	12.0	12.0	10.5	10.5	10.0	10.0	10.5	10.0
7	13.5	13.0	12.5	12.0	12.0	12.0	10.5	10.5	10.0	10.0	10.5	10.0
8	13.5	13.0	12.5	12.0	12.0	12.0	10.5	10.0	10.0	9.5	10.5	10.0
9	13.5	13.0	12.0	12.0	12.0	12.0	10.5	10.0	10.0	10.0	10.5	10.0
10	13.5	13.0	12.0	12.0	12.0	12.0	10.5	10.0	10.0	10.0	10.5	10.0
11	13.5	13.0	12.5	12.0	12.0	12.0	10.5	10.0	10.0	10.0	10.5	10.0
12	13.5	13.0	12.5	12.0	12.0	12.0	10.5	10.0	10.0	10.0	10.5	10.0
13	13.5	13.0	12.5	12.0	12.0	12.0	10.5	10.0	10.0	10.0	10.5	10.5
14	13.5	13.0	12.0	12.0	12.0	11.5	10.0	10.0	10.0	10.0	10.5	10.5
15	13.0	13.0	12.5	12.0	12.0	11.5	10.0	10.0	10.0	10.0	10.5	10.5
16	13.0	13.0	12.5	12.0	11.5	11.5	10.0	10.0	10.0	10.0	10.5	10.5
17	13.0	13.0	12.5	12.0	11.5	11.5	10.0	10.0	10.0	10.0	10.5	10.5
18	13.0	13.0	12.5	12.0	11.5	11.5	10.0	10.0	10.0	10.0	11.0	10.5
19	13.0	12.5	13.0	12.0	11.5	11.5	10.0	10.0	10.0	10.0	11.0	10.5
20	13.0	12.5	12.5	12.0	11.5	11.5	10.0	10.0	10.0	10.0	11.0	11.0
21	13.0	13.0	12.5	12.0	11.5	11.5	10.0	10.0	10.0	10.0	11.0	11.0
22	13.0	13.0	12.5	12.0	11.5	11.5	10.0	10.0	10.0	10.0	11.0	11.0
23	13.0	13.0	12.5	12.0	11.5	11.5	10.0	10.0	10.0	10.0	11.0	11.0
24	13.0	13.0	12.5	12.0	11.5	11.5	10.0	10.0	10.0	10.0	11.0	11.0
25	13.0	13.0	12.5	12.0	11.5	11.5	10.0	10.0	10.0	10.0	11.0	11.0
26	13.0	13.0	12.5	12.0	11.5	11.0	10.0	10.0	10.5	10.0	11.0	11.0
27	13.0	13.0	12.5	12.0	11.0	11.0	10.0	10.0	10.5	10.0	11.0	11.0
28	13.0	13.0	12.5	12.0	11.0	11.0	10.0	10.0	10.0	10.0	11.0	11.0
29	13.0	13.0	12.5	12.0	11.0	11.0	10.0	10.0	10.0	10.0	11.0	11.0
30	13.0	13.0	12.0	12.0	11.0	11.0	10.0	10.0	---	---	11.5	11.0
31	13.0	12.5	---	---	11.0	11.0	10.0	10.0	---	---	11.5	11.0
MONTH	13.5	12.5	13.0	12.0	12.5	11.0	11.0	10.0	10.5	9.5	11.5	10.0

## 11299997 STANISLAUS RIVER BELOW TULLOCH POWERPLANT, NEAR KNIGHTS FERRY, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.0	11.0	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.0	12.5	12.5
2	11.0	11.0	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.0	12.5	12.5
3	11.0	11.0	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.0	12.5	12.5
4	11.0	11.0	11.0	10.5	11.5	11.5	12.0	12.0	12.5	12.5	13.0	12.5
5	11.5	11.0	11.0	10.5	11.5	11.5	12.0	12.0	12.5	12.0	12.5	12.5
6	11.0	11.0	11.0	10.5	11.5	11.5	12.0	12.0	12.5	12.5	12.5	12.5
7	11.5	11.0	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.0	12.5	12.5
8	11.0	11.0	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.5	12.5	12.5
9	11.0	11.0	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.0	12.5	12.5
10	11.0	11.0	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.0	12.5	12.5
11	11.0	11.0	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.0	12.5	12.5
12	11.0	11.0	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.0	12.5	12.5
13	11.0	11.0	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.0	12.5	12.5
14	11.0	11.0	11.0	11.0	11.5	11.5	12.0	12.0	12.5	12.5	12.5	12.5
15	11.5	11.0	11.0	11.0	12.0	11.5	12.0	12.0	12.5	12.5	12.5	12.5
16	11.0	11.0	11.5	11.0	12.0	11.5	12.0	12.0	12.5	12.5	12.5	12.5
17	11.0	11.0	11.5	11.0	12.0	11.5	12.0	12.0	12.5	12.5	12.5	12.5
18	11.0	11.0	11.0	11.0	12.0	12.0	12.0	12.0	12.5	12.5	12.5	12.5
19	11.0	11.0	11.0	11.0	12.0	12.0	12.0	12.0	12.5	12.5	12.5	12.5
20	11.0	11.0	11.0	11.0	12.0	11.5	12.0	12.0	12.5	12.5	12.5	12.5
21	11.0	11.0	11.0	11.0	12.0	11.5	12.0	12.0	12.5	12.5	12.5	12.5
22	11.0	11.0	11.0	11.0	12.0	11.5	12.0	12.0	12.5	12.5	12.5	12.5
23	11.0	11.0	11.5	11.0	12.0	11.5	12.0	12.0	12.5	12.5	12.5	12.5
24	11.0	11.0	11.0	11.0	12.0	11.5	12.0	12.0	12.5	12.5	12.5	12.5
25	11.0	11.0	11.0	11.0	12.0	11.5	12.0	12.0	12.5	12.5	12.5	12.5
26	11.0	11.0	11.0	11.0	12.0	12.0	12.0	12.0	12.5	12.5	12.5	12.5
27	11.0	11.0	11.5	11.0	12.0	12.0	12.0	12.0	12.5	12.5	12.5	12.5
28	11.0	10.5	11.5	11.0	12.0	12.0	12.0	12.0	12.5	12.5	12.5	12.5
29	11.0	11.0	11.5	11.0	12.0	12.0	12.5	12.0	12.5	12.5	13.0	12.5
30	11.0	11.0	11.5	11.0	12.0	12.0	12.5	12.0	12.5	12.5	13.0	12.5
31	---	---	11.5	11.0	---	---	12.5	12.0	12.5	12.5	---	---
MONTH	11.5	10.5	11.5	10.5	12.0	11.5	12.5	12.0	12.5	12.0	13.0	12.5

## SAN JOAQUIN RIVER BASIN

## 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<sup>3</sup>/s, Aug. 10–17, 1978; no flow at times in most years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	264	6.2	4.9	0.00	0.00	0.00	954	1070	1090	1050	1040	821
2	262	6.5	4.8	0.00	0.00	0.00	930	1060	1100	1050	1040	758
3	250	6.5	4.7	0.00	2.1	0.00	827	1060	1100	1050	1030	865
4	232	6.5	4.7	0.00	3.7	0.00	779	1100	1090	1040	1020	962
5	210	6.5	4.4	0.00	4.6	0.00	818	1120	1090	1040	1020	977
6	211	5.9	4.7	0.00	4.7	0.00	839	1120	993	1040	1020	976
7	211	5.6	5.2	0.00	4.8	0.00	838	1120	945	1050	1020	972
8	211	5.7	2.7	0.00	4.9	132	930	1120	956	1040	1020	971
9	211	5.7	0.00	0.00	5.1	136	1040	1120	956	1050	1030	968
10	212	6.0	0.00	0.00	5.2	135	1060	1100	957	1050	1040	964
11	222	6.2	0.00	0.00	14	132	1050	1080	957	1050	1040	965
12	221	5.7	0.00	0.00	24	127	929	1050	955	1050	1040	967
13	203	5.0	0.00	0.00	4.5	242	823	1050	948	1050	1050	824
14	96	4.9	0.00	0.00	0.00	351	957	1070	945	1040	1050	645
15	6.6	5.0	0.00	0.00	0.00	453	1040	1100	867	1040	1030	525
16	7.1	5.2	0.00	0.00	0.00	556	1020	1110	826	1020	998	422
17	6.5	5.2	0.00	0.00	0.00	700	1020	1120	820	1020	872	376
18	5.1	5.2	0.00	0.00	0.00	758	1010	1130	804	1040	838	377
19	5.1	5.2	0.00	0.00	0.00	746	918	1100	818	1040	871	386
20	5.2	5.2	0.00	0.00	0.00	852	754	1090	818	1050	866	390
21	5.1	13	0.00	0.00	0.00	896	716	1090	822	1060	847	484
22	5.2	25	0.00	0.00	0.00	950	1030	1080	812	1060	699	539
23	5.0	25	0.00	0.00	0.00	835	1080	1080	850	1060	497	538
24	4.8	22	0.00	0.00	0.00	850	1080	1060	890	1060	501	470
25	4.8	5.2	0.00	0.00	0.00	887	1090	1030	898	1060	612	437
26	2.8	5.0	0.00	0.00	0.00	802	1090	1040	912	1050	659	437
27	0.00	4.9	0.00	0.00	0.00	792	1100	1080	921	1050	658	427
28	3.5	4.9	0.00	0.00	0.00	792	1090	1100	930	1050	776	620
29	5.5	4.9	0.00	0.00	0.00	790	1070	1100	1000	1060	843	743
30	6.1	4.9	0.00	0.00	---	756	1070	1090	1050	1060	842	422
31	6.2	---	0.00	0.00	---	887	---	1090	---	1040	842	---
TOTAL	3100.60	228.7	36.10	0.00	77.60	14557.00	28952	33730	28120	32470	27711	20228
MEAN	100	7.62	1.16	0.00	2.68	470	965	1088	937	1047	894	674
MAX	264	25	5.2	0.00	24	950	1100	1130	1100	1060	1050	977
MIN	0.00	4.9	0.00	0.00	0.00	0.00	716	1030	804	1020	497	376
AC-FT	6150	454	72	0.00	154	28870	57430	66900	55780	64400	54960	40120

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2004, BY WATER YEAR (WY)

MEAN	154	52.1	29.4	74.7	116	251	691	893	936	883	769	491
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	0.00	0.00	0.00	0.00	0.00	0.00	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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1914 - 2004	
ANNUAL TOTAL	167559.0		189211.0			
ANNUAL MEAN	459		517		451	
HIGHEST ANNUAL MEAN					684	
LOWEST ANNUAL MEAN					114	
HIGHEST DAILY MEAN	1130		Aug 1		1320	
LOWEST DAILY MEAN	0.00		Oct 27		0.00	
ANNUAL SEVEN-DAY MINIMUM	0.00		Dec 9		0.00	
ANNUAL RUNOFF (AC-FT)	332400		375300		326400	
10 PERCENT EXCEEDS	1000		1070		1080	
50 PERCENT EXCEEDS	483		548		333	
90 PERCENT EXCEEDS	2.7		0.00		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<sup>3</sup>/s, July 8–11, 1967; maximum discharge, 595 ft<sup>3</sup>/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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	293	0.00	0.00	0.00	0.00	0.00	210	298	384	436	411	332
2	295	0.00	0.00	0.00	0.00	0.00	210	300	394	423	405	317
3	295	0.00	0.00	0.00	0.00	0.00	241	322	407	427	416	310
4	284	0.00	0.00	0.00	0.00	0.00	256	362	400	430	439	310
5	273	0.00	0.00	0.00	0.00	0.00	210	379	379	436	454	311
6	273	0.00	0.00	0.00	0.00	0.00	210	379	357	432	460	311
7	272	0.00	0.00	0.00	0.00	0.00	238	379	351	422	460	311
8	273	0.00	0.00	0.00	0.00	0.00	237	379	362	422	445	311
9	272	0.00	0.00	0.00	0.00	0.00	246	378	383	439	428	311
10	273	0.00	0.00	0.00	0.00	0.00	272	370	383	452	432	311
11	289	0.00	0.00	0.00	0.00	0.00	288	344	384	452	443	311
12	299	0.00	0.00	0.00	0.00	0.00	288	331	384	441	443	311
13	304	0.00	0.00	0.00	0.00	0.00	289	332	384	429	442	296
14	303	0.00	0.00	0.00	0.00	0.00	286	352	403	442	433	249
15	9.7	0.00	0.00	0.00	0.00	0.00	270	370	412	452	419	221
16	0.00	0.00	0.00	0.00	0.00	0.00	261	379	396	438	417	229
17	0.00	0.00	0.00	0.00	0.00	0.00	261	353	393	416	417	257
18	0.00	0.00	0.00	0.00	0.00	102	261	335	404	412	410	268
19	0.00	0.00	0.00	0.00	0.00	137	261	346	405	397	393	268
20	0.00	0.00	0.00	0.00	0.00	160	278	369	405	392	404	261
21	0.00	0.00	0.00	0.00	0.00	227	310	383	396	430	436	250
22	0.00	0.00	0.00	0.00	0.00	264	319	382	390	446	436	241
23	0.00	0.00	0.00	0.00	0.00	271	329	372	389	469	436	248
24	0.00	0.00	0.00	0.00	0.00	288	338	354	403	469	416	257
25	0.00	0.00	0.00	0.00	0.00	283	329	329	412	469	393	251
26	0.00	0.00	0.00	0.00	0.00	259	315	307	415	468	390	242
27	0.00	0.00	0.00	0.00	0.00	240	306	326	423	468	390	230
28	0.00	0.00	0.00	0.00	0.00	220	300	348	424	468	390	173
29	0.00	0.00	0.00	0.00	0.00	221	299	365	426	468	390	133
30	0.00	0.00	0.00	0.00	---	222	299	364	440	468	385	168
31	0.00	---	0.00	0.00	---	223	---	371	---	441	355	---
TOTAL	4007.70	0.00	0.00	0.00	0.00	3117.00	8217	10958	11888	13654	12988	7999
MEAN	129	0.00	0.00	0.00	0.00	101	274	353	396	440	419	267
MAX	304	0.00	0.00	0.00	0.00	288	338	383	440	469	460	332
MIN	0.00	0.00	0.00	0.00	0.00	0.00	210	298	351	392	355	133
AC-FT	7950	0.00	0.00	0.00	0.00	6180	16300	21740	23580	27080	25760	15870

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2004, BY WATER YEAR (WY)

	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	99.1	4.62	0.97	1.56	2.03	48.3	227	358	375	375	343	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	1967	1967	1967	1958																																																																															
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1914 - 2004	
ANNUAL TOTAL	72528.68		72828.68			
ANNUAL MEAN	199		199		177	
HIGHEST ANNUAL MEAN					277	
LOWEST ANNUAL MEAN					52.8	
HIGHEST DAILY MEAN	488	Jul 12	469	Jul 23	556	Jul 8 1967
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 16	0.00	Jun 21 1914
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 16	0.00	Oct 16 1914
ANNUAL RUNOFF (AC-FT)	143900		144500		128300	
10 PERCENT EXCEEDS	457		429		475	
50 PERCENT EXCEEDS	184		250		73	
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<sup>2</sup>.

## 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<sup>3</sup>/s, Dec. 24, 1964, gage height, 28.85 ft in gage well, 31.2 ft outside, from floodmarks; minimum daily, 0.12 ft<sup>3</sup>/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<sup>3</sup>/s, by computation of flow over Goodwin Dam.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	219	250	243	257	228	220	226	1150	381	664	354	283
2	226	255	247	248	229	221	231	1030	372	609	346	284
3	226	253	255	251	225	222	230	874	363	575	331	268
4	224	255	283	247	223	219	230	660	347	586	325	255
5	223	258	280	239	222	219	233	632	351	576	320	258
6	226	259	282	233	221	221	233	634	362	556	301	252
7	227	256	249	236	267	219	233	633	376	537	300	239
8	220	257	250	232	350	216	235	632	376	471	305	215
9	223	262	248	231	393	219	233	633	375	430	304	191
10	221	264	250	231	397	217	232	638	412	428	300	185
11	222	260	251	230	429	218	236	639	447	428	295	172
12	222	264	247	232	495	223	235	777	445	438	303	171
13	223	267	249	230	497	220	393	1010	503	434	304	174
14	225	261	252	233	498	219	539	1210	590	432	304	176
15	222	247	250	232	498	218	545	1430	647	432	299	169
16	220	248	246	233	499	218	541	1440	712	473	294	158
17	225	249	248	235	498	220	542	1440	862	627	282	159
18	224	249	253	234	494	208	543	1440	1050	631	279	160
19	241	247	253	233	490	205	544	1210	1160	625	279	159
20	888	249	248	233	496	203	544	919	1170	628	283	148
21	948	246	247	236	495	208	630	694	1160	543	284	149
22	952	250	247	232	495	205	865	504	1180	428	286	145
23	950	248	247	231	472	205	1100	494	1180	430	285	144
24	949	250	247	232	372	203	1200	438	1130	380	287	146
25	949	247	251	237	299	213	1200	395	1030	380	293	144
26	949	249	247	234	283	206	1210	395	991	381	283	146
27	949	247	249	234	223	205	1210	396	989	384	286	146
28	950	248	249	236	220	209	1210	394	894	383	287	145
29	870	242	247	238	221	203	1210	392	736	370	286	144
30	509	244	248	237	---	202	1210	391	661	356	285	145
31	252	---	250	238	---	204	---	396	---	354	283	---
TOTAL	14374	7581	7813	7315	10729	6608	18023	23920	21252	14969	9253	5530
MEAN	464	253	252	236	370	213	601	772	708	483	298	184
MAX	952	267	283	257	499	223	1210	1440	1180	664	354	284
MIN	219	242	243	230	220	202	226	391	347	354	279	144
AC-FT	28510	15040	15500	14510	21280	13110	35750	47450	42150	29690	18350	10970



## 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 - 2004, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
MEAN	493	402	678	910	1142	1200	912	952	727	546	482	390										
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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1984 - 2004

ANNUAL TOTAL	183464	147367	
ANNUAL MEAN	503	403	734
HIGHEST ANNUAL MEAN			1893 1997
LOWEST ANNUAL MEAN			185 1991
HIGHEST DAILY MEAN	1430 Apr 25	1440 May 16	6840 Feb 26 1997
LOWEST DAILY MEAN	219 Oct 1	144 Sep 23	51 Oct 10 1990
ANNUAL SEVEN-DAY MINIMUM	222 Oct 10	145 Sep 23	85 Oct 10 1990
MAXIMUM PEAK FLOW		1500 May 15	7350 Jan 3 1997
MAXIMUM PEAK STAGE		10.25 May 15	15.59 Jan 3 1997
ANNUAL RUNOFF (AC-FT)	363900	292300	532100
10 PERCENT EXCEEDS	1010	902	1520
50 PERCENT EXCEEDS	380	260	379
90 PERCENT EXCEEDS	234	214	190

## 11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CA—Continued

## WATER-QUALITY RECORDS

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 Dec. 25 to Jan. 6, Mar. 11–30, May 16–22, 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, 14.5°C, Oct. 6–8; minimum recorded, 9.5°C, many days in January and February.

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.0	13.5	13.0	12.5	12.0	11.5	10.5	10.5	10.0	9.5	10.5	10.5
2	14.0	13.5	12.5	12.0	12.5	12.0	10.5	10.0	10.0	9.5	11.0	10.0
3	14.0	13.5	12.5	12.5	12.5	12.0	10.5	10.0	10.0	9.5	11.0	10.0
4	14.0	13.5	12.5	12.0	12.0	12.0	10.5	10.0	10.0	9.5	11.0	10.0
5	14.0	13.5	12.5	12.0	12.0	12.0	10.0	9.5	10.0	9.5	11.0	10.5
6	14.5	13.5	12.5	12.5	12.5	12.0	10.0	9.5	10.0	9.5	11.5	10.5
7	14.5	13.5	13.0	12.5	12.5	12.0	10.5	10.0	10.5	9.5	12.0	11.0
8	14.5	13.5	13.0	12.5	12.0	11.5	10.5	10.0	10.0	9.5	12.0	11.0
9	14.0	13.5	13.0	12.5	11.5	11.5	10.5	10.0	10.0	9.5	12.0	11.0
10	14.0	13.0	12.5	12.0	12.0	11.5	10.5	10.0	10.0	9.5	12.0	11.0
11	13.5	13.0	12.5	12.0	12.0	11.5	10.5	10.0	10.0	9.5	12.0	11.0
12	14.0	13.0	12.5	12.0	11.5	11.0	10.0	10.0	10.0	9.5	12.0	11.0
13	13.5	13.0	12.5	12.0	12.0	11.5	10.0	10.0	10.0	9.5	12.0	11.0
14	14.0	13.0	12.5	12.0	12.0	11.5	10.0	10.0	10.0	9.5	12.0	11.0
15	14.0	13.0	12.5	12.0	11.5	11.0	10.0	10.0	10.5	10.0	12.0	11.0
16	14.0	13.0	12.5	12.0	11.5	11.0	10.0	10.0	10.5	10.0	12.0	11.0
17	14.0	13.5	12.5	12.5	11.5	11.0	10.0	9.5	10.0	10.0	12.0	11.0
18	14.0	13.0	12.5	12.0	11.5	11.0	10.0	9.5	10.5	10.0	12.0	11.0
19	14.0	13.5	12.5	12.0	11.5	11.0	10.0	10.0	10.0	9.5	12.0	11.0
20	13.5	13.5	12.5	12.0	11.5	11.5	10.0	9.5	10.5	10.0	12.0	11.0
21	13.5	13.0	12.5	12.0	11.5	11.5	10.0	9.5	10.5	10.0	12.0	11.0
22	13.5	13.0	12.0	11.5	12.0	11.5	10.0	9.5	10.0	10.0	12.0	11.0
23	13.5	13.0	12.0	11.5	11.5	11.5	10.0	9.5	10.5	10.0	12.0	11.0
24	13.5	13.0	12.0	11.5	11.5	11.5	10.0	9.5	10.5	10.0	12.0	11.0
25	13.5	13.0	12.0	11.0	11.5	11.0	10.0	9.5	10.5	10.0	11.5	11.0
26	13.5	13.0	12.0	11.5	11.0	10.5	10.0	9.5	10.5	10.0	12.0	11.0
27	13.5	13.0	12.0	11.5	10.5	10.0	10.0	10.0	11.0	10.0	12.5	11.0
28	13.5	13.0	12.0	11.5	10.5	10.0	10.0	9.5	10.5	10.0	12.5	11.0
29	13.5	13.0	12.0	12.0	10.5	10.0	10.0	9.5	11.0	10.0	12.5	11.5
30	13.5	13.0	12.0	12.0	11.0	10.0	10.0	9.5	---	---	12.0	11.5
31	13.0	12.5	---	---	11.0	10.5	10.0	9.5	---	---	13.0	11.5
MONTH	14.5	12.5	13.0	11.0	12.5	10.0	10.5	9.5	11.0	9.5	13.0	10.0

## 11302000 STANISLAUS RIVER BELOW GOODWIN DAM, NEAR KNIGHTS FERRY, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.5	11.0	12.5	12.0	13.0	11.5	13.5	12.0	13.5	12.5	14.0	12.5
2	12.0	11.0	12.5	11.5	13.0	11.5	13.5	12.0	13.5	12.5	13.5	12.5
3	12.5	11.0	12.5	11.5	12.5	11.5	13.0	12.0	13.5	12.5	13.5	12.5
4	12.5	11.0	12.5	11.5	13.0	11.5	13.5	12.0	13.5	12.5	13.5	12.5
5	12.5	11.0	12.5	11.5	12.5	11.5	13.5	12.0	13.5	12.5	13.5	12.5
6	12.0	11.0	12.5	11.5	13.0	11.5	13.5	12.0	13.5	12.5	13.5	12.5
7	12.5	11.0	12.5	11.5	12.5	11.5	13.0	12.0	13.5	12.5	14.0	12.5
8	12.5	11.5	12.5	11.5	12.5	11.5	13.0	12.0	13.5	12.5	13.5	12.5
9	12.5	11.5	12.5	11.5	12.5	11.5	13.0	12.0	14.0	12.5	13.5	12.5
10	12.5	11.5	12.5	11.5	12.5	11.5	13.0	12.0	13.5	12.5	13.5	12.5
11	12.5	11.0	12.5	11.5	12.5	11.5	13.0	12.0	13.5	12.5	13.5	12.5
12	12.5	11.5	12.5	11.5	13.0	11.5	13.0	12.0	13.5	12.5	13.5	12.5
13	12.5	11.5	13.0	11.5	13.0	11.5	13.5	12.0	13.5	12.5	13.5	12.5
14	12.5	11.5	13.0	11.5	13.0	12.0	13.5	12.0	13.5	12.5	13.5	12.5
15	12.0	11.5	13.0	12.0	13.0	12.0	13.5	12.0	13.5	12.5	13.5	12.5
16	12.0	11.5	13.0	12.0	13.0	12.0	13.5	12.5	13.5	12.5	14.0	13.0
17	12.0	11.5	13.5	12.0	13.0	12.0	13.5	12.5	14.0	12.5	14.0	13.0
18	12.0	11.0	13.0	12.0	13.5	12.5	13.5	12.5	14.0	12.5	13.5	13.0
19	12.0	11.5	12.5	11.5	13.5	12.5	13.5	12.5	13.5	12.5	13.0	12.5
20	12.0	11.5	12.5	11.5	13.5	12.5	13.5	12.5	13.5	12.5	13.5	12.0
21	12.5	11.5	12.5	11.5	13.5	12.5	14.0	12.5	13.5	12.5	13.5	12.5
22	13.0	11.0	12.5	11.0	13.5	12.5	13.5	12.5	13.5	12.5	13.5	12.5
23	13.0	12.0	12.5	11.0	13.5	12.5	13.5	12.5	13.5	12.5	13.5	12.5
24	13.0	12.0	12.5	11.0	13.5	12.5	13.5	12.5	13.5	12.5	13.5	12.5
25	13.0	12.0	12.5	11.0	13.5	12.0	13.5	12.5	13.5	12.5	13.5	13.0
26	13.0	12.5	12.5	11.5	13.0	12.0	13.5	12.5	13.5	12.5	14.0	13.0
27	13.0	12.0	12.5	11.5	13.0	12.0	13.5	12.5	14.0	12.5	13.5	12.5
28	13.0	12.0	12.0	11.5	13.5	12.5	13.5	12.0	13.5	12.5	13.5	13.0
29	13.0	12.0	12.5	11.0	13.0	12.0	13.5	12.5	13.5	12.5	13.5	12.5
30	13.0	12.0	12.5	11.5	13.0	12.0	13.5	12.5	14.0	12.5	13.5	12.5
31	---	---	12.5	11.5	---	---	13.5	12.5	13.5	12.5	---	---
MONTH	13.0	11.0	13.5	11.0	13.5	11.5	14.0	12.0	14.0	12.5	14.0	12.0

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DATE	TIME	Depth at sample location, feet (81903)	Temperature, water, deg C (00010)	Location in X-sect. looking downstrm ft from l bank (00009)
MAY				
19...*	1508	1.50	12.7	122
19...*	1511	3.00	12.7	132
19...*	1513	4.00	12.7	142
19...*	1514	4.50	12.7	152
19...*	1515	4.00	12.7	162
19...*	1516	3.00	12.7	172
19...*	1518	3.00	12.7	182
19...*	1520	2.50	12.7	192
19...*	1521	3.50	12.6	202
19...*	1523	3.00	12.6	212
AUG				
10...*	0840	1.50	12.6	4.00
10...*	0841	2.00	12.6	13.0
10...*	0842	2.30	12.6	22.0
10...*	0843	2.00	12.6	31.0
10...*	0844	1.70	12.6	40.0
10...*	0845	2.00	12.6	49.0
10...*	0846	2.30	12.6	58.0
10...*	0847	2.00	12.6	67.0
10...*	0848	2.40	12.6	76.0
10...*	0849	2.00	12.6	85.0

\* Instantaneous discharge at time of cross-sectional measurement: May 19, 1,220 ft<sup>3</sup>/s; Aug. 10, 278 ft<sup>3</sup>/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<sup>2</sup>.

PERIOD OF RECORD.—Water years 1895–1900, 1985 to current year.

WATER-DISCHARGE RECORDS: Water years 1895–1900.

WATER TEMPERATURE: Water years 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 Dec. 13 to Jan. 6, Feb. 15–19, 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, 20.0°C, several days July, August, and September; minimum recorded, 8.0°C, Dec. 28, Jan. 4, 5.

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.0	16.0	13.0	12.0	12.5	11.5	10.5	10.0	10.0	9.5	11.5	11.0
2	17.5	15.5	12.5	11.5	12.5	11.5	10.0	9.0	10.0	10.0	12.5	10.5
3	17.5	15.5	13.0	12.0	12.5	12.0	9.5	9.0	10.5	9.5	12.0	10.5
4	17.5	15.5	12.5	11.5	12.0	12.0	9.0	8.0	10.5	9.5	12.5	10.5
5	17.5	15.5	12.5	11.5	12.5	12.0	9.0	8.0	10.5	9.0	13.0	11.0
6	18.0	16.0	13.0	12.0	13.0	12.5	9.0	8.5	10.5	9.5	13.5	11.0
7	17.5	15.5	14.0	12.5	13.5	12.5	10.5	9.0	11.5	10.0	14.5	12.0
8	17.5	16.0	14.0	13.0	12.5	11.0	11.5	10.0	10.5	9.5	15.0	12.5
9	17.5	15.5	14.0	13.5	11.0	10.5	11.0	10.5	11.0	9.0	15.5	13.0
10	16.5	15.0	13.5	13.0	12.0	11.0	11.0	10.0	11.0	9.0	16.0	13.5
11	16.0	14.0	13.0	12.0	12.0	11.0	10.5	10.0	11.0	9.0	16.0	13.5
12	16.0	14.0	12.5	11.5	11.0	10.5	11.0	10.5	11.0	9.0	16.0	13.0
13	15.5	14.0	13.0	12.0	12.0	11.0	11.0	10.5	10.5	9.5	16.0	13.0
14	15.5	13.5	13.0	12.0	12.0	11.0	10.5	10.5	11.0	9.5	16.0	13.5
15	16.0	14.0	13.0	12.5	11.0	10.0	10.5	10.0	11.0	10.0	16.5	13.5
16	16.0	14.0	12.5	11.5	10.5	9.5	10.5	10.0	11.5	11.0	16.5	13.5
17	15.5	14.0	13.5	12.5	10.5	9.5	10.5	10.0	12.0	10.5	16.5	13.5
18	16.0	14.0	13.0	12.0	10.5	9.5	10.5	10.0	11.5	11.0	17.0	14.0
19	16.5	15.0	13.0	12.0	11.0	10.0	10.5	10.0	11.5	10.0	17.0	14.0
20	15.5	14.5	13.0	12.0	11.5	11.0	10.5	10.0	11.0	10.5	16.5	13.5
21	15.0	13.5	12.5	11.0	12.0	11.5	10.0	9.0	11.5	10.5	17.0	14.0
22	15.0	13.5	11.0	10.0	12.5	11.5	10.0	9.0	11.5	10.5	17.0	14.5
23	14.5	13.5	10.5	9.5	11.5	11.5	10.0	9.0	12.0	10.5	16.5	14.0
24	14.5	13.5	10.5	9.5	12.0	11.5	10.5	9.5	12.0	10.5	16.5	14.0
25	14.5	13.0	10.5	9.5	11.5	11.0	11.0	10.0	11.5	11.0	14.5	13.0
26	14.5	13.0	10.5	9.5	11.0	9.5	10.0	9.5	11.5	10.5	14.0	12.0
27	14.5	13.0	10.5	9.5	9.5	8.5	10.5	10.0	12.0	10.5	15.0	12.0
28	14.5	13.0	11.5	10.5	9.0	8.0	11.0	10.0	12.0	10.0	16.0	13.0
29	14.5	13.5	11.5	11.0	9.5	9.0	10.5	9.5	12.0	10.5	17.0	14.0
30	13.5	12.5	11.5	11.5	10.5	9.0	11.0	9.5	---	---	15.0	14.0
31	13.5	12.5	---	---	11.0	10.0	11.0	10.0	---	---	16.0	13.0
MONTH	18.0	12.5	14.0	9.5	13.5	8.0	11.5	8.0	12.0	9.0	17.0	10.5

## 11302500 STANISLAUS RIVER AT OAKDALE, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	15.5	13.0	15.0	13.0	18.0	15.0	17.0	14.5	19.0	16.5	19.5	17.0
2	15.5	13.0	15.0	13.0	19.0	15.5	17.0	15.0	19.0	16.5	19.5	17.0
3	16.0	13.0	15.5	13.0	18.0	15.5	17.5	15.0	19.0	16.5	18.5	16.5
4	16.0	13.5	15.5	13.0	18.0	15.0	18.0	15.0	19.5	16.5	18.5	16.0
5	16.0	13.5	15.5	13.5	18.5	15.0	18.0	15.5	19.5	16.5	19.0	16.0
6	16.0	13.0	15.5	13.5	19.0	16.0	18.0	15.5	19.0	16.5	19.0	16.5
7	16.0	13.5	15.5	13.0	18.0	15.5	18.0	16.0	19.5	16.5	19.0	17.0
8	16.5	14.0	16.0	13.5	17.5	15.0	18.0	15.5	20.0	17.0	19.5	17.0
9	17.5	14.5	15.5	13.0	17.5	15.0	18.0	15.5	20.0	17.5	20.0	17.0
10	17.5	15.0	15.5	13.0	18.0	15.0	18.5	15.5	20.0	17.5	19.5	17.0
11	17.0	14.5	15.5	13.0	17.5	15.0	18.5	15.5	20.0	17.5	20.0	17.0
12	17.0	14.5	15.0	13.0	17.5	14.5	18.5	15.5	19.5	18.0	20.0	17.0
13	16.5	14.0	15.0	12.5	18.0	15.0	18.5	16.0	20.0	17.0	19.5	17.0
14	15.0	12.5	15.0	13.0	17.0	15.0	18.5	15.5	19.5	17.5	19.0	16.5
15	14.0	13.0	14.5	13.0	17.0	15.0	19.0	16.0	19.5	17.0	19.0	16.0
16	14.0	12.0	15.0	13.0	17.5	14.5	18.5	16.0	19.5	17.0	19.5	16.0
17	14.0	12.0	15.0	13.0	17.0	14.5	18.0	15.5	20.0	17.0	19.5	17.0
18	13.5	12.0	14.5	13.0	16.0	14.0	18.0	15.5	20.0	17.5	18.0	16.5
19	14.0	12.0	15.0	13.0	16.0	14.0	18.0	15.5	20.0	17.5	16.5	15.0
20	14.5	13.0	15.0	13.0	16.5	14.0	18.0	16.0	20.0	17.5	16.5	13.5
21	15.0	12.5	15.5	13.0	16.0	14.0	18.0	16.0	19.5	17.5	17.5	14.5
22	14.5	12.0	16.0	13.0	16.0	14.0	19.5	16.5	18.5	17.0	18.0	15.0
23	14.5	12.5	16.0	13.5	16.0	14.0	19.0	16.5	19.0	16.5	18.0	15.0
24	15.0	13.0	16.0	13.5	16.0	14.0	19.5	16.5	19.5	17.0	18.5	15.5
25	15.0	13.0	17.0	14.0	16.0	13.5	20.0	17.0	19.5	17.0	18.5	16.0
26	15.0	13.0	17.5	14.5	16.5	14.0	19.5	17.0	19.5	17.0	18.5	16.0
27	15.5	13.0	17.5	15.0	16.0	14.0	19.5	17.0	19.5	17.0	18.0	15.5
28	14.5	13.0	17.0	15.0	16.5	14.0	19.5	16.5	19.5	17.0	18.0	16.0
29	14.5	12.5	17.0	14.0	17.0	14.5	19.0	16.5	19.5	17.0	18.0	15.5
30	14.5	12.5	17.5	14.0	17.0	15.0	19.5	16.5	19.5	17.0	17.5	15.5
31	---	---	17.5	15.0	---	---	19.5	17.0	19.5	17.0	---	---
MONTH	17.5	12.0	17.5	12.5	19.0	13.5	20.0	14.5	20.0	16.5	20.0	13.5

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DATE	TIME	Depth at sample location, feet (81903)	Temperature, water, deg C (00010)	Location in X-sect. looking downstrm ft from l bank (00009)
MAY				
21...*	1122	2.70	13.3	8.00
21...*	1123	3.80	13.3	25.0
21...*	1124	3.10	13.3	42.0
21...*	1126	2.30	13.3	59.0
21...*	1127	3.40	13.4	76.0
21...*	1128	4.00	13.4	93.0
21...*	1129	3.10	13.4	110
21...*	1131	2.60	13.4	127
21...*	1132	2.90	13.4	144
21...*	1133	2.40	13.4	161
AUG				
10...*	1636	1.80	19.5	12.0
10...*	1637	2.50	19.5	28.0
10...*	1638	2.00	19.5	44.0
10...*	1639	1.00	19.5	60.0
10...*	1640	2.00	19.5	76.0
10...*	1641	3.00	19.5	92.0
10...*	1642	2.20	19.5	108
10...*	1643	1.50	19.5	124
10...*	1644	2.20	19.5	140
10...*	1645	1.40	19.5	156

\* 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<sup>2</sup>.

## 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<sup>3</sup>/s, Dec. 24, 1955, gage height, 63.25 ft; minimum daily, 0.11 ft<sup>3</sup>/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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	283	433	290	364	268	350	375	1160	480	746	411	341
2	290	371	290	666	274	355	433	1110	456	731	420	366
3	307	359	291	541	291	382	482	1040	440	691	426	332
4	308	336	297	420	318	336	398	919	429	650	388	311
5	319	323	306	360	300	311	396	774	432	652	377	373
6	416	318	310	321	282	300	314	721	409	643	370	419
7	504	323	320	302	272	282	304	704	430	625	359	418
8	543	333	302	294	281	275	343	701	446	589	366	385
9	514	421	292	288	325	273	332	696	433	551	378	357
10	371	416	299	284	368	269	344	720	428	517	354	290
11	340	380	316	280	377	264	344	704	447	526	347	262
12	335	340	301	276	394	263	355	694	475	515	335	246
13	341	315	293	275	450	265	326	768	479	500	335	250
14	328	312	302	274	464	350	415	928	530	484	341	242
15	325	309	304	273	472	321	537	1080	609	479	349	241
16	333	300	292	273	495	322	548	1250	675	474	347	239
17	528	297	287	273	494	330	552	1330	711	514	377	237
18	618	297	288	273	531	374	568	1340	811	640	330	237
19	647	294	290	273	664	415	586	1340	956	681	315	246
20	668	292	300	272	588	322	572	1190	1060	676	334	319
21	980	290	293	272	540	288	578	987	1090	669	321	267
22	1130	288	287	273	524	323	641	816	1090	613	333	229
23	966	289	289	271	510	338	784	682	1110	519	419	224
24	911	288	299	273	491	332	949	654	1120	474	366	218
25	901	290	322	271	444	345	1060	589	1080	444	346	216
26	899	288	391	270	549	409	1100	507	1020	443	352	214
27	904	291	357	271	732	399	1120	498	987	426	343	220
28	904	291	317	276	513	370	1140	496	993	422	322	215
29	905	288	321	272	392	424	1150	496	929	428	339	214
30	857	288	347	271	---	447	1150	477	815	435	372	216
31	636	---	349	269	---	409	---	477	---	412	386	---
TOTAL	18311	9660	9542	9571	12603	10443	18196	25848	21370	17169	11158	8344
MEAN	591	322	308	309	435	337	607	834	712	554	360	278
MAX	1130	433	391	666	732	447	1150	1340	1120	746	426	419
MIN	283	288	287	269	268	263	304	477	409	412	315	214
AC-FT	36320	19160	18930	18980	25000	20710	36090	51270	42390	34050	22130	16550

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2004, BY WATER YEAR (WY)

	404	468	868	1177	1257	1381	1481	1964	1394	520	374	354
MEAN	404	468	868	1177	1257	1381	1481	1964	1394	520	374	354
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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1941 - 2004

ANNUAL TOTAL	200853	172215		
ANNUAL MEAN	550	471	968	
HIGHEST ANNUAL MEAN			2548	1983
LOWEST ANNUAL MEAN			44.9	1977
HIGHEST DAILY MEAN	1410	May 3	47000	Dec 24 1955
LOWEST DAILY MEAN	272	Jan 20	0.11	Aug 4 1977
ANNUAL SEVEN-DAY MINIMUM	274	Jan 18	0.13	Aug 2 1977
MAXIMUM PEAK FLOW			62500	Dec 24 1955
MAXIMUM PEAK STAGE			63.25	Dec 24 1955
ANNUAL RUNOFF (AC-FT)	398400	341600	701600	
10 PERCENT EXCEEDS	1040	904	2500	
50 PERCENT EXCEEDS	459	371	408	
90 PERCENT EXCEEDS	290	273	144	

## 11303000 STANISLAUS RIVER AT RIPON, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1985–89, 1993 to current year.

CHEMICAL DATA: Water years 1985–88, 1993–94.

SPECIFIC CONDUCTANCE: Water years 1985–89, 1993–94, 1997 to current year.

WATER TEMPERATURE: Water years 1985–89, 1993 to current year.

SEDIMENT DATA: Water year 1985–88, 1993–94.

PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: October 1985 to September 1989, July 1997 to current year.

WATER TEMPERATURE: October 1985 to September 1989, October 1994 to current year.

INSTRUMENTATION.—Water-temperature and specific conductance recorders through June 1997, water-quality monitor since July 1997.

REMARKS.—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. Specific conductance records rated excellent except for Oct. 1–4, Dec. 2–12, Mar. 28 to Apr. 1, Apr. 6–12, July 14 to Aug. 6, Aug. 10, 11, Aug. 20 to Sept. 2, Sept. 30, which are rated good; Dec. 13–19, Apr. 13–17, Sept. 3–13, which are rated fair; and Dec. 20 to Jan. 9, Apr. 18 to May 2, Sept. 14–27, 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, 232 microsiemens, Mar. 17, 2004; 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, 232 microsiemens, Mar. 17; minimum recorded, 58 microsiemens, May 15.

WATER TEMPERATURE: Maximum recorded, 24.5°C, Aug. 11, 12; minimum recorded, 7.0°C, Dec. 28, Jan. 4, 5.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	122	---	---	107	102	104	89	134	133	146	127
2	---	123	---	---	108	102	122	84	136	128	141	134
3	---	125	---	---	107	102	135	115	143	132	147	134
4	---	126	---	---	106	102	115	99	145	132	144	140
5	---	---	---	---	116	101	104	100	147	131	148	142
6	---	---	---	---	106	101	105	102	154	145	153	128
7	---	---	---	---	111	98	119	104	145	142	148	146
8	---	---	---	---	103	98	136	119	142	135	149	146
9	---	---	---	---	106	101	126	122	135	119	150	146
10	---	---	---	---	109	98	128	125	119	108	150	145
11	---	---	---	---	106	98	130	124	110	108	150	147
12	---	---	---	---	111	102	134	129	110	100	151	144
13	---	---	---	---	107	101	135	131	100	98	148	143
14	---	---	---	---	112	96	143	132	100	98	146	118
15	---	---	---	---	101	95	140	138	102	99	150	124
16	---	---	---	---	103	96	141	137	107	98	139	127
17	---	---	---	---	98	95	149	138	105	99	232	124
18	74	71	---	---	99	94	140	136	111	98	135	121
19	77	72	---	---	101	93	139	135	120	98	130	119
20	76	73	---	---	94	90	149	134	118	113	156	130
21	78	65	---	---	93	89	136	132	114	108	156	145
22	---	---	---	---	94	91	135	131	109	106	149	135
23	---	---	---	---	95	91	135	131	108	106	150	129
24	---	---	---	---	102	88	142	132	111	105	138	132
25	---	---	---	---	102	89	136	132	125	107	140	132
26	---	---	---	---	120	94	140	133	167	113	132	124
27	---	---	109	102	113	105	139	134	155	130	128	124
28	---	---	108	103	110	101	135	129	137	132	129	122
29	---	---	108	102	112	97	135	132	142	137	122	113
30	---	---	107	102	110	95	136	134	---	---	116	108
31	---	---	---	---	114	102	136	133	---	---	119	109
MONTH	---	---	---	---	120	88	149	84	167	98	232	108

## 11303000 STANISLAUS RIVER AT RIPON, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	117	104	70	68	107	76	74	66	84	70	88	78
2	107	102	73	69	102	79	81	66	98	72	90	77
3	108	98	---	---	88	81	80	67	100	72	88	83
4	116	106	---	---	105	81	91	72	84	75	89	80
5	116	101	---	---	102	83	86	72	92	76	85	75
6	121	109	---	---	92	78	85	73	102	78	85	72
7	118	114	---	---	102	77	85	73	94	77	83	74
8	117	104	---	---	88	77	86	75	91	78	100	75
9	113	109	---	---	85	80	90	72	103	77	100	80
10	111	105	---	---	95	78	97	74	91	78	99	80
11	108	104	---	---	85	78	84	77	101	78	101	94
12	107	101	---	---	98	77	94	77	120	79	106	94
13	110	100	---	---	95	76	93	77	99	81	100	91
14	101	89	---	---	91	72	92	77	111	82	103	91
15	89	79	60	58	92	69	96	74	102	83	102	93
16	81	78	60	59	94	70	83	73	99	83	104	95
17	84	77	61	59	88	70	87	70	101	81	142	100
18	83	77	61	60	82	61	74	65	117	82	122	99
19	83	78	62	60	74	60	79	64	118	80	118	100
20	83	78	75	62	71	59	74	65	105	83	112	88
21	81	79	74	63	69	59	72	64	103	85	138	95
22	80	77	73	66	64	59	73	64	95	84	114	109
23	78	73	89	70	69	59	89	72	98	74	129	106
24	79	71	98	75	67	59	93	72	93	79	123	112
25	76	70	79	74	68	59	79	72	96	84	135	111
26	73	67	95	79	69	61	91	75	94	83	140	114
27	77	70	90	80	64	61	83	74	92	87	121	109
28	77	72	101	79	73	60	98	74	94	90	122	110
29	72	69	94	76	70	61	92	72	97	89	126	109
30	70	68	97	77	73	64	90	74	95	86	131	107
31	---	---	87	74	---	---	86	69	95	75	---	---
MONTH	121	67	---	---	107	59	98	64	120	70	142	72

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.0	16.5	---	---	12.0	11.0	10.5	9.5	10.0	9.0	12.5	11.5
2	17.0	15.0	---	---	12.0	11.5	9.5	9.0	10.0	9.5	13.5	11.0
3	17.0	14.5	---	---	12.5	11.5	9.0	8.0	10.5	9.5	12.5	11.5
4	17.5	15.0	---	---	12.5	12.0	8.0	7.0	10.5	10.0	13.5	11.0
5	18.0	15.5	---	---	12.5	12.0	8.0	7.0	10.5	9.0	14.0	12.0
6	18.5	16.0	---	---	13.5	12.0	8.5	7.5	11.0	9.0	15.0	12.5
7	19.0	16.5	---	---	13.5	12.5	9.5	8.5	11.0	9.5	15.5	13.0
8	19.0	17.0	---	---	12.5	11.0	11.0	9.5	11.0	9.0	16.5	13.5
9	19.0	17.0	---	---	11.0	10.5	11.5	10.5	10.5	9.0	17.5	14.5
10	---	---	---	---	11.5	10.5	11.5	11.0	10.5	9.0	18.0	15.5
11	---	---	---	---	11.5	10.5	11.5	10.5	10.5	8.5	18.0	15.0
12	---	---	---	---	10.5	9.5	11.0	10.5	10.5	9.0	18.0	15.5
13	---	---	---	---	11.5	10.5	10.5	10.5	10.5	9.5	18.0	15.5
14	---	---	---	---	12.0	11.0	10.5	10.0	11.0	9.5	18.5	15.5
15	---	---	---	---	11.0	10.0	10.0	9.5	11.5	10.5	18.0	16.0
16	---	---	---	---	10.0	9.0	10.0	10.0	11.5	11.5	18.0	16.0
17	18.0	---	---	---	9.5	8.5	10.0	9.5	12.0	11.0	19.0	16.0
18	18.0	17.0	---	---	9.5	8.5	10.0	9.5	13.0	12.0	19.0	17.0
19	18.5	18.0	---	---	10.5	9.0	10.0	9.5	12.0	11.0	18.0	16.0
20	18.5	17.5	---	---	11.0	9.5	10.0	9.5	12.0	11.5	18.5	15.5
21	18.0	16.5	---	---	12.0	11.0	10.0	8.5	12.5	11.5	19.0	16.5
22	---	---	---	---	12.0	11.5	9.5	8.5	12.5	11.5	18.5	17.0
23	---	---	---	---	11.5	11.0	9.0	8.5	13.0	11.5	18.0	16.5
24	---	---	---	---	12.0	11.5	10.0	9.0	13.0	11.5	18.0	15.5
25	---	---	---	---	11.5	10.5	11.0	9.5	12.5	11.5	16.5	15.0
26	---	---	9.0	---	10.5	9.0	10.0	9.0	12.0	11.0	15.5	14.0
27	---	---	9.5	8.0	9.0	8.0	10.5	9.5	12.0	11.0	16.0	13.5
28	---	---	10.0	9.0	8.0	7.0	11.0	10.0	12.5	11.0	16.5	14.0
29	---	---	10.5	9.5	8.5	8.0	11.0	10.0	12.5	11.0	17.5	15.0
30	---	---	11.0	10.5	9.5	8.0	11.0	10.0	---	---	17.0	15.0
31	---	---	---	---	10.0	9.0	11.0	9.5	---	---	16.5	14.5
MONTH	---	---	---	---	13.5	7.0	11.5	7.0	13.0	8.5	19.0	11.0



## 11303000 STANISLAUS RIVER AT RIPON, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17.5	14.5	16.0	14.5	21.5	18.5	20.0	18.0	22.5	20.0	23.0	20.5
2	16.5	14.0	16.5	15.0	22.0	19.0	20.5	18.0	22.5	20.0	22.5	20.5
3	16.5	14.5	17.0	15.5	22.0	19.0	20.5	18.5	22.5	19.5	21.5	19.5
4	17.5	14.5	17.5	15.5	22.0	19.0	21.0	19.0	23.0	20.0	21.5	18.5
5	17.0	14.5	17.5	15.5	22.0	19.0	21.5	19.5	23.0	20.0	22.0	19.0
6	17.5	14.0	18.0	16.0	22.5	19.5	22.0	20.0	22.5	19.5	21.5	19.0
7	18.0	15.0	17.5	15.5	22.0	19.5	22.0	20.0	23.0	20.0	21.5	19.0
8	18.5	15.0	18.0	16.0	21.0	19.0	21.5	19.5	24.0	21.0	22.0	19.0
9	19.5	16.0	18.0	16.0	20.5	18.5	21.0	19.0	23.5	21.0	22.0	19.5
10	19.5	17.0	17.5	15.5	21.0	18.0	21.5	19.0	24.0	21.0	22.5	19.5
11	19.5	17.0	17.0	15.0	21.0	18.5	22.0	19.5	24.5	21.0	23.0	19.0
12	19.5	16.5	17.5	15.0	21.0	18.5	22.5	20.0	24.5	21.5	23.0	20.0
13	19.0	16.0	17.0	15.0	21.5	18.5	22.0	20.0	24.0	21.0	21.5	19.0
14	18.0	15.5	16.5	15.0	21.5	19.5	22.5	20.0	23.5	20.5	21.5	19.0
15	17.0	15.0	16.5	14.5	21.0	19.0	22.0	20.0	23.0	20.0	21.5	18.5
16	15.5	13.5	16.0	14.5	21.0	18.5	22.5	20.0	23.5	20.0	22.5	19.0
17	15.5	13.5	16.5	14.0	20.0	18.5	22.5	20.0	24.0	20.5	22.0	19.0
18	15.0	13.0	16.0	14.5	19.0	17.5	21.5	20.0	24.0	21.0	20.5	18.0
19	15.0	13.5	16.0	14.5	18.5	17.0	21.5	19.5	24.0	21.0	18.0	16.5
20	15.5	14.0	16.5	14.5	18.0	16.5	21.5	19.5	24.0	21.5	18.0	15.5
21	17.0	14.5	16.5	15.0	18.0	16.5	21.5	19.5	24.0	21.0	18.5	16.0
22	16.5	14.0	17.5	15.5	18.0	16.0	22.0	19.5	22.0	20.0	19.5	16.5
23	16.0	14.0	18.0	15.5	18.0	16.5	23.0	20.5	22.0	19.5	20.0	17.0
24	16.0	14.0	19.0	16.5	18.0	16.0	23.0	21.0	22.5	20.0	20.5	17.5
25	16.0	14.5	19.0	17.0	18.0	16.0	23.5	20.5	22.5	19.5	21.0	18.0
26	16.5	14.5	20.0	17.5	18.5	16.5	24.0	21.5	23.0	20.0	21.0	18.0
27	16.5	15.0	20.5	18.5	18.5	16.5	24.0	21.5	23.0	20.0	20.5	18.0
28	16.5	15.0	20.0	18.5	19.0	17.0	23.5	21.0	23.0	20.0	20.0	17.5
29	15.5	14.0	20.0	17.5	19.0	17.0	23.0	20.5	23.0	20.5	20.0	17.5
30	16.0	14.0	20.5	17.5	19.5	17.5	23.0	20.5	23.5	20.5	19.5	17.5
31	---	---	20.5	18.5	---	---	23.0	20.5	23.0	20.5	---	---
MONTH	19.5	13.0	20.5	14.0	22.5	16.0	24.0	18.0	24.5	19.5	23.0	15.5

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DATE	TIME	Depth at sample locat- ion, feet (81903)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Loca- tion in X-sect. looking downstrm ft from l bank (00009)
MAY					
20...*	1520	4.50	61	16.1	5.00
20...*	1523	5.90	62	16.0	14.0
20...*	1525	6.50	62	16.0	23.0
20...*	1527	7.00	62	16.0	32.0
20...*	1529	7.50	62	16.1	41.0
20...*	1531	7.50	62	16.1	50.0
20...*	1533	7.50	64	16.1	59.0
20...*	1534	7.50	66	16.2	68.0
20...*	1535	7.00	69	16.2	77.0
20...*	1537	5.50	70	16.2	86.0
AUG					
11...*	1322	1.00	83	22.9	2.00
11...*	1323	2.80	83	22.9	8.00
11...*	1324	3.70	82	22.9	14.0
11...*	1325	3.70	82	23.0	20.0
11...*	1326	4.00	82	23.0	26.0
11...*	1327	3.30	82	23.0	32.0
11...*	1328	4.00	82	23.0	38.0
11...*	1329	3.50	82	23.0	44.0
11...*	1330	3.50	82	23.0	50.0
11...*	1331	2.70	82	23.0	56.0

\* Instantaneous discharge at time of cross-sectional measurement: May 20, 1,170 ft<sup>3</sup>/s; Aug. 11, 343 ft<sup>3</sup>/s.

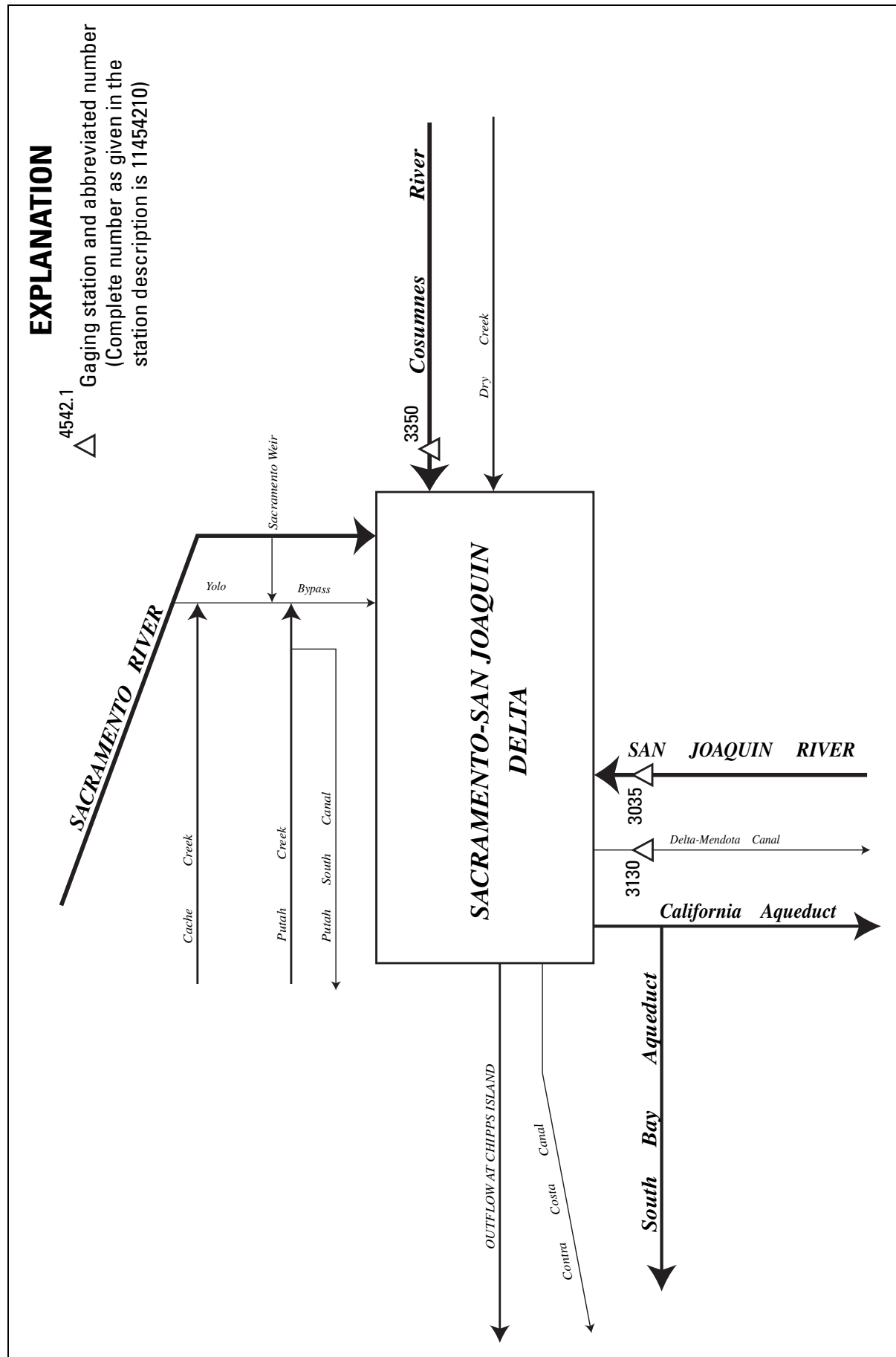


Figure 31. Principal inflows and diversions, Sacramento-San Joaquin Delta.



## 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.

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. 1–7, Oct. 22 to Nov. 3, Nov. 30 to Dec. 3, Feb. 19 to Mar. 3, Mar. 7–12, May 6–8, May 27 to June 8, June 18 to July 3, July 10–13, Aug. 18 to Sept. 1, Sept. 29, 30, which are rated good; Mar. 13–16, May 9, 10, July 4–7, July 14–16, Sept. 2–8, which are rated fair; and Mar. 17–28, May 11–16, July 17–25, which are rated poor. Water-temperature records rated excellent except for Oct. 25 to Nov. 3, Jan. 9, Apr. 21 to May 4, 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, 1,170 microsiemens, Sept. 1; minimum recorded, 289 microsiemens, Oct. 26.

WATER TEMPERATURE: Maximum recorded, 28.5°C, July 26, 27, Aug. 12; minimum recorded, 7.5°C, Jan. 4–6.

SEDIMENT CONCENTRATION: Maximum daily mean, 404 mg/L, Feb. 26; minimum daily mean, 22 mg/L, Nov. 27.

SEDIMENT LOAD: Maximum daily, 3,940 tons, Feb. 27; minimum daily, 85 tons, Nov. 27.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Alkalinity, wat flt Gran, field, mg/L as CaCO3 (29802)	Chloride, water, fltrd, mg/L (00940)
OCT 08...	1330	1800	758	9.2	7.9	542	21.0	84.0	66.7
DEC 16...	1300	1450	770	10.9	7.8	890	10.5	119	127
JAN 21...	1150	1610	769	9.3	7.6	1070	10.0	139	153
MAR 24...	1240	3110	764	10.7	8.0	736	18.0	--	97.5
APR 27...	1410	3320	769	8.7	7.5	408	20.5	--	51.1
MAY 19...	1400	2650	766	13.0	8.0	463	19.5	--	59.1
JUN 28...	1700	1600	761	18.5	7.8	439	24.0	--	63.6
AUG 03...	1320	1070	767	12.0	8.5	498	24.5	--	90.5

## 11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Sulfate water, fltrd, mg/L (00945)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite +		Partic- ulate nitro- gen, susp, water, mg/L (49570)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00665)	Total nitro- gen, wat unfl ysis, mg/L (62855)	Total carbon, suspnd sedimnt total, mg/L (00694)
			nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)					
OCT 08...	58.5	<.04	1.42	.012	.23	.128	.25	1.86	1.6
DEC 16...	115	<.04	1.92	.012	.14	.130	.24	2.51	1.1
JAN 21...	151	e.03	2.72	.019	.14	.160	.26	3.04	1.1
MAR 24...	107	<.04	1.46	.027	.24	.132	.29	2.14	1.8
APR 27...	51.2	<.04	1.21	.026	.24	.094	.21	1.81	1.8
MAY 19...	52.6	<.04	1.22	.012	.20	.075	.136	1.56	1.3
JUN 28...	59.1	e.03	.99	.034	.33	.097	.20	1.72	1.8
AUG 03...	79.3	.10	1.49	.041	.38	.088	.22	2.31	2.4
Date	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	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)
OCT 08...	<.1	1.6	3.9	--	--	--	--	--	--
DEC 16...	.1	1.0	4.5	<.006	<.006	<.006	<.005	<.005	e.006
JAN 21...	<.1	1.1	4.0	<.006	e.004	<.006	<.005	<.005	e.005
MAR 24...	<.1	1.7	4.2	<.006	<.006	<.006	<.005	<.005	.009
APR 27...	<.1	1.7	3.4	<.006	<.006	<.006	<.005	<.005	.009
MAY 19...	<.1	1.2	2.6	<.006	<.006	<.006	<.005	<.005	.010
JUN 28...	<.1	1.7	2.8	<.006	e.004	<.006	<.005	<.005	.012
AUG 03...	<.1	2.4	3.0	<.006	<.006	<.006	<.005	<.005	.009
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)
OCT 08...	--	--	--	--	--	--	--	--	--
DEC 16...	<.050	<.010	<.004	<.041	<.020	e.004	<.006	<.018	e.003
JAN 21...	<.050	<.010	<.004	<.041	<.020	e.006	<.006	<.018	<.003
MAR 24...	<.050	<.010	<.004	<.041	<.020	e.007	<.006	<.018	.003
APR 27...	<.050	<.010	<.004	<.041	e.019	.055	<.006	<.018	e.003
MAY 19...	<.050	<.010	<.004	<.041	<.020	.006	<.006	<.018	<.003
JUN 28...	<.050	<.010	<.004	<.041	<.020	e.005	<.006	<.018	<.003
AUG 03...	<.050	<.010	<.004	<.041	<.020	e.006	<.006	<.018	<.003

&lt; Actual value is known to be less than value shown.

e Estimated.

## SAN JOAQUIN RIVER BASIN

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Desulf- inyl fipro- nil, water, fltrd, ug/L (62170)	Diazi- non, water, fltrd, ug/L (39572)	Diel- drin, water, fltrd, ug/L (39381)	Disul- foton, water, fltrd 0.7u GF (82677)	EPTC, water, fltrd 0.7u GF (82668)	Ethal- flur- alin, water, fltrd 0.7u GF (82663)	Etho- prop, water, fltrd 0.7u GF (82672)	Desulf- inyl- fipro- nil amide, wat flt ug/L (62169)	Fipro- nil sulfide water, fltrd, ug/L (62167)
OCT 08...	--	--	--	--	--	--	--	--	--
DEC 16...	<.012	.006	<.009	<.02	e.003	<.009	<.005	e.003	<.013
JAN 21...	<.012	.020	<.009	<.02	e.004	<.009	<.005	<.029	<.013
MAR 24...	<.012	.006	<.009	<.02	e.004	<.009	.015	<.029	<.013
APR 27...	<.012	<.005	<.009	<.02	e.004	<.009	.018	<.029	<.013
MAY 19...	<.012	<.005	<.009	<.02	e.003	<.009	.007	<.029	<.013
JUN 28...	<.012	e.003	<.009	<.02	.007	<.009	<.005	<.029	<.013
AUG 03...	<.012	.006	<.009	<.02	.010	e.004	<.005	<.029	<.013
Date	Fipro- nil sulfone water, fltrd, ug/L (62168)	Fipro- nil, water, fltrd, ug/L (62166)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF (82666)	Mala- thion, water, fltrd, ug/L (39532)	Methyl para- thion, water, fltrd 0.7u GF (82667)	Metola- chlor, water, fltrd, ug/L (39415)	Metri- buzin, water, fltrd, ug/L (82630)
OCT 08...	--	--	--	--	--	--	--	--	--
DEC 16...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	e.006	<.006
JAN 21...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	<.013	<.006
MAR 24...	<.024	<.016	<.003	<.004	<.035	<.027	e.008	e.010	<.006
APR 27...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.033	<.006
MAY 19...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.040	<.006
JUN 28...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.065	<.006
AUG 03...	<.024	<.016	<.003	<.004	<.035	<.027	<.015	.062	<.006
Date	Moli- nate, water, fltrd 0.7u GF (82671)	Naprop- amide, water, fltrd 0.7u GF (82684)	p,p'- DDE, water, fltrd, ug/L (34653)	Para- thion, water, fltrd, ug/L (39542)	Peb- ulate, water, fltrd 0.7u GF (82669)	Pendi- meth- alin, water, fltrd 0.7u GF (82683)	Phorate water fltrd 0.7u GF (82664)	Prome- ton, water, fltrd, ug/L (04037)	Propy- zamide, water, fltrd 0.7u GF (82676)
OCT 08...	--	--	--	--	--	--	--	--	--
DEC 16...	<.004	<.007	<.003	<.010	<.004	e.012	<.011	<.01	<.004
JAN 21...	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004
MAR 24...	<.007	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004
APR 27...	<.003	<.007	<.003	<.010	<.004	e.009	<.011	<.01	<.004
MAY 19...	.006	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004
JUN 28...	<.003	<.007	<.003	<.010	<.004	e.008	<.011	<.01	<.004
AUG 03...	<.003	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004

&lt; 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 2003 TO SEPTEMBER 2004

Date	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)
OCT 08...	--	--	--	--	--
DEC 16...	<.025	<.011	<.02	.010	<.02
JAN 21...	<.025	<.011	<.02	.014	<.02
MAR 24...	<.025	<.011	<.02	.044	<.02
APR 27...	<.025	<.011	<.02	.020	<.02
MAY 19...	<.025	<.011	<.02	.015	<.02
JUN 28...	<.025	<.011	<.02	.012	<.02
AUG 03...	<.025	<.011	<.28	.010	<.02
Date	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)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)
OCT 08...	--	--	--	--	--
DEC 16...	<.034	<.02	<.010	<.002	<.009
JAN 21...	<.034	<.02	<.010	<.002	<.009
MAR 24...	<.034	<.02	<.010	<.002	.013
APR 27...	<.034	<.02	<.010	<.002	.013
MAY 19...	<.034	<.02	.021	<.002	e.007
JUN 28...	<.034	<.02	<.010	<.002	e.004
AUG 03...	<.034	<.02	<.010	<.002	e.006

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

## SAN JOAQUIN RIVER BASIN

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	623	573	568	509	864	764	849	805	982	917	645	594
2	631	569	600	568	849	758	---	---	1000	928	786	645
3	612	582	648	600	828	743	---	---	967	916	859	786
4	611	573	644	591	868	786	---	---	947	882	900	859
5	596	537	658	616	879	787	---	---	954	887	900	880
6	598	576	685	632	869	847	---	---	949	829	912	897
7	581	514	671	628	852	721	798	763	906	846	923	901
8	552	509	685	639	845	720	827	783	979	904	902	877
9	562	534	676	613	886	793	859	806	978	938	886	866
10	739	539	670	599	886	782	867	824	979	928	873	864
11	610	558	690	623	879	734	920	861	997	930	888	867
12	597	551	718	629	850	780	920	878	1020	947	867	822
13	587	535	743	701	866	845	930	883	1010	954	830	809
14	618	549	775	718	858	728	928	887	982	917	854	814
15	591	548	782	720	796	---	962	896	1020	967	852	792
16	611	560	754	690	821	759	959	905	1020	960	852	811
17	619	562	775	685	---	---	969	916	973	937	906	852
18	562	453	781	725	822	781	946	900	956	898	912	672
19	454	433	782	731	870	771	942	885	913	847	674	656
20	457	432	782	690	864	737	945	898	847	699	666	639
21	443	348	748	689	802	667	945	903	814	748	726	643
22	348	305	734	689	853	789	970	903	875	762	787	706
23	334	309	793	721	862	794	956	896	870	799	784	649
24	349	319	756	706	862	825	958	883	929	832	649	539
25	321	290	748	694	834	758	948	876	972	925	563	531
26	334	289	807	714	830	753	976	903	964	877	576	554
27	383	334	840	759	798	744	980	933	912	638	581	563
28	426	383	789	743	848	767	939	893	706	646	582	565
29	441	417	787	744	868	848	947	899	724	607	---	---
30	438	415	840	764	860	756	990	916	---	---	---	---
31	509	437	---	---	955	772	976	881	---	---	---	---
MONTH	739	289	840	509	---	---	---	---	1020	607	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	401	389	752	681	622	573	---	---	1170	908
2	---	---	411	394	767	733	651	604	---	---	987	950
3	---	---	399	373	777	704	657	606	---	---	1020	939
4	---	---	377	357	780	735	732	644	---	---	987	944
5	---	---	361	350	781	720	767	720	---	---	998	987
6	---	---	382	358	787	713	739	649	---	---	1040	994
7	651	608	398	377	785	715	732	613	---	---	1100	772
8	702	651	410	398	776	722	667	618	---	---	779	707
9	729	692	414	398	804	702	687	643	---	---	756	652
10	723	635	421	403	811	713	717	627	757	686	721	660
11	715	624	422	407	820	734	656	576	723	677	752	684
12	686	598	435	416	899	748	687	624	762	721	797	669
13	673	572	457	435	765	645	679	580	758	686	760	655
14	609	540	505	449	771	680	672	585	747	676	736	685
15	540	406	548	505	775	612	642	582	703	625	710	639
16	420	394	584	542	666	580	627	581	701	647	699	647
17	434	397	---	---	686	624	644	607	715	636	810	680
18	417	381	---	---	653	601	626	496	708	649	793	722
19	411	386	---	---	615	579	504	432	722	689	795	746
20	417	378	532	474	582	500	499	446	710	683	768	673
21	397	378	582	526	554	476	483	396	770	688	688	644
22	395	380	605	574	528	479	413	395	701	571	735	635
23	419	395	682	599	535	508	465	410	616	570	750	678
24	437	403	691	657	531	500	494	442	622	579	749	697
25	456	434	724	667	792	516	505	453	579	520	795	709
26	459	434	757	704	879	527	---	---	567	526	783	724
27	434	398	772	733	598	533	---	---	599	545	802	752
28	426	323	762	663	647	580	---	---	733	599	809	752
29	433	407	707	628	620	577	---	---	852	733	805	757
30	418	390	694	659	604	573	---	---	1030	852	821	759
31	---	---	736	694	---	---	---	---	1070	1030	---	---
MONTH	---	---	---	---	899	476	---	---	---	---	1170	635



## 11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.5	20.5	14.5	13.0	12.0	10.5	10.0	9.5	10.5	10.0	12.5	12.0
2	22.0	19.5	14.0	13.0	12.5	11.5	10.0	9.0	10.5	10.0	13.5	12.0
3	22.0	19.5	14.5	13.0	12.0	11.5	9.0	8.5	10.5	10.0	13.0	12.5
4	22.0	19.5	13.5	12.5	12.5	11.5	8.5	7.5	12.0	10.5	13.5	12.0
5	22.0	19.5	13.5	12.0	13.0	12.0	8.5	7.5	11.5	10.0	14.0	13.0
6	22.0	20.0	14.0	12.5	13.0	12.5	8.0	7.5	11.5	10.5	15.0	13.5
7	22.0	20.0	14.5	13.5	14.0	13.0	9.0	8.0	12.0	10.5	16.0	14.5
8	22.0	20.0	14.5	13.5	13.0	11.5	11.0	9.0	11.5	10.0	16.5	15.0
9	21.5	19.5	14.5	14.0	11.5	10.5	11.0	10.5	11.5	10.0	17.5	16.0
10	20.0	18.5	15.0	13.5	11.5	10.0	11.5	11.0	11.5	9.5	17.5	16.0
11	19.0	17.0	14.5	13.5	11.5	10.5	11.0	10.5	12.0	10.0	17.5	16.0
12	19.0	17.0	14.5	13.0	11.0	10.5	11.0	11.0	12.0	10.0	17.5	16.5
13	18.5	17.0	14.5	13.0	11.5	10.5	11.0	10.5	11.5	10.5	18.0	16.5
14	18.5	16.5	14.5	13.5	12.0	11.0	10.5	10.0	12.0	10.5	18.0	16.5
15	19.0	16.5	14.0	13.0	11.5	10.5	11.0	10.0	13.0	11.5	18.5	17.0
16	19.0	17.0	14.0	12.5	10.5	9.5	10.5	10.5	13.0	12.5	18.5	17.0
17	19.5	17.0	14.5	13.5	10.0	9.0	10.5	10.0	13.5	12.0	19.0	17.0
18	19.0	17.5	14.5	13.0	10.0	9.0	10.5	10.0	14.0	13.0	18.0	17.0
19	19.5	18.0	14.0	13.0	10.0	9.5	10.5	10.0	14.0	13.0	17.0	16.0
20	19.5	18.0	14.0	12.5	10.5	9.5	10.5	10.0	13.5	12.5	16.5	15.5
21	19.5	18.0	13.5	12.0	11.5	10.5	11.0	9.5	13.5	12.5	17.0	16.0
22	19.0	17.5	12.0	10.5	11.5	11.0	10.5	9.0	13.5	13.0	18.0	16.5
23	18.5	17.0	10.5	9.0	11.5	11.0	10.0	9.0	14.0	12.5	18.0	17.0
24	18.0	16.5	10.0	9.0	11.5	11.5	10.5	10.0	14.5	13.0	18.5	16.5
25	17.5	16.5	10.0	8.5	11.5	10.5	11.5	10.0	14.0	13.0	17.5	16.0
26	17.5	16.0	10.0	8.5	10.5	9.5	10.5	10.0	13.0	12.5	16.0	15.0
27	17.5	16.0	10.0	9.0	10.0	9.0	10.5	10.0	12.5	12.0	17.0	15.0
28	17.5	16.0	10.5	9.5	9.0	8.0	11.5	10.5	12.5	11.5	18.0	15.5
29	17.5	16.0	10.5	9.5	8.5	8.0	12.5	11.0	12.5	11.5	19.0	16.5
30	16.5	15.0	11.0	10.5	9.0	8.0	12.0	11.0	---	---	18.5	16.5
31	15.0	14.0	---	---	10.0	9.0	11.5	10.0	---	---	18.0	16.0
MONTH	22.5	14.0	15.0	8.5	14.0	8.0	12.5	7.5	14.5	9.5	19.0	12.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	16.0	20.0	18.0	25.0	22.0	25.0	21.5	26.5	23.0	26.0	23.0
2	---	---	21.0	19.0	25.5	22.5	25.5	22.0	25.5	22.5	25.5	23.0
3	---	---	22.0	19.5	25.0	22.0	25.5	22.5	26.0	22.0	23.5	21.0
4	---	---	22.0	20.0	25.0	21.5	26.5	23.0	26.5	23.0	23.5	19.5
5	---	---	21.5	19.5	25.0	21.5	27.5	24.0	26.0	23.0	24.5	21.0
6	17.5	---	21.0	19.0	25.0	22.0	27.0	24.0	26.0	22.0	25.5	22.0
7	18.5	16.0	21.0	19.0	24.0	21.5	27.0	23.5	27.0	22.5	26.0	22.5
8	19.0	16.5	20.5	19.0	23.0	20.5	26.5	23.0	28.0	24.0	26.0	22.5
9	20.0	17.5	20.5	18.5	24.0	20.0	25.5	22.5	27.0	24.0	26.0	23.0
10	20.5	18.0	20.0	18.0	24.5	20.5	25.5	22.0	27.0	23.0	25.5	22.0
11	20.5	18.0	19.5	18.0	24.5	21.0	26.0	22.5	27.5	23.5	25.5	22.0
12	20.5	18.5	20.0	17.5	25.0	21.0	26.5	23.0	28.5	24.5	25.0	22.5
13	19.5	17.5	20.5	18.0	25.5	22.0	26.5	23.0	28.0	24.5	24.0	21.0
14	19.0	17.0	20.5	18.5	26.0	22.5	26.0	22.5	26.5	24.0	23.0	20.5
15	18.0	16.5	20.5	18.5	25.5	22.5	26.5	22.5	26.0	22.5	23.5	20.5
16	17.0	15.5	20.5	18.5	26.0	23.0	26.5	23.0	26.5	22.5	24.5	21.0
17	17.0	15.0	20.0	18.0	26.0	23.0	26.5	23.5	26.5	23.0	24.5	21.5
18	16.0	14.5	20.0	17.5	25.0	22.0	27.0	23.5	27.5	23.5	22.0	19.0
19	16.5	14.5	20.0	17.5	24.0	21.0	26.5	23.5	27.5	24.0	19.5	17.5
20	17.5	15.5	20.0	18.0	23.5	20.5	26.5	23.0	27.5	24.0	20.0	17.0
21	18.0	16.0	20.5	18.0	23.5	20.5	27.0	23.0	27.0	24.0	20.0	17.5
22	17.5	16.0	21.5	18.5	23.5	21.0	27.0	23.5	25.0	23.0	21.0	18.0
23	18.5	16.0	22.0	19.0	23.0	20.5	27.0	23.5	25.5	22.5	22.5	19.0
24	19.0	16.5	22.5	19.5	23.0	20.5	27.5	23.5	25.5	22.5	23.0	20.0
25	20.0	17.5	22.5	20.0	23.0	20.0	28.0	24.0	25.5	22.5	23.0	20.0
26	21.0	18.5	24.0	20.5	23.0	20.0	28.5	24.5	25.0	22.5	23.0	20.0
27	21.0	19.5	24.0	21.5	23.5	20.5	28.5	25.0	25.0	22.0	22.5	20.0
28	20.5	19.0	23.5	21.0	24.5	21.5	28.0	24.5	26.0	22.5	22.5	19.5
29	19.0	17.5	23.0	20.0	24.0	21.5	27.5	24.0	26.5	23.0	22.0	19.0
30	19.5	17.5	24.0	20.5	24.5	21.5	27.5	23.5	26.0	23.0	22.0	19.5
31	---	---	24.5	21.5	---	---	27.0	23.5	26.0	23.0	---	---
MONTH	---	---	24.5	17.5	26.0	20.0	28.5	21.5	28.5	22.0	26.0	17.0

## SAN JOAQUIN RIVER BASIN

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DATE	TIME	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sediment, sieve diameter <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment discharge, tons/d (80155)
OCT						
07...	1255	1730	21.5	82	68	318
08...SS	1330	1800	21.0	61	52	253
NOV						
03...	1400	1840	14.0	80	41	204
DEC						
03...	1200	1410	12.0	84	30	114
16...SS	1300	1450	10.5	66	35	137
JAN						
06...	1300	2150	8.0	80	58	337
21...SS	1150	1610	10.0	95	29	126
FEB						
03...	1250	1690	10.5	86	40	183
MAR						
03...	1305	3620	13.0	80	148	1450
24...SS	1240	3110	18.0	75	50	420
APR						
06...	1240	2690	17.0	73	60	436
27...SS	1410	3320	20.5	55	49	439
MAY						
04...	1330	3340	21.5	75	67	604
19...SS	1400	2650	19.5	70	60	429
JUN						
08...	1255	1230	22.0	92	48	159
28...SS	1700	1600	24.0	54	33	143
JUL						
07...	1318	1210	26.0	89	54	176
AUG						
03...SS	1320	1070	24.5	73	57	165
09...	1310	1140	25.5	92	74	228
SEP						
08...	1248	1140	24.0	86	52	160

## PARTICLE-SIZE DISTRIBUTION OF SURFACE BED MATERIAL, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DATE	TIME	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Bed sediment, dry svd percent <.25mm (80166)	Bed sediment, dry svd percent <.5 mm (80167)	Bed sediment, dry svd percent <1 mm (80168)	Bed sediment, dry svd percent <2 mm (80169)	Bed sediment, dry svd percent <4 mm (80170)	Bed sediment, dry svd percent <8 mm (80171)	Number of sampling points, count (00063)
NOV										
03...	1310	1850	14.0	2	38	94	100	--	--	1
03...	1315	1850	14.0	4	35	73	90	98	100	1
03...	1320	1850	14.0	4	52	96	100	--	--	1
03...	1325	1850	14.0	5	36	81	96	99	100	1
03...	1330	1850	14.0	6	56	96	100	--	--	1
MAR										
03...	1330	3620	13.0	3	48	92	100	--	--	1
03...	1335	3620	13.0	3	40	89	99	100	--	1
03...	1340	3620	13.0	11	59	94	99	100	--	1
03...	1345	3620	13.0	7	48	90	98	100	--	1
03...	1350	3620	13.0	14	78	99	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 2003 TO SEPTEMBER 2004

DAY	MEAN	MEAN	SEDIMENT	MEAN	MEAN	SEDIMENT	MEAN	MEAN	SEDIMENT
	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
	OCTOBER			NOVEMBER			DECEMBER		
1	1360	59	218	2040	43	235	1420	31	117
2	1370	57	210	1910	42	218	1410	33	125
3	1430	57	218	1840	44	220	1400	32	120
4	1500	61	248	1820	45	223	1400	33	126
5	1580	61	261	1770	43	206	1400	39	149
6	1610	62	272	1770	46	221	1420	43	165
7	1710	67	312	1810	50	245	1430	45	175
8	1780	63	305	1790	57	274	1440	37	144
9	1730	60	279	1890	55	282	1410	31	119
10	1730	57	267	1880	52	264	1410	31	118
11	1650	54	242	1810	43	212	1480	43	173
12	1660	60	267	1770	43	206	1500	44	177
13	1680	63	285	1670	39	177	1480	41	165
14	1680	60	274	1590	35	148	1470	41	163
15	1710	61	283	1570	39	163	1480	40	160
16	1650	60	265	1570	39	165	1460	33	129
17	1630	64	282	1560	36	154	1440	28	109
18	2000	73	395	1530	40	165	1440	28	107
19	2140	72	415	1520	41	168	1440	30	116
20	2200	73	434	1530	41	167	1500	40	161
21	2320	79	495	1510	38	154	1520	46	188
22	2700	75	548	1500	33	135	1500	49	198
23	2750	70	520	1510	36	145	1510	52	212
24	2720	70	514	1530	36	148	1510	50	203
25	2830	79	606	1480	28	110	1580	52	221
26	2830	79	606	1470	24	94	1650	53	237
27	2640	56	398	1460	22	85	1680	52	235
28	2440	52	344	1450	28	109	1650	41	185
29	2360	51	327	1430	28	109	1650	44	196
30	2360	48	307	1430	29	112	1740	52	246
31	2220	45	268	---	---	---	1760	68	321
TOTAL	61970	---	10665	49410	---	5314	46580	---	5260
	JANUARY			FEBRUARY			MARCH		
1	1790	91	437	1580	32	134	3920	228	2410
2	2050	146	809	1590	32	139	3850	190	1970
3	2420	116	757	1680	38	173	3640	144	1420
4	2380	82	529	1690	45	208	3430	124	1150
5	2240	67	403	1740	51	242	3360	122	1100
6	2150	58	339	1830	54	269	3330	121	1090
7	2060	54	302	1810	55	268	3250	122	1070
8	1970	53	284	1780	53	254	3400	108	988
9	1920	61	316	1760	47	222	3410	106	980
10	1890	66	335	1770	44	210	3310	102	912
11	1850	62	310	1740	38	177	3290	101	895
12	1800	52	251	1730	40	187	3450	97	907
13	1760	47	224	1750	41	192	3480	89	832
14	1730	44	205	1790	40	192	3370	88	801
15	1700	42	192	1800	42	204	3370	90	819
16	1670	38	169	1840	44	218	3250	83	732
17	1650	42	186	1890	51	258	3050	78	639
18	1650	45	201	1920	58	302	3440	100	928
19	1640	38	170	2100	78	442	4280	115	1330
20	1630	37	164	2600	115	810	4500	96	1170
21	1610	35	151	2550	102	702	4420	81	966
22	1600	35	153	2550	99	682	3980	82	877
23	1580	31	133	2540	92	631	3530	85	806
24	1590	35	149	2480	86	576	3130	77	655
25	1600	39	167	2420	119	776	2860	72	558
26	1590	39	165	2810	404	3070	2730	66	488
27	1600	36	156	3910	373	3940	2770	66	494
28	1620	34	150	4220	271	3090	2740	69	511
29	1620	37	163	3970	276	2960	2710	68	497
30	1600	36	155	---	---	---	2560	68	471
31	1590	34	148	---	---	---	2370	62	394
TOTAL	55550	---	8273	63840	---	21528	104180	---	28860

## SAN JOAQUIN RIVER BASIN

11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

## SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MEAN	MEAN	SEDIMENT	MEAN	MEAN	SEDIMENT	MEAN	MEAN	SEDIMENT
	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
	APRIL			MAY			JUNE		
1	2290	63	391	3250	64	565	1640	66	294
2	2680	82	596	3250	68	595	1510	58	237
3	2890	76	596	3350	73	659	1410	57	215
4	2890	61	478	3340	71	639	1310	52	185
5	2850	61	469	3370	81	733	1240	60	200
6	2700	60	439	3260	93	822	1290	58	203
7	2380	55	356	3210	97	842	1300	65	229
8	2180	56	327	3180	87	743	1240	53	178
9	2110	58	328	3280	86	763	1240	63	211
10	2050	60	333	3380	84	771	1180	59	188
11	2070	60	333	3320	88	785	1110	52	157
12	2140	63	362	3240	84	736	1110	46	139
13	2050	57	315	3210	75	647	1180	46	147
14	2040	67	369	3060	69	569	1220	59	194
15	2370	77	496	2900	61	478	1260	67	229
16	2620	78	550	2860	60	461	1260	55	187
17	2710	69	507	2900	54	424	1210	50	163
18	2930	73	579	2820	50	384	1240	47	157
19	3100	73	611	2660	43	305	1370	49	183
20	3090	72	601	2480	42	284	1650	52	233
21	3100	71	593	2290	42	262	1750	47	224
22	3170	75	644	2070	40	224	1720	47	217
23	3170	73	624	1950	53	279	1660	51	228
24	3150	71	602	1870	56	282	1670	57	257
25	3240	77	672	1750	46	219	1610	51	223
26	3340	82	740	1640	49	219	1540	47	196
27	3320	74	666	1590	48	207	1600	52	224
28	3310	65	580	1600	54	235	1650	43	191
29	3280	71	631	1600	53	230	1530	52	215
30	3300	72	637	1660	57	256	1410	58	222
31	---	---	---	1710	62	285	---	---	---
TOTAL	82520	---	15425	82050	---	14903	42110	---	6126
	JULY			AUGUST			SEPTEMBER		
1	1310	63	222	1090	68	199	1200	76	247
2	1280	63	216	1130	71	216	1080	68	198
3	1270	61	211	1070	76	219	1010	55	151
4	1290	77	269	1080	77	225	1070	58	168
5	1330	81	292	1080	74	216	1150	64	197
6	1240	74	249	1090	70	205	1200	61	198
7	1200	58	187	1080	67	196	1160	62	195
8	1130	58	176	1110	72	216	1130	57	173
9	1090	65	192	1100	73	215	1110	57	171
10	1110	74	222	1020	64	175	1070	58	166
11	1180	71	226	1000	58	157	1050	66	187
12	1180	67	213	923	58	144	1090	70	206
13	1100	61	181	920	56	138	1120	69	209
14	1080	64	188	971	58	153	1100	66	195
15	1070	60	173	1100	67	200	1120	68	206
16	1020	56	155	1170	77	243	1080	64	185
17	1070	57	164	1110	79	236	1020	65	179
18	1150	65	202	1090	78	230	1050	65	185
19	1260	66	225	1050	73	208	1110	57	171
20	1260	67	228	1010	71	192	1250	69	233
21	1220	56	185	1060	78	224	1330	71	256
22	1180	51	162	1200	78	254	1230	62	205
23	1150	56	174	1320	89	318	1170	69	218
24	1090	60	177	1300	81	284	1120	67	204
25	1110	68	205	1260	81	274	1100	65	192
26	1140	74	229	1240	83	277	1120	64	192
27	1010	70	192	1180	78	249	1120	71	213
28	969	68	179	1210	80	263	1100	70	209
29	976	75	199	1270	84	287	1080	60	175
30	1010	72	197	1350	87	316	1080	59	172
31	1070	69	199	1300	82	290	---	---	---
TOTAL	35545	---	6289	34884	---	7019	33620	---	5856
YEAR	692259		135518						

## 11303500 SAN JOAQUIN RIVER NEAR VERNALIS, CA—Continued

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DATE	TIME	Depth at sample location, feet (81903)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Loca- tion in X-sect. looking dwnstrm ft from l bank (00009)
MAY					
19...*	1035	4.50	464	18.1	14.0
19...*	1040	9.50	463	18.1	42.0
19...*	1042	8.00	460	18.0	70.0
19...*	1044	7.00	466	18.1	98.0
19...*	1047	8.50	476	18.2	126
19...*	1049	3.00	479	18.2	154
19...*	1051	6.00	480	18.2	182
19...*	1053	5.00	490	18.4	210
19...*	1055	4.50	494	18.4	238
19...*	1057	1.00	504	18.5	266
AUG					
09...*	1443	3.50	772	26.5	12.0
09...*	1444	7.10	770	26.5	37.0
09...*	1446	5.80	752	26.4	62.0
09...*	1447	5.10	747	26.4	87.0
09...*	1449	5.60	742	26.5	112
09...*	1451	1.00	742	26.5	137
09...*	1453	3.20	741	26.6	162
09...*	1455	3.70	741	26.6	187
09...*	1456	2.90	743	26.7	212
09...*	1457	2.30	749	26.8	237

\* Instantaneous discharge at time of cross-sectional measurement: May 19, 2,680 ft<sup>3</sup>/s; Aug. 9, 1,120 ft<sup>3</sup>/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<sup>3</sup>/s, Aug. 11, 1969, Aug. 7, 1998; no flow for many days in some years.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4400	3410	4340	4300	4360	4450	4390	536	4340	4310	4340	4310
2	4390	4170	4340	4250	4300	4470	4340	0.00	4270	4350	4270	4340
3	4380	4390	4330	4270	4270	4440	4390	0.00	2220	4330	4410	4390
4	4370	4400	4340	4240	3820	4430	4180	1420	1420	4260	4520	4380
5	4350	4350	4360	4320	4320	4430	4360	572	1850	4380	4490	4370
6	4360	4330	4380	4360	4320	4410	4360	0.00	1860	3920	4430	4410
7	4360	4330	4380	4370	3830	4410	1940	0.00	2290	4150	4440	4400
8	4370	4340	4360	4390	3670	4370	1220	1430	2680	4450	4420	4360
9	4370	4340	3780	4370	3660	4320	1650	568	3350	4420	4400	4340
10	4150	4350	3090	4370	3660	4320	2630	0.00	3640	4390	4430	4400
11	4540	4360	2720	4370	3700	4320	4020	0.00	3660	4360	4480	4380
12	4360	4290	2770	4390	3710	4320	4430	1280	3640	4360	4430	4370
13	4370	4330	3400	4370	3680	4320	4410	518	3630	4350	4410	4100
14	4370	4430	4210	4370	3690	4320	3870	0.00	3270	4360	4450	4340
15	4380	4340	4400	4390	3710	4300	1190	0.00	3450	4340	4480	4510
16	4390	4380	4290	4340	3700	3670	0.00	736	3670	4360	4450	4370
17	4380	4400	4390	4360	3730	3440	0.00	1030	3370	4350	4450	4360
18	4420	4260	4380	4380	3720	3440	1430	1020	4210	4370	4450	4380
19	4330	4340	4310	4370	3710	3430	571	1010	4370	4390	4450	4460
20	4330	4340	4340	4370	3710	3420	0.00	1010	4360	4360	4450	4440
21	4380	4350	4340	4370	3710	3430	0.00	1020	4350	4390	4430	4270
22	4380	4340	4340	4360	3720	3420	1430	1010	4340	4440	4430	4410
23	4360	4330	4360	4350	4230	3540	573	1020	4330	4330	4410	4390
24	4340	4350	4290	4350	4390	4080	0.00	1020	4330	4490	4420	4440
25	4350	4390	4230	4380	3960	4370	0.00	1010	4300	4560	4440	4480
26	4500	4380	4310	4350	4280	4370	1320	1010	4280	4570	4420	4500
27	4450	4330	4340	4340	4480	4380	535	1010	4300	4580	4390	4440
28	4540	4400	4300	4330	4460	4370	0.00	1590	4320	4410	4400	4400
29	4370	4350	4320	4350	4380	4380	0.00	2510	4320	4380	4400	4400
30	3350	4380	4350	4360	---	4380	1320	3300	4340	4320	4350	4400
31	2800	---	4320	4370	---	4380	---	4130	---	4340	4340	---
TOTAL	133190	129480	128410	134860	114880	128130	58559.00	29760.00	108760	135370	137080	131540
MEAN	4296	4316	4142	4350	3961	4133	1952	960	3625	4367	4422	4385
MAX	4540	4430	4400	4390	4480	4470	4430	4130	4370	4580	4520	4510
MIN	2800	3410	2720	4240	3660	3420	0.00	0.00	1420	3920	4270	4100
AC-FT	264200	256800	254700	267500	227900	254100	116200	59030	215700	268500	271900	260900

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2004, BY WATER YEAR (WY)

MEAN	2575	2023	1769	2084	2503	2706	2614	2431	2978	3746	3738	3033
MAX	4333	4316	4273	4350	4584	4563	4400	4540	4591	4740	4703	4591
(WY)	1996	2004	1996	2004	1976	1976	1976	1976	1973	1989	1989	1988
MIN	368	0.00	0.00	0.00	0.00	0.00	99.6	58.3	113	354	977	539
(WY)	1952	1973	1953	1952	1952	1952	1952	1952	1951	1977	1952	1952

## SUMMARY STATISTICS

	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1951 - 2004
ANNUAL TOTAL	1402625	1370019.00	
ANNUAL MEAN	3843	3743	2702
HIGHEST ANNUAL MEAN			4144
LOWEST ANNUAL MEAN			230
HIGHEST DAILY MEAN	4540	Oct 11	4580
LOWEST DAILY MEAN	732	May 13	0.00
ANNUAL SEVEN-DAY MINIMUM	838	May 7	338
ANNUAL RUNOFF (AC-FT)	2782000	2717000	1957000
10 PERCENT EXCEEDS	4410	4430	4410
50 PERCENT EXCEEDS	4330	4340	3130
90 PERCENT EXCEEDS	1690	1210	213

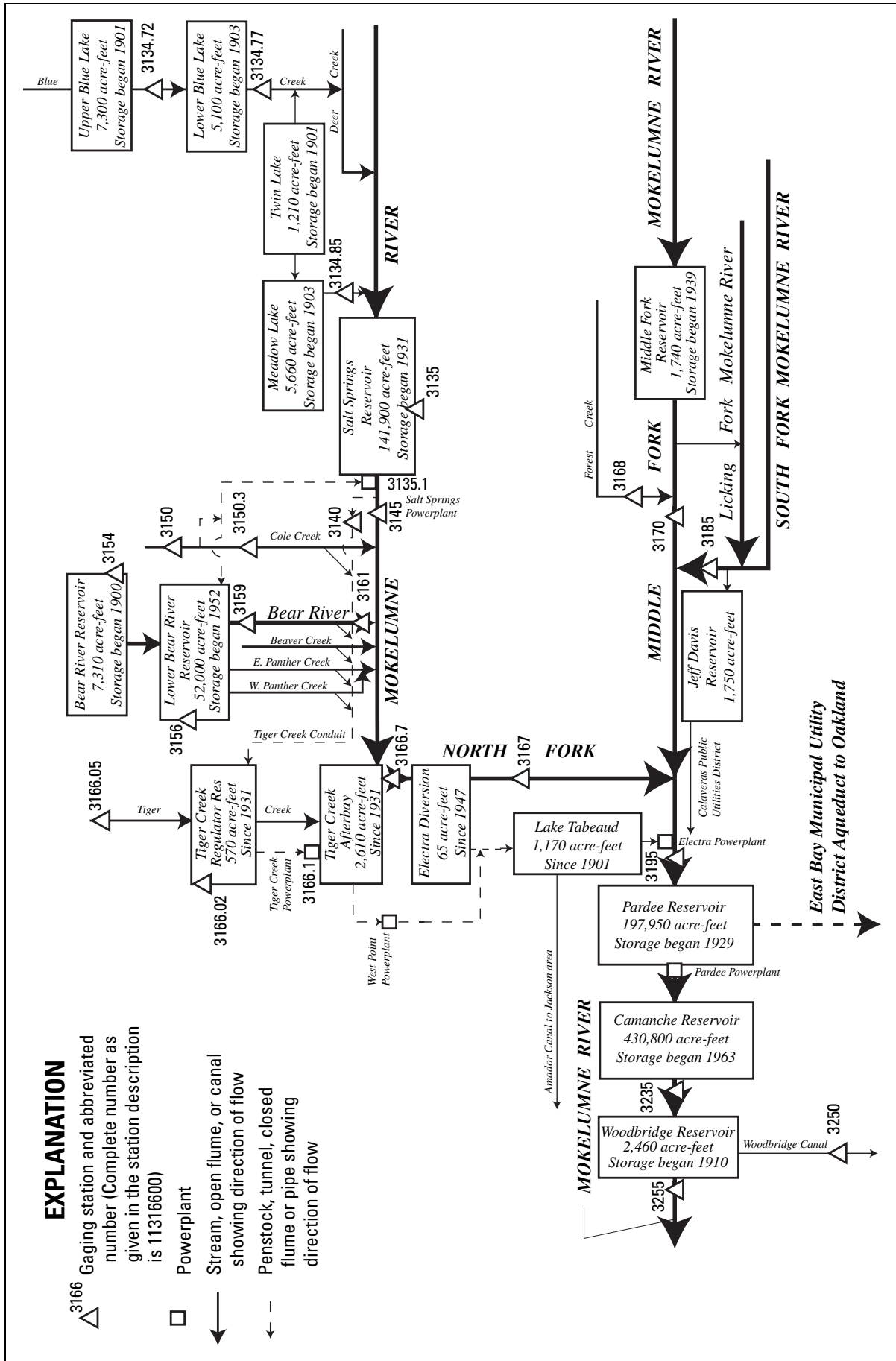


Figure 32. Diversions and storage in Mokelumne River Basin.

## 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<sup>2</sup>.

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<sup>3</sup>/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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	5.7	5.5	5.6	---	---	---	7.1	7.7	47	4.3	1.6
2	5.6	5.7	5.5	5.6	---	---	---	7.4	7.7	47	4.3	1.6
3	5.6	5.7	5.5	5.7	---	---	---	7.8	7.7	46	4.6	2.2
4	5.5	5.7	5.5	5.7	---	---	---	8.1	7.6	44	3.6	2.6
5	5.6	5.7	5.6	5.7	---	---	---	8.2	7.5	44	2.2	2.7
6	5.6	5.6	5.7	5.7	---	---	---	8.1	7.5	43	2.0	2.5
7	5.6	5.6	5.6	5.7	---	---	---	7.9	15	42	1.9	2.4
8	5.5	5.6	5.6	5.7	---	---	---	7.9	43	41	1.9	2.3
9	5.4	5.7	5.5	5.7	---	---	---	8.0	57	23	1.7	2.3
10	5.4	5.7	5.6	5.7	---	---	---	7.9	56	6.4	1.5	2.3
11	5.4	5.7	5.6	5.7	---	---	---	7.7	56	6.3	1.5	2.3
12	5.4	5.7	5.6	---	---	---	---	7.6	56	10	1.5	2.3
13	5.4	5.6	5.6	---	---	---	---	7.8	55	15	1.5	2.3
14	5.4	5.6	5.7	---	---	---	---	8.1	56	15	1.5	2.2
15	5.4	5.6	5.6	---	---	---	---	8.3	56	15	1.5	2.2
16	5.4	5.6	5.6	---	---	---	---	8.4	56	15	1.5	1.8
17	5.3	5.6	5.6	---	---	---	---	8.5	56	15	1.5	1.3
18	5.3	5.6	5.6	---	---	---	---	7.6	56	15	1.5	1.3
19	5.3	5.5	5.6	---	---	---	---	7.1	55	14	1.5	1.3
20	5.3	5.5	5.6	---	---	---	---	7.1	55	14	1.6	1.3
21	5.3	5.5	5.6	---	---	---	---	7.0	54	14	1.6	1.3
22	5.3	5.6	5.5	---	---	---	---	7.0	53	14	1.6	1.2
23	5.5	5.5	5.6	---	---	---	---	7.0	53	14	1.6	1.2
24	5.7	5.5	5.7	---	---	---	---	7.0	52	13	1.6	1.2
25	5.7	5.5	5.7	---	---	---	---	7.0	51	13	1.6	1.2
26	5.7	5.5	5.6	---	---	---	---	7.2	51	13	1.6	1.2
27	5.7	5.5	5.6	---	---	---	---	7.6	50	13	1.6	1.2
28	5.7	5.5	5.6	---	---	---	---	9.5	49	13	1.6	1.1
29	5.7	5.5	5.6	---	---	---	---	7.6	49	13	1.6	1.1
30	5.7	5.5	5.7	---	---	---	7.0	7.6	48	9.0	1.6	1.1
31	5.7	---	5.7	---	---	---	---	7.6	---	4.4	1.6	---
TOTAL	170.7	167.8	173.6	---	---	---	---	238.7	1283.7	651.1	60.7	52.6
MEAN	5.51	5.59	5.60	---	---	---	---	7.70	42.8	21.0	1.96	1.75
MAX	5.7	5.7	5.7	---	---	---	---	9.5	57	47	4.6	2.7
MIN	5.3	5.5	5.5	---	---	---	---	7.0	7.5	4.4	1.5	1.1
AC-FT	339	333	344	---	---	---	---	473	2550	1290	120	104



## 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<sup>2</sup>.

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<sup>3</sup>/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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	5.5	5.5	---	---	---	---	6.8	8.3	52	7.5	7.8
2	5.5	5.5	5.5	---	---	---	---	7.0	7.3	51	7.1	7.8
3	5.5	5.5	5.5	---	---	---	---	7.2	7.3	46	6.5	7.8
4	5.5	5.5	5.5	---	---	---	---	7.3	7.4	40	6.3	7.8
5	5.4	5.4	---	---	---	---	---	7.4	7.6	39	6.7	7.8
6	5.4	5.3	---	---	---	---	---	7.3	8.5	43	7.1	7.8
7	5.5	5.3	---	---	---	---	---	7.3	16	44	7.0	7.8
8	5.4	5.3	---	---	---	---	---	7.3	46	42	6.8	7.9
9	5.4	5.5	---	---	---	---	---	7.3	---	36	6.5	7.9
10	5.5	5.5	---	---	---	---	---	7.2	71	20	6.3	7.9
11	5.4	5.5	---	---	---	---	---	7.1	70	15	6.1	7.8
12	5.3	5.5	---	---	---	---	---	7.1	69	13	6.4	7.8
13	5.4	5.5	---	---	---	---	---	7.2	68	12	6.6	7.7
14	5.4	5.5	---	---	---	---	---	7.3	67	12	6.3	7.5
15	5.2	5.5	---	---	---	---	---	7.3	67	12	6.0	7.5
16	5.3	5.5	---	---	---	---	---	7.3	66	12	6.5	7.5
17	5.5	5.5	---	---	---	---	---	7.4	65	12	7.0	7.5
18	5.5	5.5	---	---	---	---	---	7.2	65	11	6.8	7.5
19	5.3	5.5	---	---	---	---	---	7.3	64	11	6.7	7.5
20	5.6	5.5	---	---	---	---	---	7.3	63	11	6.7	7.5
21	5.9	5.5	---	---	---	---	---	7.2	62	11	6.5	7.4
22	5.9	5.5	---	---	---	---	---	7.3	61	11	6.5	7.3
23	5.7	5.5	---	---	---	---	---	7.3	60	11	6.5	7.3
24	5.6	5.5	---	---	---	---	---	7.2	59	11	6.3	7.3
25	6.7	5.5	---	---	---	---	---	7.5	58	10	6.3	7.3
26	7.3	5.5	---	---	---	---	---	7.7	55	10	7.2	7.3
27	6.2	5.5	---	---	---	---	---	7.5	55	9.7	8.0	7.3
28	5.4	5.5	---	---	---	---	---	8.2	53	9.6	8.0	7.3
29	5.3	5.5	---	---	---	---	---	7.6	53	9.5	8.0	7.3
30	5.3	5.5	---	---	---	---	6.8	7.5	53	9.1	7.8	7.0
31	5.4	---	---	---	---	---	---	8.3	---	7.5	7.9	---
TOTAL	173.0	164.3	---	---	---	---	---	227.9	---	643.4	211.9	226.9
MEAN	5.58	5.48	---	---	---	---	---	7.35	---	20.8	6.84	7.56
MAX	7.3	5.5	---	---	---	---	---	8.3	---	52	8.0	7.9
MIN	5.2	5.3	---	---	---	---	---	6.8	---	7.5	6.0	7.0
AC-FT	343	326	---	---	---	---	---	452	---	1280	420	450

## 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<sup>2</sup>.

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<sup>3</sup>/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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	2.3	3.0	---	---	---	---	16	---	8.1	3.7	3.8
2	1.6	2.2	3.2	---	---	---	---	16	54	8.6	3.7	3.8
3	0.33	3.0	3.1	---	---	---	---	16	13	8.3	3.7	3.9
4	1.5	3.0	3.0	---	---	---	---	17	13	8.1	3.8	3.6
5	1.7	2.8	6.4	---	---	---	---	18	16	7.0	3.7	3.4
6	1.7	2.7	16	---	---	---	---	18	34	8.3	3.6	3.4
7	1.7	2.6	14	---	---	---	---	18	44	8.2	3.5	3.4
8	1.6	2.7	---	---	---	---	---	19	58	8.1	3.4	3.3
9	1.7	4.6	---	---	---	---	---	19	43	7.8	3.5	3.3
10	1.7	4.6	---	---	---	---	---	19	55	7.9	3.4	3.4
11	1.5	3.7	---	---	---	---	---	19	---	8.2	3.3	3.4
12	1.5	3.3	---	---	---	---	---	20	---	8.9	3.3	3.4
13	1.6	3.0	---	---	---	---	---	20	---	10	3.3	3.7
14	1.6	2.9	---	---	---	---	---	20	---	8.8	3.3	3.7
15	1.6	3.5	---	---	---	---	---	20	---	7.5	3.2	3.7
16	1.7	3.5	---	---	---	---	---	20	57	6.9	3.2	3.7
17	1.7	3.5	---	---	---	---	---	18	13	6.3	3.0	3.6
18	1.7	3.4	---	---	---	---	---	15	3.6	5.7	3.0	3.7
19	1.7	3.4	---	---	---	---	---	15	3.6	4.9	3.1	3.7
20	1.7	3.4	---	---	---	---	---	15	3.5	4.4	3.4	3.6
21	1.7	3.2	---	---	---	---	---	15	3.5	4.3	3.4	3.4
22	1.8	3.1	---	---	---	---	---	15	3.4	4.0	3.4	3.2
23	1.8	2.8	---	---	---	---	---	15	3.4	3.9	3.3	3.2
24	1.6	2.6	---	---	---	---	---	15	3.4	4.0	3.3	3.2
25	1.6	2.6	---	---	---	---	---	13	3.4	4.0	3.3	3.2
26	1.6	2.7	---	---	---	---	---	8.8	3.4	4.3	4.0	3.2
27	1.6	2.6	---	---	---	---	---	10	3.3	4.6	4.2	3.3
28	1.6	2.6	---	---	---	---	---	12	3.3	4.5	4.1	3.3
29	1.6	2.7	---	---	---	---	---	43	6.6	4.4	4.1	3.0
30	1.7	2.8	---	---	---	---	15	---	9.1	4.0	4.1	3.1
31	2.0	---	---	---	---	---	---	---	---	3.8	3.9	---
TOTAL	50.43	91.8	---	---	---	---	---	---	---	197.8	109.2	103.6
MEAN	1.63	3.06	---	---	---	---	---	---	---	6.38	3.52	3.45
MAX	2.0	4.6	---	---	---	---	---	---	---	10	4.2	3.9
MIN	0.33	2.2	---	---	---	---	---	---	---	3.8	3.0	3.0
AC-FT	100	182	---	---	---	---	---	---	---	392	217	205

## 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<sup>2</sup>.

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.

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, 141,400 acre-ft, June 4, elevation, 3,957.54 ft; minimum, 5,200 acre-ft, estimated, Feb. 15–17, elevation unknown.

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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98000	66400	50000	41000	14000	e6900	26400	73700	139900	129900	106300	86600
2	97000	65500	49600	40400	13100	e6700	27100	77300	140700	129100	105200	86000
3	95900	64700	49200	39900	12400	e6600	28000	81300	141100	128200	104200	85300
4	94800	64500	48800	39500	11600	e6500	29200	85700	141400	127500	103200	84600
5	93700	64500	48400	38900	10800	e6400	31200	89900	141300	126700	102200	84100
6	92700	64400	48000	38400	10100	e6500	33500	93500	141000	126000	101200	83400
7	91600	63600	47600	37800	9490	e6600	35400	96700	140800	125300	100100	82800
8	90500	62800	47200	37200	8850	e6800	37400	99700	140300	124600	99100	82100
9	89300	62100	46800	36600	8210	7290	39400	102600	139800	123800	98400	81500
10	88300	61300	46400	35900	7570	7660	41200	105800	139300	123100	97700	80900
11	87200	60200	46000	35100	7260	7840	43000	107700	138900	122300	97200	80300
12	86100	59200	45600	34200	e6500	8220	44800	109400	138300	121500	96600	79700
13	85000	58200	45400	33400	e5700	8520	46600	111200	137900	120600	96000	79100
14	84000	57300	46300	32500	e5300	8900	47900	113500	137600	119700	95400	78500
15	82900	56800	46300	31600	e5200	9540	49000	115800	137400	118900	94900	77800
16	82000	56400	46000	30600	e5200	10200	49800	118100	137200	118100	94300	77100
17	81000	55900	45800	29300	e5200	10800	50500	120400	136800	117200	93800	76400
18	80000	55500	45600	28400	7970	11600	51000	122600	136400	116400	93700	75700
19	79000	55000	45300	27400	7860	12600	51500	124300	135900	115600	93100	75000
20	78000	54600	45200	26400	7460	13600	51900	126000	135300	115300	92700	74200
21	77200	54200	45200	25500	e7200	15000	52300	127500	134700	113800	92000	74100
22	76300	53800	44900	24600	e7200	16700	52700	129000	134300	113000	91400	74100
23	75300	53300	44700	23400	e7000	18400	53200	130000	134000	112200	90500	74000
24	74400	52900	44500	22300	e6800	19500	54500	130800	134200	111400	89900	73200
25	73400	52500	43900	21200	e6600	20500	56400	131300	133700	110400	89400	72500
26	72400	52100	43300	20200	e6400	21000	58900	131900	133200	109600	88800	71700
27	71500	51600	43000	19200	e6400	21500	62100	132700	132600	109500	88300	70900
28	70400	51200	42600	18200	e6800	22100	65500	135600	131900	109500	87800	70000
29	69400	50800	42100	17200	e7000	22900	68300	137000	131200	109200	87300	69200
30	68300	50400	42000	16100	---	24100	70800	138100	130500	108200	86700	68500
31	67400	---	41600	15100	---	25300	---	139100	---	107200	86700	---
MAX	98000	66400	50000	41000	14000	25300	70800	139100	141400	129900	106300	86600
MIN	67400	50400	41600	15100	5200	6400	26400	73700	130500	107200	86700	68500
a	3868.77	3842.75	3827.38	3767.28	---	3793.77	3873.57	3955.16	3945.96	3919.92	3894.79	3870.35
b	-31300	-17000	-8800	-26500	-8100	+18300	+45500	+68300	-8600	-23300	-20500	-18200
c	520	7280	12530	1910	3210	6240	10300	7700	8970	2710	10570	10190

CAL YR 2003 MAX 142100 MIN 8490 b -6100 c 101300

WTR YR 2004 MAX 141400 MIN 5200 b -30200 c 82130

e Estimated.

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<sup>2</sup>.

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<sup>3</sup>/s, May 16, 1996, gage height, 17.66 ft, from rating curve extended above 3,900 ft<sup>3</sup>/s, on basis of computations of flow over dam and discharge through powerplant; minimum daily, 0.3 ft<sup>3</sup>/s, Mar. 17, 23, 31, Apr. 1, 1931.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	23	28	174	60	43	78	115	78	27	36	35
2	23	23	28	171	55	43	77	116	117	25	35	36
3	23	23	29	167	49	67	77	118	331	24	36	35
4	24	24	29	173	52	78	77	98	414	24	37	35
5	24	23	28	149	58	77	94	79	416	24	36	35
6	24	23	28	93	43	75	100	80	416	24	36	36
7	23	23	28	92	43	75	100	81	417	24	36	35
8	23	23	28	65	43	76	103	81	417	23	37	29
9	23	23	29	44	43	76	108	82	417	23	36	21
10	24	23	29	43	45	75	108	118	361	23	36	21
11	23	24	28	43	53	76	108	235	336	22	36	21
12	23	23	28	44	57	76	110	230	346	22	36	21
13	24	23	28	44	50	75	111	70	351	22	35	21
14	24	23	28	48	45	75	111	72	286	22	35	20
15	23	23	28	73	43	76	112	76	120	22	35	20
16	23	23	28	70	43	76	111	72	126	22	36	20
17	24	23	28	69	42	76	109	44	125	22	37	21
18	24	23	56	65	46	76	109	39	125	21	38	21
19	23	23	93	65	43	76	110	39	125	21	37	21
20	23	23	96	65	42	76	111	40	126	27	37	21
21	23	23	72	66	43	75	112	40	85	36	37	21
22	23	23	55	66	44	74	112	39	41	36	36	21
23	23	23	82	66	45	75	99	39	41	35	35	21
24	23	23	171	68	45	74	52	45	44	37	35	21
25	23	23	164	68	44	76	52	76	42	36	35	21
26	23	23	160	68	43	77	49	79	41	36	35	21
27	23	23	168	68	43	79	44	78	41	35	37	21
28	23	23	175	69	43	78	45	83	41	35	36	20
29	23	23	173	69	43	78	67	83	40	36	36	20
30	23	25	173	69	---	77	114	84	40	36	35	20
31	23	---	173	69	---	78	---	84	---	36	35	---
TOTAL	721	694	2291	2503	1348	2284	2770	2615	5906	858	1115	732
MEAN	23.3	23.1	73.9	80.7	46.5	73.7	92.3	84.4	197	27.7	36.0	24.4
MAX	24	25	175	174	60	79	114	235	417	37	38	36
MIN	23	23	28	43	42	43	44	39	40	21	35	20
AC-FT	1430	1380	4540	4960	2670	4530	5490	5190	11710	1700	2210	1450
a	31100	26500	27870	30530	19440	28370	20210	12360	29750	27860	29400	26770

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 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	42.6	52.1	78.9	78.3	99.8	121	231	726	899	182	64.9	52.3
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1927 - 2004	
ANNUAL TOTAL	66640		23837			
ANNUAL MEAN	183		65.1		219	
HIGHEST ANNUAL MEAN					710	
LOWEST ANNUAL MEAN					4.27	
HIGHEST DAILY MEAN	2580	Jun 5	417	Jun 7	11400	May 16 1996
LOWEST DAILY MEAN	22	Aug 30	20	Sep 14	0.30	Mar 17 1931
ANNUAL SEVEN-DAY MINIMUM	23	Aug 25	21	Sep 10	0.39	Mar 19 1931
MAXIMUM PEAK FLOW			421		17000	
MAXIMUM PEAK STAGE			3.62		17.66	
ANNUAL RUNOFF (AC-FT)	132200		47280		158600	
ANNUAL DIVERISON (AC-FT) a	299500		310200			
10 PERCENT EXCEEDS	477		116		567	
50 PERCENT EXCEEDS	44		42		23	
90 PERCENT EXCEEDS	23		23		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<sup>2</sup>.

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<sup>3</sup>/s, Dec. 23, 1964, gage height, 10.21 ft, site and datum then in use, from rating curve extended above 900 ft<sup>3</sup>/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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.07	0.12	0.26	15	25	27	173	230	66	2.6	0.19	e0.10
2	0.06	0.12	0.38	17	25	27	144	272	63	e2.4	0.19	e0.10
3	0.05	0.12	0.38	25	25	27	169	281	59	e2.2	0.16	e0.10
4	e0.05	0.13	0.34	25	25	27	212	296	52	e2.0	0.15	e0.10
5	e0.05	0.13	20	25	26	27	241	277	44	e1.8	e0.15	0.10
6	0.05	0.13	94	25	26	26	216	224	40	e1.6	0.14	0.10
7	0.03	0.14	104	24	25	33	198	195	37	e1.4	0.15	0.09
8	0.04	0.15	27	21	25	68	221	194	29	e1.2	0.15	0.09
9	0.02	0.58	16	21	25	117	227	187	25	e1.1	0.14	e0.09
10	0.03	0.54	11	22	25	133	216	162	21	e1.0	e0.14	e0.09
11	0.05	0.43	9.6	22	25	122	206	115	19	e0.90	0.12	e0.09
12	0.05	0.37	11	24	25	132	218	105	18	e0.80	e0.13	e0.09
13	0.04	0.37	11	24	25	135	202	136	17	e0.70	0.13	e0.09
14	0.04	0.36	15	25	24	160	162	150	17	e0.60	e0.13	e0.09
15	e0.04	0.45	16	24	24	191	146	151	16	0.57	0.13	e0.09
16	0.04	0.44	12	24	24	187	112	152	15	0.49	0.11	e0.09
17	e0.04	0.46	12	23	24	185	92	149	12	0.43	e0.10	e0.09
18	e0.04	0.52	13	25	24	215	77	130	11	0.39	e0.10	e0.09
19	e0.04	0.48	16	23	23	217	73	108	9.5	0.35	e0.10	e0.09
20	e0.04	0.41	21	23	23	226	107	104	8.1	0.33	e0.10	e0.09
21	0.04	0.36	27	22	e23	253	122	99	6.9	0.32	0.10	0.09
22	0.04	0.29	22	25	e24	267	107	89	6.1	0.26	0.10	0.09
23	0.05	0.22	17	28	e24	259	110	103	5.5	0.24	e0.10	0.10
24	0.04	0.22	22	27	e25	226	152	101	4.9	0.22	e0.10	0.11
25	0.07	0.19	22	26	32	185	207	91	4.4	0.24	0.10	0.09
26	0.08	0.18	18	26	29	131	248	80	3.9	0.23	0.10	0.09
27	0.06	0.18	18	26	28	106	280	85	3.4	0.22	e0.10	0.09
28	0.05	0.19	18	26	27	122	259	219	3.1	0.21	e0.10	0.09
29	0.05	0.21	17	25	27	156	207	107	3.1	0.22	0.10	0.08
30	0.05	0.22	18	25	---	176	198	82	2.8	0.21	e0.10	0.08
31	0.07	---	17	25	---	178	---	75	---	0.20	e0.10	---
TOTAL	1.47	8.71	625.96	738	732	4341	5302	4749	622.7	25.43	3.81	2.77
MEAN	0.05	0.29	20.2	23.8	25.2	140	177	153	20.8	0.82	0.12	0.09
MAX	0.08	0.58	104	28	32	267	280	296	66	2.6	0.19	0.11
MIN	0.02	0.12	0.26	15	23	26	73	75	2.8	0.20	0.10	0.08
AC-FT	2.9	17	1240	1460	1450	8610	10520	9420	1240	50	7.6	5.5

e Estimated.

## 11315000 COLE CREEK NEAR SALT SPRINGS DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.91	21.5	36.6	38.4	42.0	66.6	144	251	147	20.7	1.35	0.87
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	0.05	0.10	0.14	0.30	0.30	1.87	38.9	50.1	5.22	0.37	0.01	0.00
(WY)	1967	1960	1960	1933	1933	1933	1975	1934	1992	2001	1931	1931

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1928 - 2004	
ANNUAL TOTAL	21998.47		17152.85			
ANNUAL MEAN	60.3		46.9		64.4	
HIGHEST ANNUAL MEAN					131 1983	
LOWEST ANNUAL MEAN					16.6 1977	
HIGHEST DAILY MEAN	533	May 29	296	May 4	3760	Dec 23 1964
LOWEST DAILY MEAN	0.02	Oct 9	0.02	Oct 9	0.00	Aug 1 1931
ANNUAL SEVEN-DAY MINIMUM	0.04	Oct 7	0.04	Oct 7	0.00	Aug 1 1931
MAXIMUM PEAK FLOW			428	Apr 27	6140	Dec 23 1964
MAXIMUM PEAK STAGE			3.12	Apr 27	10.21	Dec 23 1964
ANNUAL RUNOFF (AC-FT)	43630		34020		46670	
10 PERCENT EXCEEDS	159		185		201	
50 PERCENT EXCEEDS	23		16		15	
90 PERCENT EXCEEDS	0.07		0.09		0.14	

## 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<sup>2</sup>.

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 5,830 ft above NGVD of 1929, from topographic map. Prior to Dec. 3, 1987, nonrecording gage, and Dec. 3, 1987, to Oct. 16, 2002, recording gage at site 100 ft upstream at different datum.

REMARKS.—No records computed above 5.0 ft<sup>3</sup>/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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.19	0.35	0.26	4.0	3.7	3.9	4.2	---	3.6	3.1	0.24	0.15
2	0.21	0.31	0.29	3.9	3.7	4.0	4.2	---	3.6	3.3	0.25	0.15
3	0.21	0.35	0.27	4.0	3.7	3.8	4.5	---	3.5	3.4	0.25	0.16
4	0.23	0.37	0.25	4.2	3.8	3.8	---	---	3.5	3.4	0.24	0.16
5	0.25	0.36	---	4.2	3.8	3.8	---	---	3.4	3.3	0.25	0.16
6	0.22	0.34	---	3.9	3.9	3.8	---	---	3.4	3.3	0.23	0.17
7	0.20	0.33	---	3.9	3.9	3.9	---	---	3.4	3.2	0.24	0.16
8	0.24	0.36	---	3.8	3.9	4.0	---	---	3.4	2.4	0.25	0.16
9	0.24	0.55	---	3.8	3.9	---	4.3	---	3.4	1.8	0.23	0.16
10	0.23	0.40	---	3.8	3.9	---	4.2	4.2	3.4	1.4	0.23	0.16
11	0.26	0.35	---	3.8	3.9	---	4.3	3.6	3.4	0.93	0.22	0.16
12	0.28	0.32	3.7	3.8	3.9	---	4.7	3.6	3.4	0.68	0.21	0.16
13	0.27	0.33	3.7	3.8	3.9	---	4.4	3.7	3.4	0.56	0.22	0.27
14	0.24	0.33	3.7	3.8	3.9	---	4.1	3.8	3.4	0.58	0.20	0.38
15	0.26	0.41	3.8	3.8	3.9	---	4.1	4.3	3.4	0.61	0.20	0.39
16	0.27	0.35	3.7	3.8	4.0	---	4.0	---	3.4	0.40	0.20	0.38
17	0.29	0.38	3.7	3.8	---	---	4.0	4.3	3.4	0.39	0.20	0.38
18	0.28	0.38	3.7	3.8	3.9	---	3.9	3.5	3.4	0.37	0.19	0.41
19	0.29	0.36	3.8	3.8	3.9	---	3.9	3.3	3.4	0.36	0.19	0.41
20	0.28	0.32	3.8	3.8	3.8	---	4.0	3.3	3.4	0.34	0.18	0.45
21	0.28	0.29	3.8	3.8	3.8	---	4.0	3.3	3.4	0.37	0.17	0.45
22	0.26	0.27	3.8	3.9	3.8	---	---	3.3	3.4	0.31	0.17	0.43
23	0.26	0.25	3.7	3.7	3.8	---	---	3.3	3.3	0.31	0.17	0.41
24	0.23	0.24	3.9	3.8	3.8	---	---	3.3	3.3	0.31	0.16	0.41
25	0.27	0.22	3.8	3.7	3.8	---	---	3.3	3.3	0.30	0.16	0.41
26	0.29	0.21	3.8	3.7	3.9	---	---	3.3	3.3	0.27	0.16	0.41
27	0.26	0.21	3.9	3.7	3.9	---	---	3.3	3.3	0.27	0.16	0.41
28	0.25	0.21	4.4	3.7	3.9	---	---	---	3.3	0.25	0.17	0.41
29	0.26	0.25	4.4	3.7	3.8	---	---	4.6	3.3	0.25	0.16	0.41
30	0.32	0.25	---	3.7	---	4.3	---	3.7	3.3	0.25	0.16	0.41
31	0.34	---	4.1	3.7	---	4.2	---	3.7	---	0.25	0.16	---
TOTAL	7.96	9.65	---	118.6	---	---	---	---	101.8	36.96	6.22	9.14
MEAN	0.26	0.32	---	3.83	---	---	---	---	3.39	1.19	0.20	0.30
MAX	0.34	0.55	---	4.2	---	---	---	---	3.6	3.4	0.25	0.45
MIN	0.19	0.21	---	3.7	---	---	---	---	3.3	0.25	0.16	0.15
AC-FT	16	19	---	235	---	---	---	---	202	73	12	18



## 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<sup>2</sup>.

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, 7,420 acre-ft, May 28, gage height, 78.69 ft; minimum, 590 acre-ft, Oct. 30, 31, gage height, 24.43 ft.

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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	614	591	1380	2360	914	2190	e6970	e7050	7400	7170	5660	2690
2	612	591	1460	2270	968	2120	e6980	e7050	7410	7170	5570	2600
3	612	595	1560	2180	1020	2040	e6990	e7050	7390	7180	5470	2510
4	611	595	1660	2090	1060	1970	e7000	e7050	7390	7190	5370	2420
5	610	595	1760	1990	1110	1910	e7010	e7050	7390	7190	5280	2360
6	609	595	1870	1910	1150	1870	e7020	e7050	7390	7190	5180	2350
7	609	597	1980	1820	1190	1900	e7030	e7060	7390	7160	4900	2330
8	608	598	2160	1750	1230	1980	e7040	e7060	7380	7150	4810	2290
9	607	619	2210	1690	1280	2080	e7050	e7060	7380	7140	4720	2230
10	606	634	2260	1620	1320	2240	e7060	e7070	7380	7140	4630	2160
11	605	649	2310	1560	1360	2370	e7060	e7070	7370	7130	4540	2080
12	604	661	2350	1500	1420	2490	e7060	e7080	7370	7130	4450	2020
13	603	670	2410	1430	1470	2610	e7060	e7080	7360	7120	4370	1950
14	603	684	2480	1380	1510	2800	e7060	e7090	7360	7110	4280	1880
15	602	705	2530	1330	1560	3070	e7060	e7090	7350	7110	4190	1810
16	601	720	2540	1270	1910	3290	e7060	7090	7350	7100	4110	1750
17	600	748	2510	1220	2260	3600	e7060	7080	7340	7100	4030	1680
18	598	771	2490	1180	2610	3940	e7060	7070	7330	7090	3940	1620
19	598	792	2480	1120	2720	4320	e7060	7070	7320	7020	3860	1560
20	598	812	2510	1070	2710	4710	e7060	7190	7300	6910	3780	1490
21	597	815	2540	1020	2670	5180	e7060	7370	7290	6800	3700	1430
22	597	838	2530	961	2630	5710	e7060	7390	7280	6700	3620	1370
23	595	871	2520	907	2570	6210	e7050	7390	7260	6590	3520	1310
24	595	912	2630	857	2510	6580	e7050	7390	7250	6470	3430	1250
25	593	973	2640	804	2480	6770	e7050	7410	7230	6370	3330	1190
26	592	1040	2630	744	2450	6770	e7050	7400	7220	6270	3240	1130
27	592	1120	2600	696	2390	6720	e7050	7400	7200	6160	3140	1070
28	592	1190	2580	683	2320	6700	e7050	7420	7190	6060	3050	1020
29	591	1250	2580	744	2250	6730	e7050	7400	7180	5960	2960	964
30	590	1310	2520	809	---	6790	e7050	7400	7170	5860	2870	911
31	590	---	2430	863	---	e6960	---	7400	---	5760	2780	---
TOTAL	18634	23541	71110	41828	53042	124620	211270	222830	219620	211500	128780	53425
MEAN	601	785	2290	1350	1830	4020	7040	7190	7320	6820	4150	1780
MAX	614	1310	2640	2360	2720	6960	7060	7420	7410	7190	5660	2690
MIN	590	591	1380	683	914	1870	6970	7050	7170	5760	2780	911
a	24.43	33.72	44.47	28.38	42.91			78.55	77.22	68.64	47.39	29.03
b	-24	+720	+1120	-1567	+1387	+4710	+90	+350	-230	-1410	-2980	-1869
CAL YR 2003	TOTAL 1099468	MEAN 3010	MAX 7400	MIN 590	b +1190							
WTR YR 2004	TOTAL 1380200	MEAN 3770	MAX 7420	MIN 590	b +297							

e Estimated.

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<sup>2</sup>.

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, May 28, 2004, maximum elevation, 5,820.12 ft, June 6, 7, 2002, May 28, 2004; minimum, 3,460 acre-ft, Jan. 7, 2003, elevation, 5,713.07 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 52,100 acre-ft, May 28, elevation, 5,820.12 ft; minimum, 5,020 acre-ft, Jan. 6, elevation, 5,723.79 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 2003 TO SEPTEMBER 2004  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24100	22600	14800	5840	8400	8860	15800	35700	52000	45800	44100	35200
2	24200	22600	14400	5690	8460	8620	16100	37200	51900	45700	44100	34700
3	24200	22600	14000	5540	8500	8370	16600	38400	51700	45600	44000	34300
4	24200	22600	13600	5350	8510	8160	17300	40400	51400	45500	44000	34000
5	24100	22600	13300	5170	8510	8150	18200	41600	51200	45400	44000	33600
6	24100	22600	12900	5020	8510	8160	19000	43200	50900	45300	44000	33200
7	24100	22600	12600	5160	8510	8160	19600	44100	50600	45200	43900	32900
8	24100	22600	12200	5330	8510	8270	20400	44700	50300	45100	43900	32500
9	24100	22700	11900	5490	8660	8550	21300	45600	49900	45100	43000	32200
10	24000	22700	11500	5660	8660	8670	22100	45900	49600	44900	42700	31900
11	24000	22700	11200	5810	8680	8770	22800	46200	49200	44800	42300	31500
12	24000	22700	10800	5970	8720	8870	23600	46400	48900	44700	42000	31100
13	24000	22600	10500	6120	8750	9060	24400	47200	48500	44600	41600	30700
14	22900	22100	10100	6280	8730	9200	24800	47700	48200	44500	41300	30300
15	22900	21700	9800	6440	8500	9350	25100	48200	48100	44400	40900	30100
16	22900	21300	9430	6600	8420	9520	25300	48700	48000	44300	40600	29900
17	22900	20900	9180	6750	8680	9910	25300	49700	47800	44200	40200	29600
18	22800	20400	8940	6910	8870	10300	25300	50000	47600	44100	40200	29400
19	22800	20000	8700	7060	9050	10700	25400	50300	47400	44000	39600	29100
20	22800	19500	8480	7210	9270	11100	25700	50400	47300	44000	39300	28900
21	22800	19100	8250	7350	9530	11600	25900	50400	47200	44000	38900	28800
22	22800	18700	8040	7490	9770	12100	26000	50500	46800	44000	38600	28800
23	22800	18200	7830	7620	9930	12600	26300	50600	46700	44000	38200	28600
24	22700	17800	7620	7760	9910	13100	27100	50800	46700	44200	37900	28300
25	22700	17400	7420	7890	9750	13600	28400	50900	46400	44200	37500	28000
26	22700	17100	7220	8010	9650	14000	29900	51100	46200	44100	37100	27700
27	22700	16700	6980	8140	9460	14000	31500	51200	46100	44100	36700	27500
28	22700	16300	6660	8250	9310	14000	33000	52100	46000	44100	36300	27100
29	22700	15700	6370	8280	9090	14400	33500	51900	45900	44100	35900	26800
30	22600	15200	6120	8330	---	14800	34500	51800	45900	44100	35600	26600
31	22600	---	5970	8360	---	15300	---	51700	---	44100	35600	---
MAX	24200	22700	14800	8360	9930	15300	34500	52100	52000	45800	44100	35200
MIN	22600	15200	5970	5020	8400	8150	15800	35700	45900	44000	35600	26600
a	5773.52	5758.09	5728.90	5738.97	5741.50	5758.12	5794.36	5819.51	5811.50	5808.96	5796.16	5780.82
b	-1900	-7400	-9230	+2390	+730	+6210	+19200	+17200	-5800	-1800	-8500	-9000

CAL YR 2003 MAX 52100 MIN 3460 b +2170  
WTR YR 2004 MAX 52100 MIN 5020 b +2100

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<sup>2</sup>.

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, and Dec. 3, 1987 to Oct. 16, 2002, recording gage at same site at different datum.

REMARKS.—No records computed above 150 ft<sup>3</sup>/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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	5.6	5.9	5.4	5.7	5.6	6.4	7.3	25	7.2	7.3	6.9
2	5.1	6.7	5.9	5.3	5.7	5.6	6.4	7.4	33	7.2	7.3	6.9
3	5.1	6.3	5.9	5.2	5.7	5.6	6.3	7.4	29	7.1	7.3	6.8
4	5.2	6.3	5.9	5.2	5.7	5.6	6.4	7.4	25	6.9	7.1	6.9
5	5.1	6.2	6.2	5.2	5.6	5.7	6.4	7.3	22	6.8	7.1	6.9
6	5.2	6.2	7.0	5.2	5.5	5.9	6.4	7.1	19	6.8	7.1	6.9
7	5.1	6.3	7.4	5.1	5.5	6.0	6.5	7.1	17	6.8	7.1	6.7
8	5.1	6.3	6.0	5.3	5.5	6.2	6.5	7.3	15	6.8	7.1	6.7
9	5.1	7.1	5.7	5.4	5.5	6.5	6.5	7.4	13	6.8	7.2	6.6
10	5.1	6.4	5.7	5.3	5.5	7.0	6.5	7.4	12	6.8	7.1	6.6
11	5.1	6.3	5.7	5.2	5.5	6.5	6.6	7.4	10	6.8	7.1	6.6
12	5.1	6.3	5.7	5.2	5.5	6.4	6.6	7.5	8.9	6.8	7.1	6.5
13	5.1	6.2	6.5	5.4	5.5	6.4	6.6	7.5	7.6	6.8	7.1	6.5
14	5.1	6.3	6.2	5.6	5.5	6.5	6.7	7.5	7.4	6.8	7.4	6.5
15	5.1	6.5	5.8	5.6	5.5	6.5	6.7	7.5	7.3	6.8	7.7	6.5
16	5.1	6.3	5.7	5.5	7.2	6.4	6.7	9.2	7.1	6.8	7.7	6.5
17	5.1	6.3	5.6	5.6	6.3	6.4	6.7	11	7.1	6.8	7.7	6.5
18	5.1	6.2	5.7	5.6	6.3	6.5	6.8	14	7.0	6.8	7.6	6.5
19	5.1	6.2	5.6	5.6	5.9	6.5	6.8	18	7.0	6.9	7.6	6.4
20	5.1	6.1	6.2	5.6	5.8	6.5	6.9	20	7.0	7.0	7.6	6.2
21	5.1	6.1	5.9	5.6	5.7	6.5	6.9	20	7.0	7.0	7.3	6.3
22	5.1	6.1	5.6	5.5	5.8	6.7	6.8	20	7.0	7.0	7.1	6.3
23	5.1	6.1	5.6	5.6	5.7	6.7	6.7	21	6.9	7.0	7.0	6.3
24	5.1	6.0	7.2	5.6	5.7	6.6	6.7	24	6.9	7.2	7.0	6.3
25	5.1	6.0	6.2	5.6	6.2	6.6	6.8	26	6.9	7.3	7.0	6.3
26	5.1	6.0	5.7	5.6	6.0	6.7	6.8	25	6.8	7.4	7.0	6.3
27	5.1	6.0	5.6	5.6	5.8	6.6	6.9	25	6.9	7.3	7.0	6.3
28	5.1	6.0	5.5	5.7	5.7	6.5	7.0	39	8.4	7.3	6.9	6.3
29	5.1	6.0	5.5	5.7	5.7	6.5	7.1	62	8.5	7.3	6.9	6.3
30	5.1	5.9	5.4	5.7	---	6.4	7.1	32	7.7	7.3	6.9	6.2
31	5.6	---	5.3	5.6	---	6.4	---	22	---	7.3	6.9	---
TOTAL	158.8	186.3	183.8	169.3	167.2	196.5	200.2	498.7	359.4	216.9	223.3	195.5
MEAN	5.12	6.21	5.93	5.46	5.77	6.34	6.67	16.1	12.0	7.00	7.20	6.52
MAX	5.6	7.1	7.4	5.7	7.2	7.0	7.1	62	33	7.4	7.7	6.9
MIN	5.1	5.6	5.3	5.1	5.5	5.6	6.3	7.1	6.8	6.8	6.9	6.2
AC-FT	315	370	365	336	332	390	397	989	713	430	443	388

## 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<sup>2</sup>.

PERIOD OF RECORD.—December 1987 to current year. Prior to Oct. 1, 2003, 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 concrete control. Elevation of gage is 3,710 ft above NGVD of 1929, from topographic map. Prior to Dec. 8, 1987, nonrecording gage, and Dec. 8, 1987, to Sept. 26, 2002, recording gage at site 300 ft upstream at different datum.

REMARKS.—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 500 ft upstream to Tiger Creek Powerplant Conduit for use at Tiger Creek Powerplant (station 11316610). 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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	7.9	7.1	20	18	36	52	17	35	7.4	7.3	7.4
2	5.7	6.8	7.2	19	20	34	48	16	33	7.5	7.3	7.4
3	5.7	8.6	7.1	17	19	33	47	16	31	7.6	7.2	7.4
4	5.7	7.4	7.1	16	19	33	46	15	27	7.7	7.2	7.7
5	5.7	7.2	12	16	18	33	45	15	24	7.8	7.6	7.9
6	5.5	7.0	18	16	18	36	43	15	21	7.9	7.3	7.9
7	5.5	7.1	41	17	18	41	41	14	19	8.0	7.2	7.9
8	5.5	7.5	14	21	17	49	40	14	18	8.0	7.2	7.9
9	5.5	22	11	22	17	59	39	14	16	7.9	7.2	8.1
10	5.5	10	13	21	17	70	36	14	15	7.9	7.1	8.6
11	5.5	8.4	13	20	17	71	34	14	13	8.0	7.2	8.6
12	5.5	7.7	12	20	18	73	32	14	12	8.0	7.3	8.7
13	5.5	7.6	29	20	18	74	30	13	11	8.1	7.3	8.7
14	5.5	7.7	25	21	17	80	28	13	10	8.1	7.3	8.6
15	5.5	14	16	21	18	87	27	13	9.6	8.1	7.3	8.6
16	5.5	9.2	14	21	57	86	26	14	9.1	8.0	7.3	8.7
17	5.5	8.8	14	21	55	86	25	15	9.1	8.2	7.3	8.7
18	5.5	8.1	14	22	63	90	24	18	9.0	8.2	7.3	8.8
19	5.5	7.7	14	21	47	90	24	21	9.0	8.2	7.3	8.2
20	5.5	7.5	22	21	42	88	30	23	8.9	8.3	7.2	7.9
21	5.4	7.3	24	20	38	90	29	22	8.8	8.3	7.2	8.1
22	5.2	7.3	18	20	36	90	25	22	8.7	8.4	7.1	8.1
23	5.3	7.2	16	19	35	86	23	23	8.4	8.5	7.1	8.1
24	5.3	7.2	50	20	33	78	22	25	7.7	8.6	7.0	8.1
25	5.3	7.2	42	19	50	73	21	28	7.5	8.7	6.9	8.1
26	5.2	7.2	28	18	51	68	20	28	7.6	8.7	7.2	8.2
27	5.2	7.1	22	20	42	60	19	27	7.6	8.7	7.3	8.1
28	5.3	7.2	20	20	39	58	19	45	6.8	8.7	7.3	8.1
29	5.3	7.2	20	19	37	58	18	86	6.1	8.6	7.3	8.0
30	5.3	7.1	20	19	---	57	18	53	6.6	8.1	7.4	8.0
31	6.4	---	19	18	---	55	---	39	---	7.3	7.4	---
TOTAL	170.2	250.2	589.5	605	894	2022	931	706	415.5	251.5	224.6	244.6
MEAN	5.49	8.34	19.0	19.5	30.8	65.2	31.0	22.8	13.8	8.11	7.25	8.15
MAX	6.4	22	50	22	63	90	52	86	35	8.7	7.6	8.8
MIN	5.2	6.8	7.1	16	17	33	18	13	6.1	7.3	6.9	7.4
AC-FT	338	496	1170	1200	1770	4010	1850	1400	824	499	445	485

## 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<sup>2</sup>.

PERIOD OF RECORD.—October 2002 to current year.

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, 516 acre-ft, Apr. 24, 2004, gage height, 19.97 ft; minimum, 322 acre-feet, May 12, 13, 2004, minimum gage height, 2.21 ft, May 13.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 516 acre-ft, Apr. 24, gage height, 19.97 ft; minimum, 322 acre-feet, May 12, 13, minimum gage height, 2.21 ft, May 13.

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 2003 TO SEPTEMBER 2004

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	419	479	414	480	453	442	483	429	486	408	455	457
2	436	467	477	477	478	439	470	420	484	412	448	419
3	434	440	470	469	457	447	455	411	432	413	444	417
4	449	492	464	453	428	445	457	402	419	409	447	434
5	446	368	457	436	427	446	466	393	431	410	442	427
6	469	324	451	421	430	447	470	383	412	408	442	440
7	457	466	444	436	424	448	466	373	409	412	440	436
8	465	450	438	417	415	449	471	362	405	411	437	437
9	469	470	430	408	414	464	474	352	419	421	426	431
10	445	441	444	409	416	465	474	340	410	406	424	424
11	436	405	444	414	420	455	473	331	413	409	420	429
12	423	402	435	419	426	432	475	322	419	418	412	434
13	416	403	435	411	453	468	472	322	422	413	413	414
14	415	403	440	425	446	481	465	353	415	419	410	422
15	430	405	404	409	455	475	455	448	413	424	420	412
16	405	412	457	421	480	463	450	506	412	404	414	412
17	421	407	391	423	432	455	475	510	419	422	411	406
18	407	407	437	428	436	455	499	510	423	410	445	407
19	409	419	410	430	434	452	498	509	409	410	417	411
20	414	406	427	422	445	452	491	464	414	412	412	416
21	410	439	420	420	461	450	480	461	414	430	412	497
22	402	453	414	414	466	449	480	458	409	414	422	490
23	450	442	434	418	454	406	506	512	403	413	415	440
24	457	430	468	415	457	402	516	507	459	409	412	442
25	407	418	498	418	454	471	506	433	407	410	414	460
26	414	418	500	408	439	464	495	409	413	406	433	448
27	418	412	495	406	431	455	481	410	413	507	416	439
28	440	420	487	446	438	451	467	410	418	499	414	439
29	413	422	486	403	441	454	453	413	414	495	411	439
30	432	423	479	448	---	468	437	415	411	418	411	457
31	505	---	474	450	---	478	---	427	---	433	475	---
MAX	505	492	500	480	480	481	516	512	486	507	475	497
MIN	402	324	391	403	414	402	437	322	403	404	410	406
a	19.09	12.05	16.60	14.51	13.71	16.88	13.38	12.48	10.96	12.96	16.66	14.71
b	+84	-82	+51	-24	-9	+37	-41	-10	-16	+22	+42	-18

CAL YR 2003 MAX 510 MIN 324 b +32

WTR YR 2004 MAX 516 MIN 322 b +36

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<sup>2</sup>.

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<sup>3</sup>/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 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	5.4	6.2	7.5	7.6	7.7	11	8.6	7.9	5.7	5.7	3.7
2	6.8	5.6	6.2	7.5	7.7	7.7	11	8.6	7.9	5.7	4.6	3.7
3	8.5	5.5	6.1	7.4	7.7	7.7	11	8.6	7.9	5.7	3.7	3.7
4	8.5	6.2	5.9	7.4	7.6	11	11	8.6	7.9	5.7	3.7	3.7
5	8.5	6.0	5.8	7.3	7.7	11	11	8.6	7.9	5.7	3.7	3.7
6	8.5	5.6	5.7	7.3	7.8	11	11	8.6	7.9	5.7	3.7	3.7
7	8.5	5.7	5.7	7.2	7.8	11	11	8.6	7.9	5.7	3.7	3.7
8	8.5	5.5	5.6	7.3	7.7	11	11	8.6	7.9	5.7	3.7	3.7
9	8.5	5.6	5.5	7.3	7.7	11	11	8.6	7.9	5.7	3.7	3.7
10	6.1	5.6	5.5	7.4	7.7	11	11	8.6	7.9	5.7	3.7	3.7
11	3.7	5.5	5.5	7.3	7.7	11	11	8.6	7.9	5.7	3.7	3.7
12	3.7	5.4	5.5	7.5	7.7	11	11	8.6	7.9	5.7	3.7	3.7
13	3.7	5.5	5.5	7.6	7.7	11	11	8.6	7.9	5.7	3.7	3.6
14	3.8	5.6	5.5	7.6	7.8	11	11	8.6	7.9	5.7	3.7	3.7
15	3.6	5.7	5.5	7.6	7.8	11	11	8.6	7.9	5.7	3.7	3.7
16	3.4	5.6	5.4	7.7	7.8	11	11	8.6	7.9	5.7	3.7	3.7
17	3.2	5.6	5.5	7.7	7.8	11	11	8.6	7.9	5.7	3.7	3.7
18	3.2	5.6	5.4	7.7	30	11	11	8.2	7.9	5.7	3.7	3.7
19	3.2	5.6	5.4	7.7	---	11	11	8.0	7.9	5.7	3.6	3.7
20	3.2	5.6	5.5	7.7	---	11	11	8.0	6.8	5.7	3.7	3.7
21	3.2	5.5	5.4	7.7	7.8	11	11	8.0	5.7	5.7	3.7	3.7
22	3.2	5.5	5.4	7.7	7.8	11	11	8.0	5.7	5.7	3.7	3.8
23	3.2	5.5	5.4	7.7	7.7	36	11	8.0	5.7	5.7	3.7	3.7
24	3.2	5.6	5.4	7.7	7.8	---	11	8.0	5.7	5.7	3.7	3.7
25	3.2	5.6	5.5	7.7	7.7	37	11	8.0	5.7	5.7	3.7	3.7
26	3.2	6.2	5.5	7.7	7.6	11	11	8.0	5.7	5.7	3.7	3.7
27	3.2	6.6	5.4	7.7	7.7	11	11	8.0	5.7	5.7	3.7	3.7
28	3.2	6.5	5.4	7.7	7.7	11	11	8.0	5.7	5.7	3.7	3.7
29	3.2	6.4	5.4	7.7	7.7	11	11	8.0	5.7	5.7	3.7	3.7
30	4.1	6.3	6.5	7.6	---	11	11	8.0	5.7	5.7	3.7	3.7
31	5.2	---	7.5	7.7	---	11	---	8.0	---	5.7	3.7	---
TOTAL	149.2	172.1	175.7	234.3	---	---	330	258.4	213.9	176.7	117.5	111.0
MEAN	4.81	5.74	5.67	7.56	---	---	11.0	8.34	7.13	5.70	3.79	3.70
MAX	8.5	6.6	7.5	7.7	---	---	11	8.6	7.9	5.7	5.7	3.8
MIN	3.2	5.4	5.4	7.2	---	---	11	8.0	5.7	5.7	3.6	3.6
AC-FT	296	341	349	465	---	---	655	513	424	350	233	220

## 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<sup>2</sup>.

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. Prior to Aug. 11, 2003, at different datum.

REMARKS.—No records computed above 500 ft<sup>3</sup>/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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	43	34	140	49	108	200	361	111	52	39	39
2	43	43	34	233	48	89	192	365	108	39	39	39
3	43	43	34	115	77	78	192	371	151	39	39	39
4	43	43	34	63	56	88	196	407	346	39	39	39
5	43	43	34	59	46	88	183	340	424	39	39	39
6	43	42	34	61	47	87	140	302	423	39	39	39
7	43	42	34	56	47	86	141	155	417	39	39	39
8	43	42	34	55	47	85	146	178	429	39	39	38
9	43	42	33	54	47	182	174	245	411	39	39	38
10	43	42	34	52	47	403	183	250	392	39	39	38
11	43	42	34	50	47	477	173	391	319	39	39	38
12	43	42	34	48	47	492	171	412	318	38	39	38
13	43	37	34	46	47	456	199	214	319	38	39	38
14	43	31	34	44	46	489	191	102	256	38	39	38
15	43	31	34	48	46	---	179	103	90	38	39	38
16	43	34	34	44	46	---	162	103	63	38	39	38
17	43	34	33	44	46	---	151	103	64	38	39	39
18	43	34	33	43	45	---	152	102	64	38	39	39
19	43	34	33	43	49	---	153	102	64	38	39	38
20	43	34	33	50	105	---	152	102	64	38	39	41
21	43	34	34	55	46	---	152	102	64	38	39	43
22	42	34	34	81	46	---	154	102	63	39	39	43
23	42	35	33	46	46	---	170	102	63	39	40	43
24	42	35	138	45	46	---	272	102	64	39	40	45
25	42	34	342	47	115	---	305	103	63	39	39	45
26	42	34	139	47	392	480	327	104	64	38	39	47
27	42	34	65	89	241	404	306	105	63	38	39	45
28	42	34	62	94	159	392	389	104	63	37	39	45
29	42	34	68	52	115	375	300	215	64	38	39	45
30	42	34	102	49	---	198	350	223	64	39	39	45
31	42	---	69	49	---	199	---	188	---	39	39	---
TOTAL	1323	1120	1761	2002	2241	---	6155	6158	5468	1207	1211	1218
MEAN	42.7	37.3	56.8	64.6	77.3	---	205	199	182	38.9	39.1	40.6
MAX	43	43	342	233	392	---	389	412	429	52	40	47
MIN	42	31	33	43	45	---	140	102	63	37	39	38
AC-FT	2620	2220	3490	3970	4450	---	12210	12210	10850	2390	2400	2420
a	30240	25860	27340	30050	21020	28350	19080	11410	29450	27510	29180	26480

CAL YR 2003 a 298600  
WTR YR 2004 a 306000

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<sup>2</sup>.

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 concrete control. Elevation of gage is 1,980 ft above NGVD of 1929, from topographic map. Prior to Sept. 29, 2003, at different datum.

REMARKS.—No records computed above 33 ft<sup>3</sup>/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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e25	---	---	---	---	---	---	---	---	---	25	26
2	e25	---	---	---	---	---	---	---	---	24	25	25
3	25	---	---	---	---	---	---	---	---	24	25	25
4	25	---	---	---	---	---	---	---	---	24	25	25
5	24	---	---	---	---	---	---	---	---	24	25	25
6	24	---	---	---	---	---	---	---	---	24	25	25
7	23	---	---	---	---	---	---	---	---	24	25	25
8	23	---	---	---	---	---	---	---	---	24	25	25
9	23	---	---	---	---	---	---	---	---	24	25	24
10	23	---	---	---	---	---	---	---	---	24	25	24
11	24	---	---	---	---	---	---	---	---	24	25	24
12	24	---	---	---	---	---	---	---	---	24	25	24
13	24	---	---	---	---	---	---	---	---	23	25	24
14	26	30	---	---	---	---	---	---	---	23	25	24
15	28	32	---	---	---	---	---	---	---	23	26	24
16	28	33	---	---	---	---	---	---	---	23	26	25
17	28	33	---	---	---	---	---	---	---	23	25	25
18	28	33	---	---	---	---	---	---	---	24	26	25
19	28	33	---	---	---	---	---	---	---	23	25	24
20	27	33	---	---	---	---	---	---	---	23	26	26
21	27	33	---	---	---	---	---	---	---	24	26	30
22	27	33	---	---	---	---	---	---	---	24	26	29
23	27	---	---	---	---	---	---	---	---	24	26	30
24	27	33	---	---	---	---	---	---	---	24	26	31
25	27	33	---	---	---	---	---	---	---	24	26	32
26	27	33	---	---	---	---	---	---	---	24	25	32
27	26	33	---	---	---	---	---	---	---	23	25	32
28	24	---	---	---	---	---	---	---	---	23	25	33
29	26	33	---	---	---	---	---	---	---	23	25	32
30	---	---	---	---	---	---	---	---	---	24	25	32
31	---	---	---	---	---	---	---	---	---	25	26	---
TOTAL	---	---	---	---	---	---	---	---	---	---	785	807
MEAN	---	---	---	---	---	---	---	---	---	---	25.3	26.9
MAX	---	---	---	---	---	---	---	---	---	---	26	33
MIN	---	---	---	---	---	---	---	---	---	---	25	24
AC-FT	---	---	---	---	---	---	---	---	---	---	1560	1600

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<sup>2</sup>.

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<sup>3</sup>/s, Feb. 19, 1986, gage height, 8.12 ft, from rating curve extended above 500 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 7.41 ft; minimum daily, 0.11 ft<sup>3</sup>/s, Aug. 14, 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 120 ft<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage Height (ft)
Feb. 25	2035	136	4.39

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	2.7	2.9	32	11	46	34	11	6.2	3.4	0.92	0.81
2	1.6	2.6	3.3	31	13	44	32	10	6.0	3.6	0.96	1.1
3	1.2	4.1	3.2	21	15	40	30	10	5.7	3.4	1.3	0.90
4	1.1	3.5	3.0	16	14	36	29	10	5.5	3.1	1.3	0.74
5	1.2	3.2	5.0	16	14	34	28	9.5	5.1	3.1	1.1	0.81
6	1.3	3.0	9.6	14	13	34	27	9.2	4.6	3.5	1.3	0.95
7	1.4	3.1	27	15	14	35	27	9.1	4.6	3.5	0.94	0.97
8	1.5	3.4	10	16	13	35	26	8.7	4.9	3.5	1.5	1.0
9	1.5	9.5	8.0	15	12	40	25	8.5	5.2	3.3	1.6	1.1
10	1.5	4.9	16	14	11	45	24	9.0	5.6	2.7	1.6	1.0
11	1.6	2.8	16	14	11	49	23	9.4	5.8	2.7	1.5	1.0
12	1.5	2.5	11	13	11	49	21	9.5	5.7	3.0	1.1	1.0
13	1.7	2.4	23	12	11	50	20	8.6	5.5	2.9	1.6	1.0
14	1.8	2.6	27	12	11	49	18	7.7	5.4	2.9	0.81	0.94
15	1.5	5.4	16	12	11	52	17	8.1	5.2	2.5	0.85	0.86
16	1.3	4.5	12	12	22	54	18	8.0	5.1	2.2	1.0	0.59
17	1.4	3.4	9.8	12	31	54	17	7.6	4.4	1.2	1.3	0.70
18	1.2	3.3	8.7	12	55	55	16	7.2	2.9	1.3	1.3	0.61
19	1.2	3.1	8.1	11	46	55	17	7.2	3.4	1.4	0.91	0.79
20	1.3	3.1	10	11	36	51	17	7.3	3.3	1.5	1.1	1.6
21	1.2	3.1	13	11	32	51	17	7.1	3.4	1.6	0.77	1.6
22	1.1	3.3	11	11	29	53	17	7.0	3.7	1.8	0.74	1.5
23	1.4	3.2	10	11	30	52	16	7.1	3.9	2.3	1.1	1.8
24	1.4	3.6	30	11	29	48	15	7.2	3.8	2.5	1.2	1.7
25	1.5	3.3	53	11	63	48	14	7.3	3.6	2.6	1.3	1.5
26	1.5	3.0	27	11	89	47	14	6.9	2.5	2.0	1.2	1.4
27	1.4	2.8	18	12	65	42	12	6.2	3.3	1.1	0.87	1.3
28	1.4	3.0	16	12	55	39	12	9.5	3.1	1.4	0.88	1.4
29	1.5	2.9	17	11	48	37	12	8.0	3.1	1.2	0.96	1.7
30	1.6	2.9	19	12	---	35	12	7.6	3.4	2.3	0.74	1.9
31	2.0	---	18	12	---	34	---	6.9	---	1.6	0.75	---
TOTAL	44.7	104.2	461.6	436	815	1393	607	256.4	133.9	75.1	34.50	34.27
MEAN	1.44	3.47	14.9	14.1	28.1	44.9	20.2	8.27	4.46	2.42	1.11	1.14
MAX	2.0	9.5	53	32	89	55	34	11	6.2	3.6	1.6	1.9
MIN	1.1	2.4	2.9	11	11	34	12	6.2	2.5	1.1	0.74	0.59
AC-FT	89	207	916	865	1620	2760	1200	509	266	149	68	68

## SAN JOAQUIN RIVER BASIN

## 11316800 FOREST CREEK NEAR WILSEYVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.94	8.74	19.3	38.2	45.4	51.7	48.9	34.6	13.6	6.13	3.69	3.13
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1961 - 2004	
ANNUAL TOTAL	6363.0		4395.67			
ANNUAL MEAN	17.4		12.0		23.0	
HIGHEST ANNUAL MEAN					67.9 1983	
LOWEST ANNUAL MEAN					2.39 1977	
HIGHEST DAILY MEAN	137	Apr 13	89	Feb 26	1550	Jan 2 1997
LOWEST DAILY MEAN	1.1	Oct 4	0.59	Sep 16	0.11	Aug 14 1977
ANNUAL SEVEN-DAY MINIMUM	1.2	Oct 16	0.78	Sep 13	0.15	Aug 11 1977
MAXIMUM PEAK FLOW			136	Feb 25	2020	Feb 19 1986
MAXIMUM PEAK STAGE			4.39	Feb 25	8.12	Feb 19 1986
ANNUAL RUNOFF (AC-FT)	12620		8720		16660	
10 PERCENT EXCEEDS	52		35		59	
50 PERCENT EXCEEDS	11		5.7		7.9	
90 PERCENT EXCEEDS	1.8		1.1		2.0	

## 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<sup>2</sup>.

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<sup>3</sup>/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<sup>3</sup>/s; because of leakage, only 5 ft<sup>3</sup>/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<sup>3</sup>/s, Jan. 2, 1997, gage height, 9.28 ft, from rating curve extended above 4,010 ft<sup>3</sup>/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<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 25	2255	435	3.64

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	8.7	10	139	50	146	96	45	13	12	3.3	4.7
2	5.4	9.0	10	120	56	137	91	44	11	12	3.2	4.6
3	5.4	9.5	10	78	61	117	86	45	23	12	3.9	4.2
4	5.8	10	9.7	67	61	105	86	45	40	12	4.4	5.2
5	5.4	10	12	63	34	96	85	45	41	10	4.0	5.2
6	7.0	9.9	17	41	30	91	86	46	26	12	4.9	5.8
7	7.0	10	44	30	32	91	80	47	8.7	11	4.8	5.8
8	7.1	11	25	32	29	94	78	48	9.7	9.9	4.2	5.5
9	7.0	21	44	30	29	106	78	48	11	10	5.2	4.9
10	8.2	24	60	34	27	118	76	47	12	8.8	4.4	4.7
11	7.6	41	63	57	27	127	74	37	12	6.9	4.4	4.8
12	6.5	28	50	55	48	125	71	16	11	7.5	4.6	4.9
13	6.4	11	42	54	51	124	69	13	11	6.5	5.0	4.3
14	7.0	10	51	45	52	126	65	24	12	6.3	4.7	4.1
15	7.2	13	28	40	51	134	65	45	12	5.1	3.8	4.5
16	7.1	12	19	52	34	137	63	44	12	5.9	4.4	3.6
17	7.3	9.6	17	41	56	137	60	44	12	3.6	4.5	3.4
18	7.6	9.2	27	22	122	137	55	17	8.0	3.6	5.2	3.4
19	8.6	10	45	21	137	139	55	14	8.7	3.1	4.6	4.3
20	7.7	12	46	21	114	135	56	13	8.2	3.9	4.2	5.5
21	7.8	12	49	20	96	139	55	11	7.2	4.7	4.9	6.4
22	8.0	9.1	38	23	89	143	52	12	8.2	5.4	4.8	6.5
23	8.3	9.3	16	49	86	142	50	16	12	5.8	5.3	6.4
24	9.1	9.0	51	49	84	134	48	41	12	6.8	6.2	6.0
25	9.0	9.6	145	49	183	130	47	41	12	6.9	6.2	5.7
26	7.3	9.6	87	48	358	136	47	41	10	6.0	6.3	5.2
27	5.4	9.7	66	22	237	116	48	20	12	5.4	5.9	5.2
28	5.8	10	60	23	177	107	48	16	12	4.1	5.4	4.5
29	5.7	10	65	22	149	103	48	15	12	3.8	5.6	5.0
30	5.9	10	72	21	---	102	47	13	12	4.3	4.9	5.6
31	6.8	---	65	21	---	98	---	13	---	4.9	4.4	---
TOTAL	214.3	377.2	1343.7	1389	2560	3772	1965	966	411.7	220.2	147.6	149.9
MEAN	6.91	12.6	43.3	44.8	88.3	122	65.5	31.2	13.7	7.10	4.76	5.00
MAX	9.1	41	145	139	358	146	96	48	41	12	6.3	6.5
MIN	3.9	8.7	9.7	20	27	91	47	11	7.2	3.1	3.2	3.4
AC-FT	425	748	2670	2760	5080	7480	3900	1920	817	437	293	297

## SAN JOAQUIN RIVER BASIN

## 11317000 MIDDLE FORK MOKELUMNE RIVER AT WEST POINT, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	11.2	22.0	49.2	91.5	125	139	147	108	43.4	16.5	9.30	7.73
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	0.07	0.15
(WY)	1932	1930	1977	1977	1991	1977	1977	1931	1924	1924	1931	1931

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1912 - 2004	
ANNUAL TOTAL	18696.5		13516.6			
ANNUAL MEAN	51.2		36.9		63.7	
HIGHEST ANNUAL MEAN					218 1983	
LOWEST ANNUAL MEAN					5.25 1977	
HIGHEST DAILY MEAN	447	Apr 13	358	Feb 26	3740	Jan 2 1997
LOWEST DAILY MEAN	2.2	Aug 31	3.1	Jul 19	0.00	Aug 23 1931
ANNUAL SEVEN-DAY MINIMUM	5.0	Aug 12	3.9	Jul 28	0.00	Aug 23 1931
MAXIMUM PEAK FLOW			435	Feb 25	5040	Jan 2 1997
MAXIMUM PEAK STAGE			3.64	Feb 25	9.28	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	37080		26810		46180	
10 PERCENT EXCEEDS	136		102		166	
50 PERCENT EXCEEDS	31		13		21	
90 PERCENT EXCEEDS	6.4		4.7		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<sup>2</sup>.

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<sup>3</sup>/s from the Middle Fork Mokelumne River which, due to leakage, delivers about 5 ft<sup>3</sup>/s to Licking Fork Mokelumne River. There are two pumps with a combined capacity of 8.9 ft<sup>3</sup>/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<sup>3</sup>/s, Jan. 2, 1997, gage height, 12.72 ft, from rating curve extended above 2,700 ft<sup>3</sup>/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<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 25	2220	558	5.05

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	7.2	10	208	36	167	100	33	17	6.3	3.7	2.8
2	4.3	7.8	11	152	48	157	90	30	16	6.7	4.2	2.4
3	4.7	12	11	86	63	133	87	29	15	6.9	4.5	2.3
4	4.2	9.9	10	62	55	119	85	27	13	5.9	4.1	2.4
5	3.7	7.9	12	54	47	109	83	25	12	5.3	3.4	2.7
6	4.2	9.0	21	47	44	103	82	25	12	5.0	3.6	2.7
7	4.1	9.5	72	48	46	104	79	25	12	4.4	3.4	2.7
8	4.0	8.5	29	50	41	112	78	24	12	3.9	3.4	2.9
9	3.9	30	13	49	41	126	74	24	12	3.4	3.4	2.5
10	4.5	23	39	49	39	148	71	25	12	3.2	3.0	2.3
11	4.4	12	60	48	37	163	67	24	12	3.1	2.9	2.3
12	4.4	9.3	33	46	37	159	64	23	11	2.8	2.7	2.2
13	4.5	7.4	44	44	35	154	61	21	11	2.2	2.6	2.1
14	4.9	9.1	81	43	35	157	58	21	11	2.0	2.3	2.6
15	4.2	18	50	43	35	169	56	19	10	1.8	2.2	3.2
16	4.5	18	34	43	59	172	56	18	9.6	1.8	2.9	3.0
17	4.9	13	26	41	124	173	55	21	9.1	1.6	3.2	3.0
18	4.7	11	24	41	198	176	53	20	8.9	1.4	2.9	2.9
19	4.4	10	24	41	181	173	53	17	8.6	1.4	2.8	4.0
20	4.6	9.7	31	40	135	163	54	16	8.3	1.1	3.0	4.8
21	4.0	9.9	44	40	112	164	54	18	8.2	3.7	2.8	5.7
22	4.2	8.6	38	38	102	164	51	20	7.7	2.6	2.7	5.2
23	4.4	9.1	31	37	95	160	48	19	7.3	3.7	3.4	5.5
24	5.0	9.7	110	37	93	149	46	19	6.9	4.3	3.0	4.7
25	4.6	9.1	219	37	214	140	44	18	6.9	4.0	2.8	4.7
26	4.6	7.8	106	36	442	145	44	18	6.6	4.0	2.9	4.1
27	4.9	8.8	69	37	313	118	43	17	6.7	3.8	3.3	3.6
28	4.9	10	55	43	215	111	40	22	6.6	3.6	2.8	3.5
29	5.0	10	64	39	177	106	39	21	6.0	4.0	2.2	3.3
30	5.1	8.9	77	38	---	107	39	20	6.1	3.9	2.6	4.0
31	5.4	---	63	37	---	105	---	18	---	3.1	2.5	---
TOTAL	139.5	334.2	1511	1654	3099	4406	1854	677	301.5	110.9	95.2	100.1
MEAN	4.50	11.1	48.7	53.4	107	142	61.8	21.8	10.1	3.58	3.07	3.34
MAX	5.4	30	219	208	442	176	100	33	17	6.9	4.5	5.7
MIN	3.7	7.2	10	36	35	103	39	16	6.0	1.1	2.2	2.1
AC-FT	277	663	3000	3280	6150	8740	3680	1340	598	220	189	199

## SAN JOAQUIN RIVER BASIN

## 11318500 SOUTH FORK MOKELUMNE RIVER NEAR WEST POINT, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.3	29.8	71.7	132	175	187	180	120	46.0	21.1	12.1	9.86
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	0.04	0.13
(WY)	1989	1991	1991	1991	1991	1977	1977	1977	1992	1934	1934	1934

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1934 - 2004	
ANNUAL TOTAL	19441.09		14282.4			
ANNUAL MEAN	53.3		39.0		82.6	
HIGHEST ANNUAL MEAN					264 1983	
LOWEST ANNUAL MEAN					6.14 1977	
HIGHEST DAILY MEAN	487	Apr 13	442	Feb 26	5780	Feb 17 1986
LOWEST DAILY MEAN	0.84	Sep 17	1.1	Jul 20	0.00	Aug 6 1934
ANNUAL SEVEN-DAY MINIMUM	1.1	Sep 16	1.6	Jul 14	0.00	Aug 12 1934
MAXIMUM PEAK FLOW			558	Feb 25	7610	Jan 2 1997
MAXIMUM PEAK STAGE			5.05	Feb 25	12.72	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	38560		28330		59870	
10 PERCENT EXCEEDS	152		112		212	
50 PERCENT EXCEEDS	31		16		27	
90 PERCENT EXCEEDS	3.8		2.9		5.5	

## 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<sup>2</sup>.

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.

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<sup>3</sup>/s, Jan. 2, 1997, gage height, 25.60 ft, present datum; minimum observed, 5 ft<sup>3</sup>/s, Aug. 13–15, 17, 18, 1904.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	555	474	567	1140	752	1070	1030	393	762	574	595	72
2	589	475	587	1290	681	1070	1010	390	725	674	592	666
3	594	296	584	1060	764	1000	995	392	689	566	609	476
4	628	234	590	929	872	960	1040	418	1000	601	615	569
5	596	98	613	878	808	713	976	392	1050	554	608	630
6	636	224	589	715	630	682	848	353	1120	516	580	579
7	619	291	862	782	664	702	814	255	1110	569	591	526
8	588	479	827	800	696	833	805	215	1010	589	622	552
9	591	614	617	803	678	988	896	286	1110	554	595	563
10	577	543	640	811	625	1180	969	281	1100	527	559	585
11	600	619	747	839	596	1350	979	387	926	548	595	523
12	607	651	667	832	618	1370	957	412	967	626	557	551
13	581	587	681	839	612	1340	977	314	938	457	588	569
14	597	616	772	839	414	1360	963	189	1000	616	577	577
15	582	627	684	767	345	1480	965	250	852	515	468	519
16	594	655	620	824	370	1530	972	255	740	460	640	577
17	581	599	519	823	848	1520	877	340	711	543	426	531
18	571	619	553	814	928	1530	776	334	685	494	64	543
19	545	596	671	795	1010	1620	773	307	640	575	597	657
20	523	626	762	796	1040	1560	779	302	642	568	559	652
21	550	595	814	803	947	1590	864	293	699	389	582	96
22	540	480	805	741	891	1660	827	294	695	501	497	84
23	525	539	733	755	869	1740	804	387	528	536	598	78
24	514	601	831	738	685	1590	326	642	271	538	556	242
25	520	600	1500	743	1010	1480	351	669	514	641	553	589
26	517	598	1110	799	2190	1470	365	913	561	425	500	615
27	533	606	931	842	1770	1300	358	702	620	110	544	606
28	525	624	861	806	1350	1250	386	808	590	80	556	589
29	483	632	868	769	1180	1240	389	768	526	89	543	644
30	537	602	946	732	---	1080	364	878	587	584	430	532
31	519	---	894	718	---	1020	---	900	---	632	79	---
TOTAL	17517	15800	23445	25822	24843	39278	23435	13719	23368	15651	16475	14992
MEAN	565	527	756	833	857	1267	781	443	779	505	531	500
MAX	636	655	1500	1290	2190	1740	1040	913	1120	674	640	666
MIN	483	98	519	715	345	682	326	189	271	80	64	72
AC-FT	34740	31340	46500	51220	49280	77910	46480	27210	46350	31040	32680	29740

## SAN JOAQUIN RIVER BASIN

## 11319500 MOKELUMNE RIVER NEAR MOKELUMNE HILL, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	514	581	762	922	1044	1172	1357	1870	1786	738	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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1928 - 2004	
ANNUAL TOTAL	328380		254345			
ANNUAL MEAN	900		695		984	
HIGHEST ANNUAL MEAN					2511	
LOWEST ANNUAL MEAN					208	
HIGHEST DAILY MEAN	4320	Jun 4	2190	Feb 26	31300	Jan 2 1997
LOWEST DAILY MEAN	91	Aug 14	64	Aug 18	6.6	Oct 2 1977
ANNUAL SEVEN-DAY MINIMUM	299	Nov 1	282	May 14	7.0	Sep 28 1977
MAXIMUM PEAK FLOW			2510	Feb 26	41300	Jan 2 1997
MAXIMUM PEAK STAGE			10.51	Feb 26	25.60	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	651300		504500		713100	
10 PERCENT EXCEEDS	1670		1050		2130	
50 PERCENT EXCEEDS	711		618		623	
90 PERCENT EXCEEDS	515		365		248	



## 11323500 MOKELUMNE RIVER BELOW CAMANCHE DAM, CA

LOCATION.—Lat 38°13'14", long 121°02'19", in NW 1/4 NW 1/4 sec.7, T.4 N., R.9 E., San Joaquin County, Hydrologic Unit 18040005, on left bank, 0.7 mi downstream from Murphy Creek, 1.0 mi downstream from Camanche Dam, and 3.4 mi northeast of Clements.

DRAINAGE AREA.—627 mi<sup>2</sup>.

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.—Water-stage recorder. Datum of gage is 82.71 ft above NGVD of 1929. Oct. 1, 1999, to September 2001, and Oct. 1, 2002, to September 2003, published data from ultrasonic flowmeters on outlet pipes at Camanche 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. 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<sup>3</sup>/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<sup>3</sup>/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<sup>3</sup>/s, Feb. 19, 1986, gage height, 11.21 ft; minimum daily, 23 ft<sup>3</sup>/s, Oct. 6, 1977.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	358	352	351	413	358	368	353	783	583	467	377	328
2	358	351	352	386	361	375	355	914	530	384	365	326
3	358	358	351	360	364	365	356	1040	525	384	372	325
4	362	357	352	355	367	364	352	1120	524	389	376	326
5	364	345	351	351	367	363	352	1510	527	389	357	315
6	364	345	352	352	364	364	353	1390	527	378	358	317
7	364	345	352	352	364	364	354	1260	528	365	358	306
8	364	340	353	352	364	361	355	1110	518	364	358	290
9	364	340	352	351	364	361	355	1010	513	364	358	291
10	364	344	358	351	364	363	351	920	513	364	358	291
11	364	348	357	351	368	361	351	817	505	364	357	289
12	358	351	352	354	364	358	368	742	503	364	356	289
13	358	351	359	356	365	358	516	704	507	364	358	289
14	359	358	358	352	366	358	514	683	507	362	358	285
15	359	357	354	352	368	356	530	665	516	362	358	283
16	358	353	352	351	364	356	546	660	542	363	356	283
17	358	355	354	351	359	357	547	656	553	362	354	267
18	358	357	354	351	410	358	547	651	549	358	351	265
19	358	357	353	351	375	354	547	641	547	360	345	266
20	358	358	357	356	362	352	548	633	547	359	351	258
21	352	358	351	358	358	351	548	633	539	368	345	251
22	351	358	356	358	360	355	550	628	533	376	345	229
23	352	358	352	358	358	357	553	633	534	374	345	229
24	356	358	363	358	358	354	550	632	535	371	344	227
25	358	358	372	358	402	354	547	632	533	370	345	224
26	358	354	362	358	482	351	572	635	533	371	343	217
27	359	351	359	358	422	351	601	635	536	374	345	221
28	358	351	354	358	372	351	601	662	536	377	339	225
29	357	351	361	358	368	353	599	659	539	390	339	223
30	351	352	356	358	---	354	787	663	539	389	343	288
31	353	---	344	355	---	352	---	664	---	388	337	---
TOTAL	11113	10571	11004	11083	10818	11099	14458	24985	15921	11614	10951	8223
MEAN	358	352	355	358	373	358	482	806	531	375	353	274
MAX	364	358	372	413	482	375	787	1510	583	467	377	328
MIN	351	340	344	351	358	351	351	628	503	358	337	217
AC-FT	22040	20970	21830	21980	21460	22010	28680	49560	31580	23040	21720	16310



## 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<sup>3</sup>/s, July 8, 1953; no flow at times in each year. Lowest daily mean, -64 ft<sup>3</sup>/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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	164	121	0.00	0.00	0.00	0.00	0.00	145	148	190	211	177
2	152	118	0.00	0.00	0.00	0.00	0.00	141	151	192	208	173
3	139	104	0.00	0.00	0.00	0.00	0.00	139	159	190	211	167
4	136	23	0.00	0.00	0.00	0.00	0.00	133	164	189	214	170
5	134	0.00	0.00	0.00	0.00	0.00	0.00	128	166	190	213	171
6	133	0.00	0.00	0.00	0.00	0.00	0.00	138	168	191	204	168
7	137	0.00	0.00	0.00	0.00	0.00	0.00	152	169	192	198	170
8	145	0.00	0.00	0.00	0.00	0.00	0.00	150	170	195	191	168
9	146	0.00	0.00	0.00	0.00	0.00	0.00	144	170	200	192	162
10	140	0.00	0.00	0.00	0.00	0.00	0.00	142	168	202	189	158
11	148	0.00	0.00	0.00	0.00	0.00	0.00	141	166	205	192	156
12	146	0.00	0.00	0.00	0.00	0.00	0.00	141	166	202	192	152
13	142	0.00	0.00	0.00	0.00	0.00	0.00	149	163	200	189	157
14	142	0.00	0.00	0.00	0.00	0.00	0.00	155	164	197	189	159
15	144	0.00	0.00	0.00	0.00	0.00	0.00	149	164	195	190	154
16	146	0.00	0.00	0.00	0.00	0.00	0.00	143	178	197	187	138
17	145	0.00	0.00	0.00	0.00	0.00	0.00	143	186	199	182	131
18	137	0.00	0.00	0.00	0.00	0.00	52	143	184	197	185	136
19	139	0.00	0.00	0.00	0.00	0.00	97	142	187	199	185	144
20	141	0.00	0.00	0.00	0.00	0.00	122	146	184	199	184	154
21	138	0.00	0.00	0.00	0.00	0.00	130	147	182	193	186	155
22	138	0.00	0.00	0.00	0.00	0.00	133	142	183	194	185	146
23	133	0.00	0.00	0.00	0.00	0.00	138	139	187	193	184	133
24	138	0.00	0.00	0.00	0.00	0.00	142	133	191	193	187	128
25	140	0.00	0.00	0.00	0.00	0.00	144	133	192	197	190	127
26	140	0.00	0.00	0.00	0.00	0.00	141	130	190	208	192	125
27	141	0.00	0.00	0.00	0.00	0.00	143	138	189	210	186	124
28	130	0.00	0.00	0.00	0.00	0.00	146	143	190	209	185	124
29	123	0.00	0.00	0.00	0.00	0.00	145	147	189	212	182	124
30	119	0.00	0.00	0.00	---	0.00	148	144	192	215	185	122
31	117	---	0.00	0.00	---	0.00	---	144	---	214	183	---
TOTAL	4313	366.00	0.00	0.00	0.00	0.00	1681.00	4404	5260	6159	5951	4473
MEAN	139	12.2	0.00	0.00	0.00	0.00	56.0	142	175	199	192	149
MAX	164	121	0.00	0.00	0.00	0.00	148	155	192	215	214	177
MIN	117	0.00	0.00	0.00	0.00	0.00	0.00	128	148	189	182	122
AC-FT	8550	726	0.00	0.00	0.00	0.00	3330	8740	10430	12220	11800	8870

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 2004, BY WATER YEAR (WY)

	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	106	23.1	4.29	0.22	0.18	21.2	109	203	254	267	248	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	1953	1953	1953	1948																																																																			
MIN	0.00	-0.14	0.00	0.00	0.00	0.00	0.00	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 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1926 - 2004
ANNUAL TOTAL	30539.00	32607.00	
ANNUAL MEAN	83.7	89.1	119
HIGHEST ANNUAL MEAN			206
LOWEST ANNUAL MEAN			49.2
HIGHEST DAILY MEAN	196	Jul 24	215
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
ANNUAL RUNOFF (AC-FT)	60570	64680	86330
10 PERCENT EXCEEDS	174	192	306
50 PERCENT EXCEEDS	78	129	98
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<sup>2</sup>.

PERIOD OF RECORD.—May 1924 to September 1994 (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<sup>3</sup>/s, Nov. 22, 1950, gage height, 29.58 ft, from rating curve extended above 6,200 ft<sup>3</sup>/s, on basis of contracted-opening measurement of peak flow; minimum daily, 0.23 ft<sup>3</sup>/s, Nov. 15, 1977. Maximum discharge since construction of Camanche Dam in 1963, 5,340 ft<sup>3</sup>/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 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	126	276	357	284	306	289	428	363	181	43	29
2	116	128	275	360	306	299	292	456	281	92	37	34
3	117	182	271	305	301	293	290	591	256	79	34	36
4	115	574	272	286	290	289	287	718	244	69	34	34
5	119	419	276	280	286	286	290	901	233	74	33	28
6	120	297	278	278	286	286	291	981	232	69	33	28
7	118	297	283	282	287	284	288	944	239	49	32	28
8	119	292	273	279	286	282	287	854	242	37	30	28
9	113	324	272	275	287	281	285	772	228	33	30	28
10	114	285	302	274	286	283	282	676	230	31	30	28
11	114	280	303	272	289	283	285	595	233	30	38	28
12	113	279	277	300	291	284	288	528	223	34	46	27
13	114	277	277	275	290	284	305	430	226	33	46	27
14	115	282	294	276	290	284	298	430	222	33	46	28
15	121	285	277	276	290	285	271	423	212	32	43	26
16	119	279	273	274	315	283	262	418	213	32	33	26
17	114	276	272	273	293	285	264	409	215	31	34	28
18	113	274	272	273	351	284	260	409	222	30	37	28
19	113	273	277	276	328	284	259	405	223	29	33	30
20	116	276	282	277	300	285	257	383	228	28	29	30
21	115	276	276	276	292	284	251	376	234	28	29	29
22	112	276	272	278	295	286	251	379	224	30	29	30
23	113	278	280	278	295	287	257	383	220	57	30	30
24	116	278	301	282	288	289	253	386	218	49	30	30
25	122	277	297	280	321	293	249	386	216	37	30	31
26	120	278	278	279	376	297	248	390	211	38	29	32
27	122	274	274	284	388	288	263	365	208	33	30	30
28	137	274	274	285	326	289	271	384	214	32	29	30
29	135	272	310	283	301	288	270	390	213	32	30	36
30	127	275	305	285	---	289	313	396	215	42	30	54
31	124	---	283	283	---	291	---	399	---	52	29	---
TOTAL	3655	8463	8732	8841	8818	8911	8256	15985	6938	1456	1046	911
MEAN	118	282	282	285	304	287	275	516	231	47.0	33.7	30.4
MAX	137	574	310	360	388	306	313	981	363	181	46	54
MIN	109	126	271	272	284	281	248	365	208	28	29	26
AC-FT	7250	16790	17320	17540	17490	17670	16380	31710	13760	2890	2070	1810

## 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 - 2004, BY WATER YEAR (WY)

	386	426	442	744	878	828	659	647	545	365	258	251
MEAN	386	426	442	744	878	828	659	647	545	365	258	251
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 2003 CALENDAR YEAR

## FOR 2004 WATER YEAR

## WATER YEARS 1965 - 2004

ANNUAL TOTAL	112978	82012	
ANNUAL MEAN	310	224	534
HIGHEST ANNUAL MEAN			2170 1983
LOWEST ANNUAL MEAN			21.8 1977
HIGHEST DAILY MEAN	1570 May 31	981 May 6	5240 Mar 8 1986
LOWEST DAILY MEAN	69 Sep 22	26 Sep 15	0.23 Nov 15 1977
ANNUAL SEVEN-DAY MINIMUM	75 Sep 19	27 Sep 10	0.24 Nov 12 1977
MAXIMUM PEAK FLOW		1220 Nov 4	5340 Mar 8 1986
MAXIMUM PEAK STAGE		10.68 Nov 4	23.31 Jan 9 1997
ANNUAL RUNOFF (AC-FT)	224100	162700	386800
10 PERCENT EXCEEDS	627	361	1530
50 PERCENT EXCEEDS	211	274	211
90 PERCENT EXCEEDS	118	30	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<sup>2</sup>.

PERIOD OF RECORD.—February to May 1924 (published as "near Pleasant Valley"), October 1954 to September 2004 (discontinued).

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<sup>3</sup>/s, Jan. 2, 1997, gage height, 20.30 ft, from rating curve extended above 5,000 ft<sup>3</sup>/s; no flow Aug. 7–18, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	5.0	5.4	31	8.9	31	97	20	5.5	8.1	5.9	4.9
2	4.9	5.3	5.5	32	12	31	89	21	5.5	8.1	6.0	4.9
3	4.7	6.7	5.4	23	19	27	80	20	5.3	8.0	5.7	4.7
4	4.6	6.4	5.4	17	18	24	76	20	5.2	7.8	5.8	4.7
5	4.6	5.6	6.2	14	15	21	74	20	5.1	7.6	5.7	4.7
6	4.6	5.5	7.9	12	14	19	75	20	5.8	7.6	5.7	4.7
7	4.6	5.9	22	14	16	18	74	18	6.7	7.8	5.6	4.6
8	4.6	5.9	8.2	14	14	17	70	16	7.8	7.8	5.5	4.6
9	4.6	12	6.4	13	13	16	71	13	8.3	7.8	5.5	4.6
10	4.6	6.4	15	12	12	14	68	9.9	8.3	7.8	5.4	4.5
11	4.5	5.7	22	11	11	13	63	10	8.2	7.8	5.2	4.5
12	4.4	5.4	12	10	10	12	59	8.5	8.1	7.9	5.1	4.6
13	4.4	5.3	25	9.8	9.7	12	56	7.2	8.1	7.8	5.0	4.6
14	4.4	5.5	28	9.4	9.3	11	55	6.6	8.1	7.5	5.0	4.7
15	4.3	8.1	17	8.9	9.1	11	53	6.3	8.1	7.5	5.0	4.8
16	4.2	7.6	10	8.7	e22	9.5	49	6.2	8.0	7.4	5.1	4.8
17	4.2	6.0	8.2	8.4	e50	10	43	6.2	e8.0	7.4	5.0	4.8
18	4.3	5.8	8.8	8.2	e43	9.4	40	6.1	e8.0	7.4	5.0	4.9
19	4.4	5.5	7.8	8.1	29	8.7	37	6.1	e8.0	7.2	5.0	5.4
20	4.4	5.4	9.3	7.9	21	9.3	42	6.0	e8.1	7.2	5.1	6.0
21	4.4	5.3	13	7.7	18	10	46	6.0	e8.1	7.2	5.1	5.9
22	4.4	5.3	10	7.6	17	9.7	47	6.0	e8.1	7.1	5.1	5.7
23	4.4	5.3	8.8	7.5	17	9.2	42	6.0	e8.1	7.1	5.1	5.5
24	4.4	5.3	16	8.2	18	9.2	35	6.0	8.1	6.7	5.2	5.5
25	4.4	5.3	34	8.6	35	22	31	5.9	8.1	6.6	5.2	5.4
26	4.4	5.3	20	7.9	87	135	29	5.8	8.1	6.5	5.2	5.4
27	4.3	5.3	13	9.2	60	135	28	5.7	8.1	6.4	5.2	5.3
28	4.2	5.3	11	16	40	116	29	6.2	8.1	6.4	5.1	5.3
29	4.2	5.3	13	10	30	103	31	6.0	8.2	6.1	5.0	5.3
30	4.1	5.3	19	9.8	---	98	27	5.8	8.2	5.9	4.9	5.4
31	4.3	---	15	9.7	---	98	---	5.6	---	5.9	4.9	---
TOTAL	137.7	178.0	408.3	374.6	678.0	1069.0	1616	312.1	225.4	225.4	163.3	150.7
MEAN	4.44	5.93	13.2	12.1	23.4	34.5	53.9	10.1	7.51	7.27	5.27	5.02
MAX	4.9	12	34	32	87	135	97	21	8.3	8.1	6.0	6.0
MIN	4.1	5.0	5.4	7.5	8.9	8.7	27	5.6	5.1	5.9	4.9	4.5
AC-FT	273	353	810	743	1340	2120	3210	619	447	447	324	299
a	-1666	-562	+1042	+1327	+4056	+5262	-72	-450	-2028	-2718	-2902	-2388
b	1966	962	1115	847	734	1111	1543	2386	2927	3454	3588	2981
c	126	14	8	6	5	91	116	179	224	269	252	206

e Estimated.

a Change in contents, in acre-feet, in Jenkinson Lake.

b Diversion, in acre-feet, from Jenkinson Lake provided by El Dorado Irrigation District.

c Total evaporation, in acre-feet, from Jenkinson Lake provided by El Dorado Irrigation District; not reviewed by U.S. Geological Survey.

## 11333000 CAMP CREEK NEAR SOMERSET, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.94	8.59	41.3	88.1	113	134	145	109	27.1	11.1	6.94	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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1955 - 2004	
ANNUAL TOTAL	12159.1		5538.5			
ANNUAL MEAN	33.3		15.1		57.8	
ANNUAL MEAN a	71.5		48.2		86.2	
HIGHEST ANNUAL MEAN					215	1983
LOWEST ANNUAL MEAN					1.89	1977
HIGHEST DAILY MEAN	481	May 4	135	Mar 26	10700	Jan 2 1997
LOWEST DAILY MEAN	4.1	Oct 30	4.1	Oct 30	0.00	Aug 7 1977
ANNUAL SEVEN-DAY MINIMUM	4.3	Oct 25	4.3	Oct 25	0.00	Aug 7 1977
MAXIMUM PEAK FLOW			151		Mar 26	22400
MAXIMUM PEAK STAGE			3.54		Mar 26	20.30
ANNUAL RUNOFF (AC-FT)	24120		10990		41880	
ANNUAL RUNOFF (AC-FT) a	51740		35000		62430	
10 PERCENT EXCEEDS	80		34		168	
50 PERCENT EXCEEDS	7.0		7.8		8.2	
90 PERCENT EXCEEDS	4.8		4.7		3.1	

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<sup>2</sup>.

## 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<sup>3</sup>/s, Jan. 2, 1997, gage height, 18.54 ft, from rating curve extended above 34,000 ft<sup>3</sup>/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<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 4,000 ft<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 26	2345	4,910	7.72

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	11	28	830	213	1040	594	278	88	24	6.9	5.1
2	7.2	11	29	1100	297	1170	571	269	80	24	7.5	4.6
3	7.5	16	29	635	537	865	531	273	74	24	7.7	5.1
4	6.9	25	30	397	485	743	521	277	70	22	7.6	4.2
5	7.4	29	32	295	354	655	519	280	66	23	7.4	3.9
6	8.4	28	33	255	298	594	522	277	62	22	7.2	4.5
7	8.7	26	63	268	299	560	512	263	58	20	7.3	4.6
8	8.4	27	228	257	286	566	494	239	57	18	7.3	4.1
9	7.8	39	117	246	250	611	492	225	56	18	8.2	3.5
10	8.4	58	93	236	235	688	486	212	54	17	8.6	4.2
11	7.8	59	168	226	218	753	469	201	56	16	7.7	3.6
12	7.7	42	185	216	208	761	445	187	53	17	6.1	3.5
13	8.3	34	164	208	199	756	433	172	51	16	5.0	4.1
14	8.5	30	332	204	194	743	419	162	48	15	4.7	4.2
15	8.5	31	348	204	188	760	398	152	45	14	4.0	3.7
16	8.4	35	186	204	201	781	378	147	43	14	4.6	3.5
17	8.7	57	131	203	447	772	353	144	40	13	4.7	3.7
18	8.8	45	106	199	1270	766	329	138	37	13	4.7	3.1
19	8.4	37	95	195	1270	784	306	133	35	12	4.1	3.5
20	8.8	34	99	194	870	762	299	124	34	12	4.3	4.5
21	9.1	32	119	190	707	757	321	121	34	11	3.7	5.8
22	10	30	194	182	620	771	324	115	33	10	3.4	7.0
23	10	28	155	174	577	778	305	109	31	11	4.8	8.0
24	9.3	27	218	172	570	740	285	106	30	10	4.9	9.6
25	9.2	27	784	176	1170	691	279	102	30	9.5	4.8	8.6
26	8.8	27	603	172	3810	833	285	99	27	9.7	4.5	7.8
27	8.6	27	344	224	2900	758	295	97	26	9.1	5.2	8.3
28	8.1	27	245	372	1500	677	308	92	26	8.6	5.2	8.2
29	8.3	27	302	278	1110	629	313	110	25	7.5	5.1	7.7
30	9.0	27	448	235	---	620	300	114	24	8.1	6.1	7.6
31	9.9	---	334	231	---	611	---	97	---	7.4	6.0	---
TOTAL	262.1	953	6242	8978	21283	22995	12086	5315	1393	455.9	179.3	159.8
MEAN	8.45	31.8	201	290	734	742	403	171	46.4	14.7	5.78	5.33
MAX	10	59	784	1100	3810	1170	594	280	88	24	8.6	9.6
MIN	6.9	11	28	172	188	560	279	92	24	7.4	3.4	3.1
AC-FT	520	1890	12380	17810	42210	45610	23970	10540	2760	904	356	317



## 11335000 COSUMNES RIVER AT MICHIGAN BAR, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	30.9	136	425	931	1183	1182	1047	683	250	59.7	20.3	14.6
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	0.00	7.90	18.3	21.4	35.9	43.5	33.7	48.5	4.42	0.10	0.00	0.00
(WY)	1978	1930	1977	1991	1991	1977	1977	1977	1924	1977	1908	1924

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1908 - 2004
ANNUAL TOTAL	106184.2	80302.1	
ANNUAL MEAN	291	219	493
HIGHEST ANNUAL MEAN			1687
LOWEST ANNUAL MEAN			21.8
HIGHEST DAILY MEAN	2920	Apr 13	3810
LOWEST DAILY MEAN	6.8	Sep 27	3.1
ANNUAL SEVEN-DAY MINIMUM	7.4	Sep 25	3.7
MAXIMUM PEAK FLOW			4910
MAXIMUM PEAK STAGE			7.72
ANNUAL RUNOFF (AC-FT)	210600	159300	357300
10 PERCENT EXCEEDS	824	641	1280
50 PERCENT EXCEEDS	154	60	102
90 PERCENT EXCEEDS	8.8	5.2	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: October 2001 to current year.

SPECIFIC CONDUCTANCE: October 2001 to current year.

WATER TEMPERATURE: Water years 1963–79, October 2001 to current year.

SEDIMENT DATA: Water years 1958–74, October 2001 to current year.

PERIOD OF DAILY RECORD.—

pH: December 2001 to November 2002 (discontinued).

SPECIFIC CONDUCTANCE: December 2001 to September 2004 (discontinued).

WATER TEMPERATURE: December 2001 to September 2004 (discontinued).

INSTRUMENTATION.—Water-quality monitor from December 2001 to September 2004.

REMARKS.— Specific conductance and water temperature records are rated excellent, except Dec. 12 to Apr. 28, 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, 43 microsiemens, May 6, 7, 8, 2004.

WATER TEMPERATURE: Maximum recorded, 31.0°C, July 20–22, 2003, July 22, 2004; minimum recorded, 3.0°C, Jan. 18, 20, 24, 30, 31, 2002.

EXTREME FOR CURRENT YEAR.—

SPECIFIC CONDUCTANCE: Maximum recorded, 128 microsiemens, Jan. 28; minimum recorded, 43 microsiemens, May 6, 7, 8.

WATER TEMPERATURE: Maximum recorded, 31.0°C, July 22; minimum recorded, 4.0°C, Jan. 5.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, uS/cm 25 deg C (00095)	Temperature, water, deg C (00010)	Alkalinity, water fltrd Gran, field, mg/L as CaCO <sub>3</sub> (29802)	Chloride, water, fltrd, mg/L (00940)	Sulfate, water, fltrd, mg/L (00945)
OCT										
14...	1020	8.4	758	9.4	7.8	92	16.5	38.0	1.83	2.0
DEC										
19...	1230	95	758	12.2	7.7	91	6.5	26.0	2.99	6.1
JAN										
23...	1000	175	763	9.2	7.6	83	5.0	29.0	2.36	3.9
FEB										
23...	1240	577	760	8.8	7.8	90	12.0	--	2.23	3.4
MAR										
28...	1830	667	759	11.9	7.6	56	13.0	--	1.17	1.7
APR										
28...	1140	296	757	7.8	7.7	52	19.0	--	1.01	1.3
MAY										
28...	1020	91	762	10.4	7.5	58	21.5	--	1.10	1.2
JUN										
23...	1500	31	761	14.1	8.1	61	28.0	--	1.16	1.4
AUG										
05...	1650	7.3	764	10.2	7.7	76	28.5	--	1.82	1.6

Date	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)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L (00665)	Total nitrogen, water unfltrd, by analysis, mg/L (62855)	Total carbon, suspnd total, mg/L (00694)	Inorganic carbon, suspnd total, mg/L (00688)
OCT									
14...	<.04	<.06	<.008	.10	<.006	.020	.22	1.1	<.1
DEC									
19...	<.04	.15	<.008	<.02	<.006	.007	.27	.1	<.1
JAN									
23...	<.04	e.03	<.008	<.02	<.006	.004	.09	.2	<.1
FEB									
23...	<.04	.11	e.006	.14	e.003	.009	.21	.5	<.1
MAR									
28...	<.04	<.06	<.008	<.02	<.006	.009	.08	<.1	<.1
APR									
28...	<.04	<.06	<.008	<.02	<.006	.010	.08	.1	<.1
MAY									
28...	<.04	<.06	<.008	.07	<.006	.011	.06	.1	<.1
JUN									
23...	<.04	<.06	<.008	<.02	<.006	.007	.10	.3	<.1
AUG									
05...	<.04	<.06	<.008	.05	<.006	.012	.21	.5	<.1

< Actual value is known to be less than value shown.

e Estimated.

## 11335000 COSUMNES RIVER AT MICHIGAN BAR, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Organic carbon, suspd sediment total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	2,6-Diethyl-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)
OCT 14...	1.1	2.1	--	--	--	--	--	--	--
DEC 19...	.1	3.6	<.006	<.006	<.006	<.005	<.005	<.007	<.050
JAN 23...	.1	2.3	<.006	<.006	<.006	<.005	<.005	<.007	<.050
FEB 23...	.5	3.2	<.006	<.006	<.006	<.005	<.005	<.007	<.050
MAR 28...	<.1	3.2	<.006	<.006	<.006	<.005	<.005	<.007	<.050
APR 28...	.1	1.8	--	--	--	--	--	--	--
MAY 28...	.1	2.8	--	--	--	--	--	--	--
JUN 23...	.3	1.8	--	--	--	--	--	--	--
AUG 05...	.5	2.8	--	--	--	--	--	--	--

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)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)
OCT 14...	--	--	--	--	--	--	--	--	--
DEC 19...	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012
JAN 23...	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012
FEB 23...	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012
MAR 28...	<.010	<.004	<.041	<.020	<.005	<.006	<.018	<.003	<.012
APR 28...	--	--	--	--	--	--	--	--	--
MAY 28...	--	--	--	--	--	--	--	--	--
JUN 23...	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--

&lt; Actual value is known to be less than value shown.

## SAN JOAQUIN RIVER BASIN

11335000 COSUMNES RIVER AT MICHIGAN BAR, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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)	Desulfinylfipronil amide, wat flt ug/L (62169)	Fipronil sulfide, water, fltrd, ug/L (62167)	Fipronil sulfone, water, fltrd, ug/L (62168)
OCT 14...	--	--	--	--	--	--	--	--	--
DEC 19...	<.005	<.009	<.02	<.004	<.009	<.005	e.002	<.013	<.024
JAN 23...	<.005	<.009	<.02	<.004	<.009	<.005	<.029	<.013	<.024
FEB 23...	<.005	<.009	<.02	<.004	<.009	<.005	<.029	<.013	<.024
MAR 28...	<.005	<.009	<.02	<.004	<.009	<.005	<.029	<.013	<.024
APR 28...	--	--	--	--	--	--	--	--	--
MAY 28...	--	--	--	--	--	--	--	--	--
JUN 23...	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--
Date	Fipronil, water, fltrd, ug/L (62166)	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)	Methylparathion, 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)
OCT 14...	--	--	--	--	--	--	--	--	--
DEC 19...	<.016	<.003	<.004	<.035	<.027	<.015	<.013	<.006	.003
JAN 23...	<.016	<.003	<.004	<.035	<.027	<.100	<.013	<.006	<.003
FEB 23...	<.016	<.003	<.004	<.035	<.027	<.015	<.013	<.006	<.003
MAR 28...	<.016	<.003	<.004	<.035	<.027	<.015	<.013	<.006	<.007
APR 28...	--	--	--	--	--	--	--	--	--
MAY 28...	--	--	--	--	--	--	--	--	--
JUN 23...	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--

&lt; Actual value is known to be less than value shown.

e Estimated.

## 11335000 COSUMNES RIVER AT MICHIGAN BAR, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	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)	Propy- zamide, water, fltrd 0.7u GF ug/L (82676)	Propa- chlor, water, fltrd, ug/L (04024)
OCT									
14...	--	--	--	--	--	--	--	--	--
DEC									
19...	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025
JAN									
23...	<.007	<.003	<.010	<.004	<.022	<.011	<.04	<.004	<.025
FEB									
23...	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025
MAR									
28...	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.025
APR									
28...	--	--	--	--	--	--	--	--	--
MAY									
28...	--	--	--	--	--	--	--	--	--
JUN									
23...	--	--	--	--	--	--	--	--	--
AUG									
05...	--	--	--	--	--	--	--	--	--
Date	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)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)
OCT									
14...	--	--	--	--	--	--	--	--	--
DEC									
19...	<.011	<.02	<.005	<.02	<.034	<.02	<.010	<.002	<.009
JAN									
23...	<.011	<.02	<.005	<.02	<.034	<.02	<.010	<.002	<.009
FEB									
23...	<.011	<.02	.032	<.02	<.034	<.02	<.010	<.002	<.009
MAR									
28...	<.011	<.02	.013	<.02	<.034	<.02	<.010	<.002	<.009
APR									
28...	--	--	--	--	--	--	--	--	--
MAY									
28...	--	--	--	--	--	--	--	--	--
JUN									
23...	--	--	--	--	--	--	--	--	--
AUG									
05...	--	--	--	--	--	--	--	--	--

&lt; Actual value is known to be less than value shown.

## 11335000 COSUMNES RIVER AT MICHIGAN BAR, CA—Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	86	84	88	86	77	76	120	87	114	112	104	88
2	87	83	88	86	77	77	103	97	123	102	98	96
3	87	84	87	86	78	77	104	99	125	111	98	96
4	87	84	88	86	78	78	107	102	125	122	100	95
5	87	84	88	83	79	78	112	107	126	122	106	96
6	87	84	85	81	78	78	111	110	125	120	107	97
7	87	85	82	78	79	78	117	110	124	119	102	92
8	88	84	79	77	78	70	117	111	119	112	94	88
9	88	85	80	78	73	65	111	107	117	114	88	80
10	88	85	80	77	70	63	107	103	125	113	80	70
11	88	85	77	75	82	67	103	100	115	112	71	63
12	88	86	75	74	73	65	100	97	113	110	63	61
13	88	85	75	74	91	72	100	95	111	108	62	59
14	88	85	76	75	93	77	95	93	109	106	60	58
15	88	86	77	76	96	79	93	91	108	105	60	56
16	89	86	77	75	95	85	91	89	112	104	57	53
17	88	85	75	72	88	86	89	86	114	76	53	52
18	88	86	72	72	88	87	87	85	126	67	53	51
19	89	86	74	72	90	88	85	83	100	81	53	50
20	---	---	75	74	96	89	84	82	81	80	51	49
21	---	---	75	74	95	94	83	81	80	79	50	48
22	---	---	75	74	94	83	82	80	83	80	50	47
23	---	---	76	75	84	80	82	79	84	81	48	46
24	---	---	76	75	84	77	83	81	96	81	47	46
25	88	86	76	76	120	74	84	83	105	84	50	46
26	88	86	76	76	74	71	87	83	104	78	59	50
27	88	86	76	76	80	74	89	84	89	81	58	54
28	88	86	77	76	84	80	128	87	90	88	56	54
29	88	87	77	76	91	83	126	119	90	88	56	54
30	88	86	77	77	106	91	125	117	---	---	57	52
31	88	87	---	---	103	98	120	114	---	---	53	52
MONTH	---	---	88	72	120	63	128	79	126	67	107	46
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	53	51	46	45	56	55	69	68	82	80	94	90
2	53	50	47	46	56	55	70	69	83	80	94	91
3	53	50	47	46	56	56	70	69	83	80	94	90
4	51	50	46	45	57	55	70	70	84	81	94	91
5	52	50	45	44	57	56	71	70	85	81	96	91
6	53	49	44	43	58	56	71	70	85	81	97	93
7	50	49	44	43	59	57	71	70	85	82	98	93
8	50	49	44	43	60	58	72	70	85	82	97	94
9	50	49	45	44	60	58	71	70	86	83	98	94
10	50	48	46	45	60	58	72	70	86	83	98	95
11	49	48	46	46	60	59	72	71	87	84	98	94
12	49	47	47	45	61	59	73	71	87	84	99	96
13	49	47	49	47	61	59	73	71	86	84	99	96
14	51	48	50	48	62	60	74	72	87	84	100	96
15	50	48	50	49	62	61	75	72	87	84	101	96
16	50	48	50	49	63	62	75	73	87	84	101	97
17	52	49	50	49	63	62	75	73	87	85	102	98
18	53	51	51	49	63	63	76	74	88	85	102	97
19	54	52	52	51	64	62	77	75	88	85	101	97
20	56	54	52	51	64	63	77	75	89	86	101	98
21	56	55	53	51	65	63	78	76	89	86	102	98
22	57	55	53	52	65	64	79	76	89	86	102	99
23	56	54	54	53	66	64	79	77	89	86	102	99
24	55	53	55	54	66	65	80	77	89	87	102	99
25	55	53	56	55	66	65	80	78	90	87	102	99
26	55	53	57	56	67	65	83	78	90	87	101	98
27	54	51	57	56	67	66	83	79	91	88	100	97
28	52	48	57	56	68	67	81	79	91	88	---	---
29	48	46	57	56	68	68	81	79	92	89	---	---
30	46	45	56	54	69	68	82	79	94	90	---	---
31	---	---	55	54	---	---	82	80	93	90	---	---
MONTH	57	45	57	43	69	55	83	68	94	80	---	---

## 11335000 COSUMNES RIVER AT MICHIGAN BAR, CA—Continued

## TEMPERATURE, WATER, DEGREE C, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	23.5	20.0	14.5	12.5	9.5	9.0	8.5	7.5	7.0	6.5	9.0	8.0
2	23.0	19.5	13.0	12.0	10.5	9.0	8.0	7.0	8.0	7.0	10.0	8.0
3	23.0	19.0	13.0	11.5	11.0	9.5	7.0	6.0	7.5	7.0	9.5	8.0
4	23.0	19.5	12.5	11.0	10.5	9.5	6.5	5.0	8.5	7.0	9.5	7.5
5	23.0	19.0	12.5	11.0	11.0	10.0	5.5	4.0	7.5	6.5	9.5	8.0
6	23.0	19.0	12.0	11.0	11.5	10.5	5.0	4.5	7.5	6.5	10.5	8.5
7	23.0	19.5	13.5	11.5	12.0	11.0	6.5	5.0	8.5	7.0	12.0	9.5
8	22.5	19.0	14.0	12.5	11.5	9.5	8.0	6.5	8.0	6.5	12.5	10.5
9	22.5	19.0	14.0	13.0	9.5	8.5	8.0	7.5	7.5	6.0	13.0	11.0
10	21.0	18.0	13.5	12.0	9.0	8.5	8.0	7.5	7.5	6.0	13.5	11.5
11	20.5	17.0	12.5	11.0	9.5	8.5	8.5	7.5	7.5	6.0	12.5	11.0
12	20.5	17.0	12.5	11.0	9.0	8.0	8.0	7.5	7.5	6.0	12.5	10.5
13	19.5	16.0	13.0	10.5	10.0	8.5	7.5	7.0	7.0	6.5	12.5	10.5
14	19.0	15.5	12.0	11.0	10.5	9.5	7.0	6.5	8.0	6.5	13.0	11.0
15	19.0	15.5	12.0	11.0	9.5	7.5	7.0	6.5	9.0	7.5	13.5	11.5
16	18.5	15.5	12.0	11.0	7.5	6.5	7.0	6.5	9.5	8.5	13.0	11.5
17	18.5	15.5	12.0	11.0	7.0	6.0	7.5	7.0	10.0	9.5	13.0	11.0
18	18.5	15.5	12.0	11.0	7.0	5.5	7.5	7.0	10.5	9.5	13.5	11.5
19	18.5	15.5	12.5	10.5	7.0	6.0	7.0	7.0	9.5	8.0	13.5	12.0
20	---	---	12.5	10.5	8.0	7.0	7.0	6.5	9.0	7.5	13.5	11.5
21	---	---	12.0	10.5	9.0	7.5	7.0	5.5	9.0	8.5	13.5	11.5
22	---	---	10.5	9.0	8.5	7.5	6.5	5.5	9.0	8.5	14.5	12.5
23	---	---	9.0	7.5	8.5	8.0	6.0	5.0	10.0	8.5	14.0	12.5
24	---	---	8.5	7.0	10.0	8.5	6.5	5.5	10.5	9.0	13.5	12.0
25	19.0	16.0	8.0	6.5	9.5	8.0	7.0	6.0	10.5	9.5	12.5	10.5
26	18.5	16.0	8.0	6.5	8.0	7.0	7.0	5.5	9.5	8.5	11.5	10.0
27	18.5	15.5	7.5	6.0	7.0	5.5	8.0	6.5	8.5	7.5	12.5	10.5
28	18.5	15.5	8.0	6.5	5.5	4.5	8.0	7.5	8.0	6.5	13.5	11.0
29	18.0	15.5	8.5	7.5	6.0	4.5	7.5	7.0	8.5	7.0	14.0	12.0
30	16.5	14.5	9.0	8.5	6.5	6.0	7.0	6.5	---	---	13.5	11.5
31	15.0	13.5	---	---	8.0	6.5	7.5	6.0	---	---	13.5	11.0
MONTH	---	---	14.5	6.0	12.0	4.5	8.5	4.0	10.5	6.0	14.5	7.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.5	11.5	19.5	16.5	24.5	21.5	28.0	24.5	29.5	24.5	29.0	23.0
2	13.5	11.0	20.5	17.0	25.5	22.5	28.5	25.0	28.5	24.5	28.5	23.0
3	14.0	11.5	21.5	18.0	25.5	23.0	29.0	25.5	29.0	23.5	26.5	21.5
4	14.5	12.0	21.5	19.0	25.0	23.0	29.5	25.5	29.0	24.0	27.0	21.0
5	14.5	12.0	20.5	18.5	24.5	23.0	29.5	26.0	29.0	24.0	28.0	22.0
6	14.5	12.0	19.5	18.0	25.5	23.5	30.0	26.5	28.5	23.5	27.5	22.5
7	14.5	12.0	20.0	17.0	25.0	24.0	29.5	26.5	29.0	23.5	27.0	22.5
8	15.5	12.5	20.0	17.5	24.5	23.5	29.0	26.0	29.5	24.5	27.5	22.5
9	16.5	13.5	20.0	17.5	24.0	23.0	28.5	25.5	29.5	24.5	28.5	22.5
10	17.0	14.0	19.5	18.0	24.0	23.0	28.5	24.5	29.5	24.5	27.0	22.0
11	16.5	14.0	19.5	17.0	24.5	23.0	28.5	25.0	29.5	25.0	27.5	21.5
12	16.5	14.0	19.5	17.0	24.5	23.5	28.5	25.0	30.0	25.0	27.0	22.5
13	16.5	14.0	20.0	17.5	25.5	24.0	28.5	25.0	30.0	24.5	26.5	21.5
14	16.0	13.5	21.0	18.0	26.0	24.5	28.5	24.5	29.5	24.5	25.5	21.0
15	15.0	14.0	21.5	19.0	27.0	25.0	28.5	24.0	28.5	23.5	26.0	20.5
16	14.0	12.5	22.0	19.0	27.5	25.5	28.5	25.0	29.0	23.5	26.5	21.0
17	14.0	12.0	21.5	19.5	27.5	25.0	29.0	25.0	29.5	23.5	26.0	21.0
18	13.5	11.5	21.5	19.0	27.5	24.5	29.5	25.5	30.0	24.0	22.5	21.0
19	14.0	12.5	22.0	19.0	27.5	24.5	30.0	25.5	30.0	24.5	21.0	19.0
20	14.5	13.0	22.0	19.5	27.5	24.0	30.5	26.0	30.0	24.5	22.0	17.0
21	16.0	13.5	22.0	19.5	28.0	24.5	30.5	26.0	29.5	24.0	22.5	17.5
22	16.0	13.0	22.0	19.5	28.0	24.5	31.0	26.0	27.5	24.0	23.0	18.0
23	16.5	14.0	21.5	19.5	28.0	24.5	30.5	26.0	28.0	24.0	22.5	18.5
24	17.5	14.5	22.0	19.5	28.0	24.5	30.5	26.0	28.5	23.5	22.5	18.5
25	19.0	15.5	22.5	20.0	28.0	24.0	30.5	25.5	28.5	23.0	23.0	18.5
26	20.0	17.0	23.0	20.5	28.0	24.5	30.5	26.0	29.0	23.5	23.0	19.0
27	21.0	17.5	23.0	21.0	28.0	24.5	30.5	26.0	28.0	23.0	23.0	18.5
28	20.0	18.0	22.5	21.0	28.5	25.0	30.0	25.5	29.0	23.5	---	---
29	19.0	17.0	23.0	20.0	28.0	25.0	30.0	24.5	29.0	24.0	---	---
30	19.0	16.5	23.0	20.0	27.5	25.0	30.0	24.5	29.0	23.5	---	---
31	---	---	24.0	21.0	---	---	29.5	24.5	28.5	23.5	---	---
MONTH	21.0	11.0	24.0	16.5	28.5	21.5	31.0	24.0	30.0	23.0	---	---

## SAN JOAQUIN RIVER BASIN

11335000 COSUMNES RIVER AT MICHIGAN BAR, CA—Continued

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)	Suspended sediment, sieve diameter, percent <.063mm (70331)
OCT						
14...SS	1020	8.4	16.5	14	.32	53
DEC						
19...SS	1230	95	6.5	4	1.0	84
JAN						
23...SS	1000	175	5.0	4	1.9	79
FEB						
23...SS	1240	577	12.0	8	12	98
MAR						
28...SS	1830	667	13.0	2	3.6	94
APR						
28...SS	1140	296	19.0	4	3.2	83
MAY						
28...SS	1020	91	21.5	1	.25	50
JUN						
23...SS	1500	31	28.0	1	.08	75
AUG						
05...SS	1650	7.3	28.5	3	.06	54

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Depth at sample location, feet (81903)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Location in X-sect. looking downstrm 1 bank (00009)
APR							
28...*	1315	3.00	7.7	7.7	52	19.0	24.0
28...*	1317	3.00	7.8	7.7	52	19.0	40.0
28...*	1319	3.00	7.6	7.6	52	19.0	56.0
28...*	1321	3.00	7.7	7.6	52	19.2	72.0
28...*	1323	3.00	7.7	7.6	52	19.3	88.0

SS Suspended-sediment data determined from a sample collected and processed according to National Water Quality Assessment (NAWQA) protocol.

\* Instantaneous discharge at time of cross-sectional measurement: 296 ft<sup>3</sup>/s.



## 11335655 DEER CREEK NEAR CAMERON PARK, CA

LOCATION.—Lat 38°37'26", long 120°59'37", in SW 1/4 NE 1/4 sec.21, T.9 N., R.9 E., El Dorado County, Hydrologic Unit 18040013, Tahoe National Forest, on right bank, 0.5 mi upstream of Marble Creek, and 3.0 mi south of Cameron Park.

DRAINAGE AREA.—10.3 mi<sup>2</sup>.

PERIOD OF RECORD.—June 2004 to September 2004.

GAGE.—Water-stage recorder. Elevation of gage is 720 ft above NGVD of 1929, from topographical map.

REMARKS.—Records poor. Flow is affected by effluent from the wastewater treatment plant upstream.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9.4 ft<sup>3</sup>/s, June 5, 2004, gage height, 3.57 ft; minimum daily, 1.7 ft<sup>3</sup>/s, Aug. 20, 2004.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	e4.7	2.3	2.3	2.0
2	---	---	---	---	---	---	---	---	3.8	2.4	2.2	2.0
3	---	---	---	---	---	---	---	---	4.1	2.3	2.3	1.9
4	---	---	---	---	---	---	---	---	4.8	2.2	2.1	2.3
5	---	---	---	---	---	---	---	---	4.4	2.2	2.1	2.2
6	---	---	---	---	---	---	---	---	3.4	2.3	2.1	2.1
7	---	---	---	---	---	---	---	---	3.8	2.3	2.1	2.0
8	---	---	---	---	---	---	---	---	5.0	2.2	2.0	2.2
9	---	---	---	---	---	---	---	---	3.7	2.3	2.1	2.2
10	---	---	---	---	---	---	---	---	3.5	2.4	2.1	2.0
11	---	---	---	---	---	---	---	---	3.0	2.2	1.9	e2.4
12	---	---	---	---	---	---	---	---	3.4	2.2	2.0	2.1
13	---	---	---	---	---	---	---	---	3.3	2.2	2.0	e2.4
14	---	---	---	---	---	---	---	---	3.7	2.3	1.9	e2.1
15	---	---	---	---	---	---	---	---	2.9	2.4	2.1	e2.4
16	---	---	---	---	---	---	---	---	2.6	2.5	2.1	3.6
17	---	---	---	---	---	---	---	---	3.1	2.5	2.0	3.9
18	---	---	---	---	---	---	---	---	2.9	2.5	1.9	4.0
19	---	---	---	---	---	---	---	---	3.2	2.3	1.9	e6.4
20	---	---	---	---	---	---	---	---	2.8	2.2	1.7	e6.0
21	---	---	---	---	---	---	---	---	3.1	2.2	1.9	e5.3
22	---	---	---	---	---	---	---	---	2.7	2.3	2.0	e4.8
23	---	---	---	---	---	---	---	---	2.4	2.4	2.1	e5.1
24	---	---	---	---	---	---	---	---	2.6	2.4	2.0	e4.0
25	---	---	---	---	---	---	---	---	2.4	2.4	2.0	e4.3
26	---	---	---	---	---	---	---	---	2.4	2.3	2.0	e4.8
27	---	---	---	---	---	---	---	---	2.4	2.3	2.1	e4.2
28	---	---	---	---	---	---	---	---	2.3	2.2	2.1	e4.1
29	---	---	---	---	---	---	---	---	2.4	2.4	2.0	e5.6
30	---	---	---	---	---	---	---	---	2.2	2.3	2.0	e4.4
31	---	---	---	---	---	---	---	---	---	2.3	1.9	---
TOTAL	---	---	---	---	---	---	---	---	97.0	71.7	63.0	102.8
MEAN	---	---	---	---	---	---	---	---	3.23	2.31	2.03	3.43
MAX	---	---	---	---	---	---	---	---	5.0	2.5	2.3	6.4
MIN	---	---	---	---	---	---	---	---	2.2	2.2	1.7	1.9
AC-FT	---	---	---	---	---	---	---	---	192	142	125	204

e Estimated.

## 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<sup>2</sup>.

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. 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<sup>3</sup>/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<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 29	1915	626	4.74	Feb. 18	0600	1,240	6.63
Jan. 1	1200	877	5.55	Feb. 25	1415	1,290	6.76

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	5.3	5.7	342	9.1	38	5.1	5.7	4.9	6.6	5.5	6.4
2	4.9	4.2	25	87	53	35	4.8	5.7	5.3	7.2	5.5	6.1
3	4.4	4.9	10	16	49	18	5.3	5.6	5.4	6.7	5.4	5.2
4	4.4	11	7.0	8.8	23	14	5.6	5.5	5.1	6.8	5.8	4.6
5	4.5	6.0	7.8	6.1	13	12	5.5	5.9	5.0	6.9	6.5	5.6
6	4.7	5.1	27	5.8	15	10	5.5	5.6	4.8	7.2	5.7	5.8
7	4.5	12	22	43	18	8.4	5.4	5.4	4.5	6.9	6.0	5.7
8	4.6	46	9.3	12	12	7.7	5.7	4.2	4.3	6.2	6.4	6.4
9	4.5	45	6.1	10	10	8.8	6.1	4.6	4.4	6.5	6.2	6.6
10	4.4	11	31	7.6	12	8.9	6.4	4.4	4.9	6.4	6.1	6.1
11	4.4	6.3	51	5.9	12	8.5	7.2	6.0	4.4	6.6	6.2	6.7
12	4.3	5.8	13	5.6	12	8.1	7.2	5.3	4.3	6.2	7.7	6.6
13	4.5	5.9	23	7.9	12	7.4	7.8	4.3	4.3	5.5	6.7	6.2
14	4.7	12	72	7.4	11	7.4	8.0	4.9	4.3	6.0	6.7	6.1
15	5.8	18	18	6.2	11	7.6	8.5	4.7	4.6	5.6	6.5	5.2
16	5.6	6.2	8.9	5.9	64	6.8	8.4	5.0	4.7	5.2	6.2	4.5
17	5.1	7.2	6.2	9.0	58	7.3	9.5	5.1	4.9	5.4	5.8	4.3
18	5.1	5.9	9.2	7.5	614	7.5	7.6	5.4	4.7	5.3	6.6	3.0
19	5.5	4.8	36	6.8	113	6.4	8.3	4.2	5.0	5.4	6.7	75
20	6.1	4.7	36	6.9	45	6.5	6.9	3.9	5.4	5.0	6.4	31
21	6.0	4.8	48	6.5	22	7.9	7.2	3.7	5.6	5.2	6.1	8.9
22	5.8	4.5	14	6.4	19	7.0	6.3	3.7	5.9	5.4	5.7	6.5
23	8.8	4.5	34	6.8	15	6.8	5.8	3.8	6.2	5.5	5.5	7.8
24	5.9	4.5	104	20	20	7.0	6.1	4.8	5.9	5.6	5.3	6.9
25	6.8	4.6	31	14	384	19	7.0	4.9	6.4	6.0	5.2	7.9
26	6.6	4.9	10	12	350	11	7.6	5.6	6.6	6.0	5.5	6.9
27	7.1	4.5	6.5	37	120	12	8.6	6.0	6.9	6.0	5.3	6.8
28	6.9	4.5	5.7	19	40	7.5	8.0	11	6.4	5.8	5.8	5.9
29	6.4	4.6	243	14	19	7.0	6.0	5.0	6.7	5.7	5.3	5.7
30	6.2	6.1	84	15	---	6.6	6.1	5.1	6.3	6.0	5.1	6.1
31	24	---	15	11	---	5.7	---	5.1	---	5.9	4.9	---
TOTAL	187.3	318.9	1070.7	769.1	2155.1	331.8	203.5	160.1	158.1	186.7	184.3	276.5
MEAN	6.04	10.6	34.5	24.8	74.3	10.7	6.78	5.16	5.27	6.02	5.95	9.22
MAX	24	49	243	342	614	38	9.5	11	6.9	7.2	7.7	75
MIN	4.3	4.2	5.7	5.6	9.1	5.7	4.8	3.7	4.3	5.0	4.9	3.0
AC-FT	372	633	2120	1530	4270	658	404	318	314	370	366	548

## 11336580 MORRISON CREEK NEAR SACRAMENTO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.84	19.8	27.5	55.6	68.4	30.2	14.6	6.60	5.70	6.12	5.90	6.23
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 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1959 - 2004	
ANNUAL TOTAL	4346.8		6002.1			
ANNUAL MEAN	11.9		16.4		21.1	
HIGHEST ANNUAL MEAN					59.6 1983	
LOWEST ANNUAL MEAN					4.76 1977	
HIGHEST DAILY MEAN	243	Dec 29	614	Feb 18	1940	Jan 5 1982
LOWEST DAILY MEAN	1.5	Feb 6	3.0	Sep 18	0.00	Jul 12 1960
ANNUAL SEVEN-DAY MINIMUM	2.0	Sep 8	4.1	May 19	0.07	Jul 11 1960
MAXIMUM PEAK FLOW			1290	Feb 25	2730	Feb 17 1986
MAXIMUM PEAK STAGE			6.76	Feb 25	10.40	Feb 17 1986
ANNUAL RUNOFF (AC-FT)	8620		11910		15280	
10 PERCENT EXCEEDS	21		24		31	
50 PERCENT EXCEEDS	6.4		6.4		5.9	
90 PERCENT EXCEEDS	4.5		4.6		3.1	

## 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<sup>2</sup>.

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 fair except during period of beaver activity, Oct. 1, 2004, to Feb. 10, 2004, and discharges below 1 ft<sup>3</sup>/s, which are poor. 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<sup>3</sup>/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<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 18	1715	543	5.41

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	0.00	0.17	118	2.5	28	0.18	0.28	0.43	0.40	0.93	1.9
2	0.89	0.01	4.1	152	9.5	54	0.12	0.34	0.32	0.44	0.91	1.7
3	0.47	2.0	1.8	31	13	34	0.10	0.37	0.18	0.93	0.93	1.3
4	0.62	0.95	0.85	16	14	18	0.14	0.37	0.18	0.99	0.79	1.1
5	0.79	1.1	0.54	8.1	7.2	8.9	0.30	0.39	0.27	1.1	0.66	1.2
6	1.0	0.43	0.31	6.7	3.4	4.4	0.36	0.48	0.35	0.95	0.62	1.2
7	0.73	0.15	2.9	10	3.5	2.0	0.31	0.36	0.37	0.88	1.0	1.2
8	0.40	5.3	2.7	16	2.3	1.4	0.24	0.32	0.42	0.81	2.8	1.2
9	0.40	19	1.6	10	2.2	1.1	0.73	0.21	0.25	1.0	2.0	1.5
10	0.28	11	4.6	6.5	e2.2	1.2	1.0	0.23	0.20	1.9	2.3	1.5
11	0.17	8.6	14	4.7	1.5	1.2	0.46	0.29	0.25	2.7	1.7	1.4
12	0.47	1.7	3.8	3.4	0.88	1.8	0.41	0.28	0.47	2.2	1.2	1.6
13	0.93	0.15	3.9	2.6	0.79	1.2	0.74	0.16	1.0	1.9	1.1	1.5
14	0.55	0.10	16	3.0	0.71	1.0	1.3	0.14	0.73	2.7	1.2	1.4
15	0.55	0.70	13	2.3	0.65	0.84	1.0	0.14	0.59	1.9	1.1	1.3
16	0.52	2.7	3.9	1.7	5.6	0.53	0.49	0.34	0.31	1.6	1.3	1.2
17	0.43	2.1	2.2	1.6	4.1	0.37	0.38	0.32	0.19	1.9	2.0	1.1
18	0.78	2.3	1.1	1.2	384	0.38	1.9	0.33	0.21	1.8	3.1	1.3
19	0.71	1.3	0.34	0.94	160	0.30	0.56	0.33	0.54	1.5	2.4	6.5
20	0.81	0.43	19	0.86	40	0.32	0.45	0.31	0.96	1.3	2.2	5.8
21	0.34	0.21	28	0.50	13	0.28	0.37	0.27	0.54	1.3	1.9	2.2
22	0.33	0.15	9.6	0.43	6.5	0.50	0.30	0.20	0.38	1.5	1.5	1.2
23	0.25	0.08	8.4	0.52	5.6	0.49	0.15	0.16	0.38	1.6	1.4	0.80
24	0.16	0.03	34	1.2	5.9	0.42	0.11	0.15	0.35	1.7	1.5	1.0
25	0.21	0.00	21	1.7	95	1.00	0.19	0.14	0.34	1.2	3.0	1.0
26	0.18	0.00	9.3	1.4	361	5.5	0.29	0.27	0.49	1.2	2.5	1.3
27	0.45	0.02	9.0	1.4	142	1.4	0.27	0.63	0.58	1.0	2.5	1.1
28	0.30	0.02	4.1	6.3	51	0.59	0.25	0.67	0.71	1.0	2.4	0.98
29	0.14	0.00	34	5.9	27	0.36	0.32	0.56	0.59	1.2	2.2	1.0
30	0.03	0.00	47	4.9	---	0.39	0.25	0.19	0.46	1.2	2.2	0.95
31	0.00	---	25	3.5	---	0.30	---	0.24	---	1.0	2.0	---
TOTAL	15.29	60.53	326.21	424.35	1365.03	172.17	13.67	9.47	13.04	42.80	53.34	48.43
MEAN	0.49	2.02	10.5	13.7	47.1	5.55	0.46	0.31	0.43	1.38	1.72	1.61
MAX	1.4	19	47	152	384	54	1.9	0.67	1.0	2.7	3.1	6.5
MIN	0.00	0.00	0.17	0.43	0.65	0.28	0.10	0.14	0.18	0.40	0.62	0.80
AC-FT	30	120	647	842	2710	341	27	19	26	85	106	96

e Estimated.

## 11336585 LAGUNA CREEK NEAR ELK GROVE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.45	1.47	18.6	46.5	76.6	9.14	2.74	0.81	0.68	0.93	1.08	0.86
MAX	0.79	4.46	92.1	206	263	21.9	8.91	2.24	3.08	2.08	1.88	1.61
(WY)	2000	2003	1997	1997	1998	1996	1998	1998	2002	2001	2001	2004
MIN	0.00	0.00	0.01	3.76	1.94	0.00	0.29	0.13	0.00	0.00	0.05	0.26
(WY)	1996	1996	2001	2001	2002	1997	2002	1999	1996	1996	1996	1997

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 1996 - 2004
ANNUAL TOTAL	1208.99	2544.33	
ANNUAL MEAN	3.31	6.95	13.0
HIGHEST ANNUAL MEAN			29.6 1998
LOWEST ANNUAL MEAN			4.31 2001
HIGHEST DAILY MEAN	63 Apr 13	384 Feb 18	1530 Feb 3 1998
LOWEST DAILY MEAN	0.00 Mar 14	0.00 Oct 31	0.00 Oct 1 1995
ANNUAL SEVEN-DAY MINIMUM	0.01 May 9	0.01 Nov 24	0.00 Oct 1 1995
MAXIMUM PEAK FLOW		543 Feb 18	2020 Jan 23 1997
MAXIMUM PEAK STAGE		5.41 Feb 18	7.54 Jan 23 1997
ANNUAL RUNOFF (AC-FT)	2400	5050	9410
10 PERCENT EXCEEDS	7.5	9.4	11
50 PERCENT EXCEEDS	1.2	1.0	0.57
90 PERCENT EXCEEDS	0.07	0.19	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<sup>2</sup>.

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. 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<sup>3</sup>/s, Dec. 16, 2002, gage height, 7.89 ft; minimum daily, 0.38 ft<sup>3</sup>/s, Dec. 9, 2003.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 400 ft<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 1	1215	566	6.79	Feb. 25	1145	445	6.53

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	0.92	3.6	181	0.85	39	4.8	7.1	2.5	1.3	3.7	2.8
2	3.7	0.50	2.1	123	23	30	4.7	4.9	1.6	1.4	7.7	4.7
3	2.6	1.5	0.49	39	16	23	4.9	5.0	3.4	2.1	7.3	5.8
4	2.2	0.65	1.3	19	11	19	6.4	3.3	2.7	3.2	4.2	4.6
5	2.2	0.77	4.8	11	5.4	16	5.4	5.6	2.8	3.9	3.0	5.1
6	3.1	0.56	1.2	7.6	3.3	14	5.2	3.3	6.2	3.7	5.2	4.6
7	3.2	3.3	3.7	10	2.6	13	6.0	1.3	5.2	3.8	6.2	7.3
8	3.9	13	0.51	5.4	2.2	11	7.5	3.2	4.6	6.0	5.5	7.3
9	3.7	11	0.38	4.3	1.9	10	6.3	6.0	4.2	4.3	3.9	6.9
10	3.9	2.4	17	3.0	1.6	9.5	5.7	7.0	3.5	4.3	2.8	6.0
11	2.8	0.53	14	2.3	1.7	8.7	6.4	4.4	3.0	4.5	2.0	6.3
12	1.3	0.43	0.82	2.2	1.3	8.0	6.0	5.4	3.7	5.2	3.0	5.2
13	0.90	0.45	0.48	2.1	1.1	7.5	5.2	4.6	3.4	5.2	2.8	4.2
14	2.3	0.48	18	1.5	1.2	7.0	4.9	4.6	3.2	6.7	6.2	4.4
15	1.6	2.1	1.0	1.8	1.0	6.3	4.0	3.6	3.3	2.8	8.0	3.8
16	1.5	0.90	0.49	1.2	21	5.5	4.1	3.5	3.3	3.2	6.8	2.9
17	1.4	0.44	0.49	1.1	10	5.3	5.0	5.2	1.3	4.2	3.4	5.5
18	0.84	0.41	0.58	0.92	231	6.6	5.1	3.4	1.6	3.8	4.2	7.7
19	0.70	0.47	4.6	0.88	85	4.8	5.6	2.2	2.4	4.6	5.6	14
20	0.81	0.47	6.8	0.91	31	5.3	4.9	3.2	1.6	4.0	4.7	9.0
21	2.0	0.40	2.7	1.0	20	5.5	5.4	4.1	2.4	2.2	4.2	3.3
22	0.86	0.43	0.61	0.94	25	5.3	4.6	4.0	3.5	1.8	5.2	1.8
23	0.59	0.42	24	1.4	22	5.4	3.4	4.3	2.2	2.5	3.9	2.6
24	0.61	0.43	9.8	11	14	3.9	4.9	3.9	1.3	4.5	3.1	3.8
25	0.67	0.43	5.2	1.9	198	5.8	8.1	3.0	1.3	3.5	4.4	3.1
26	0.59	0.41	1.1	1.1	356	7.6	7.4	3.7	2.9	4.3	4.8	2.6
27	0.59	0.40	0.49	1.1	199	6.5	6.8	4.9	1.2	3.6	4.0	3.3
28	1.8	0.40	0.42	0.93	86	5.7	4.9	5.6	2.3	3.6	5.3	5.5
29	1.2	0.44	84	0.93	47	5.4	5.7	3.5	3.8	4.3	2.9	4.7
30	0.63	1.4	25	0.90	---	4.5	10	4.4	1.5	4.7	4.8	5.1
31	2.8	---	4.0	0.95	---	4.9	---	5.1	---	3.5	5.4	---
TOTAL	58.29	46.44	239.66	440.36	1419.15	310.0	169.3	133.3	85.9	116.7	144.2	153.9
MEAN	1.88	1.55	7.73	14.2	48.9	10.0	5.64	4.30	2.86	3.76	4.65	5.13
MAX	3.9	13	84	181	356	39	10	7.1	6.2	6.7	8.0	14
MIN	0.59	0.40	0.38	0.88	0.85	3.9	3.4	1.3	1.2	1.3	2.0	1.8
AC-FT	116	92	475	873	2810	615	336	264	170	231	286	305

## 11337600 MARSH CREEK AT BRENTWOOD, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2004, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.42	3.66	26.8	12.3	18.3	9.33	5.35	4.92	3.95	4.24	4.81	4.30
MAX	3.82	6.26	70.1	15.6	48.9	12.1	6.90	6.03	5.23	5.35	5.58	5.22
(WY)	2001	2003	2003	2002	2004	2001	2003	2003	2001	2002	2001	2003
MIN	1.31	1.55	2.02	6.33	4.94	5.42	3.87	4.19	2.86	3.16	3.50	2.63
(WY)	2003	2004	2001	2001	2002	2003	2001	2002	2004	2003	2002	2002

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR	FOR 2004 WATER YEAR	WATER YEARS 2000 - 2004
ANNUAL TOTAL	2001.90	3317.20	
ANNUAL MEAN	5.48	9.06	8.33
HIGHEST ANNUAL MEAN			11.1 2003
LOWEST ANNUAL MEAN			5.57 2001
HIGHEST DAILY MEAN	84 Dec 29	356 Feb 26	590 Dec 16 2002
LOWEST DAILY MEAN	0.38 Dec 9	0.38 Dec 9	0.38 Dec 9 2003
ANNUAL SEVEN-DAY MINIMUM	0.42 Nov 21	0.42 Nov 21	0.42 Nov 21 2003
MAXIMUM PEAK FLOW		566 Jan 1	1110 Dec 16 2002
MAXIMUM PEAK STAGE		6.79 Jan 1	7.89 Dec 16 2002
ANNUAL RUNOFF (AC-FT)	3970	6580	6030
10 PERCENT EXCEEDS	11	11	11
50 PERCENT EXCEEDS	3.3	3.9	3.9
90 PERCENT EXCEEDS	0.66	0.69	1.1

## 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 made at other sites not included in the partial-record program. These 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 are given in separate tables.

### 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 2004

Station No.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Annual maximum	
						Gage height (ft)	Discharge (ft <sup>3</sup> /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., <a href="#">Tulare County</a> , 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, 1974–2004	02-26-04	unknown	e<30

### Special study and miscellaneous sites

Discharge measurements in the following table were made at special study and miscellaneous sites throughout the area covered by this volume.

Discharge measurements made at special study and miscellaneous sites during water year 2004

Station no.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Measurements	
					Date	Discharge (ft <sup>3</sup> /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., <a href="#">Alpine County</a> , Hydrologic Unit 16050201, 3.2 mi north of Highway 89 and 6.5 mi east of Markleeville	0.92	1999–2004	10-08-03 11-19-03 12-17-03 01-23-04 02-23-04 03-24-04 04-20-04 05-24-04 06-25-04 07-23-04 08-18-04 09-29-04	.13 .25 .19 .23 .18 .56 .27 .21 .17 .11 .09 .14

a Published as a miscellaneous measurement.

e Estimated.

<Actual value is known to be less than value shown.



## REVISION OF RECORDS FOR DISCONTINUED STATIONS

## Crest-Stage Partial-Record Stations

The following table contains revisions to annual maximum discharges for discontinued crest-stage stations previously published in U.S. Geological Survey Open-File Report: Floods from Small Drainage Areas in California: A Compilation of Peak Data, October 1958 to September 1973; by Arvi O. Waananen; published December 12, 1973. 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. The years given in the period of record represent water years for which the annual maximum was obtained.

Station no.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record (water year)	Date	Annual maximum	
						Gage height (ft)	Discharge (ft <sup>3</sup> /s)
WALKER LAKE BASIN							
10296800	Slinkard Creek tributary near Topaz, CA	Lat 38°38'50", long 119°33'40", in NE 1/4, NW 1/4, sec. 9, T.9 N., R.22 E., Mono County, Hydrologic Unit 16050302, at culvert on State Highway 89, 2.1 mi west of junction with U.S. Highway 395, and 3.4 mi northwest of Topaz Post Office.	0.14	1963-73	7-16-67	12.8	e210

e Estimated.

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD SITES

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 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Sulfate, water, fltrd, mg/L (00945)
NOV 18...	1330	7.3	<2.0	593	12.2	115	7.6	80	2.5	1.95	3.5
FEB 20...	1400	20	31	578	10.3	93	7.5	76	.0	3.02	3.6
MAY 19...	1300	141	9.0	586	10.1	111	7.3	43	8.0	.66	1.3
AUG 19...	1125	28	<2.0	592	9.6	124	7.6	44	15.5	.71	.8

Date	Residue on evap. at 180degC mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, unfltrd, mg/L as N (00625)	Nitrite + nitrate, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L (00665)	Fecal coliform, M-FC, 0.7u MF, 100 mL (31625)	Boron, water, fltrd, ug/L (01020)	Suspended sediment concentration, mg/L (80154)	Suspended sediment discharge, tons/d (80155)
NOV 18...	57	--	.11	.001	.004	.012	<1	e5.8	1	.02
FEB 20...	62	--	.19	.059	--	.020	K1	e4.9	4	.22
MAY 19...	35	<10	.16	.007	--	.017	K1	<7.0	8	3.0
AUG 19...	47	<10	.17	.001	--	.021	48	<7.0	4	.30

## CROSS-SECTIONAL DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, deg C (00010)	Location in X-sect. looking downstrm 1 bank (00009)
MAY 19...*	1314	1.30	.70	586	10.1	111	7.3	42	8.0	2.00
19...*	1315	1.05	.70	586	10.1	111	7.3	43	8.0	7.00
19...*	1316	1.10	.70	586	10.1	111	7.3	43	8.0	12.0
19...*	1317	1.20	.70	586	10.1	111	7.3	43	8.0	17.0
19...*	1318	1.50	.70	586	10.1	111	7.3	42	8.0	22.0
19...*	1319	1.90	.70	586	10.1	111	7.3	42	8.0	27.0
19...*	1320	2.00	.70	586	10.1	111	7.3	42	8.0	32.0
19...*	1321	1.70	.70	586	10.1	111	7.3	43	8.0	37.0
19...*	1322	2.20	.70	586	10.0	110	7.3	44	8.0	42.0
19...*	1323	1.50	.70	586	10.1	111	7.3	44	8.0	47.0

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

e Estimated.

K Results based on colony count outside the acceptance range (non-ideal colony count).

\* Instantaneous discharge at time of cross-sectional measurement: May 19, 141 ft<sup>3</sup>/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 to October 2003 (discontinued).

CHEMICAL DATA.—July to October 2003 (discontinued).

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT								
10...	1250	e.02	602	9.7	100	7.9	98	6.5

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)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unfltrd, by analysis, mg/L (62855)
OCT							
10...	.35	92	.13	<.06	.048	.066	.09

e Estimated.

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

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD SITES

## 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 to October 2003 (discontinued).

CHEMICAL DATA.—July to October 2003 (discontinued).

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT								
10...	1100	.13	603	9.7	95	8.0	118	4.5

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)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)
OCT							
10...	.80	79	.04	.11	.027	.033	.11

## 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 to October 2003 (discontinued).

CHEMICAL DATA.—July to October 2003 (discontinued).

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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)
OCT 10...	1015	.20	603	10.9	107	8.4	102	4.5

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)
OCT 10...	2.03	93	.13	1.46	.125	.144	1.63

## SAN JOAQUIN RIVER BASIN

11271320 DRY CREEK NEAR SNELLING, CA

LOCATION.—Lat 37°33'18", long 120°27'44", in NE 1/4 SE 1/4 sec.30, T.4 S., R.14 E., Merced County, Hydrologic Unit 18040002, on left bank, 650 ft downstream from Fields Road, and 2.8 mi northwest of Snelling.

DRAINAGE AREA.—67.6 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1966 to September 1992, December 2002 (discontinued).

WATER-DISCHARGE RECORDS: October 1966 to September 1992 (daily).

CHEMICAL DATA: December 2002 (discontinued).

SEDIMENT DATA: December 2002 (discontinued).

REMARKS.—Estimated discharge based on unreviewed gage records (Department of Water Resources, California Data Exchange Center).

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

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Dis-charge, cfs (00060)	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)	Phos-phorus, water, unfltrd mg/L (00665)	1-Naph-thol, water, fltrd 0.7u GF ug/L (49295)
DEC 16...	1700	e36	1.5	.05	.20	e.006	.07	.22	<.09
Date	2,6-Di-ethyl-aniline water, fltrd 0.7u GF (82660)	2-[(2-Et-6-Me-Ph)-amino]propan-1-ol, ug/L (61615)	2Chloro-2',6'-diethyl acet-anilide wat flt ug/L (61618)	CIAT, water, fltrd, ug/L (04040)	2-Ethyl-6-methyl-aniline water, fltrd, ug/L (61620)	3,4-Di-chloro-aniline water, fltrd, ug/L (61625)	4Chloro-2methyl phenol, water, fltrd, ug/L (61633)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)
DEC 16...	<.006	<.1	<.005	<.006	<.004	<.004	<.006	<.006	<.004
Date	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl oxon, water, fltrd, ug/L (61635)	Azin-phos-methyl, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Chlor-pyrifos, water, fltrd, ug/L (61636)	Chlor-pyrifos, water, fltrd, ug/L (38933)	cis-Per-methrin water, fltrd 0.7u GF ug/L (82687)	Cyflu-thrin, water, fltrd, ug/L (61585)
DEC 16...	<.007	<.05	<.050	<.010	<.041	<.06	<.005	<.006	<.008
Date	Cyper-methrin water, fltrd, ug/L (61586)	DCPA, water, fltrd 0.7u GF ug/L (82682)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)	Diazi-non, water, fltrd, ug/L (39572)	Dicro-tophos, water, fltrd, ug/L (38454)	Diel-drin, water, fltrd, ug/L (39381)	Dimeth-oate, water, fltrd 0.7u GF ug/L (82662)	Ethion monoxon water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)
DEC 16...	<.009	e.002	<.004	<.005	<.08	<.005	<.006	<.03	<.004

e Estimated.

< Actual value known to be less than the value shown.

## SAN JOAQUIN RIVER BASIN

11271320 DRY CREEK NEAR SNELLING, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	Fenami-phos sulfone water, fltrd, ug/L (61645)	Fenami-phos sulf-oxide, water, fltrd, ug/L (61646)	Fenami-phos, water, fltrd, ug/L (61591)	Desulf-inyl-fipro-nil amide, wat flt ug/L (62169)	Fipro-nil sulfide water, fltrd, ug/L (62167)	Fipro-nil sulfone water, fltrd, ug/L (62168)	Fipro-nil, water, fltrd, ug/L (62166)	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)
DEC 16...	<.008	<.03	<.03	<.009	<.005	<.005	<.007	<.002	<.003
Date	Ipro-dione, water, fltrd, ug/L (61593)	Isofen-phos, water, fltrd, ug/L (61594)	Mala-oxon, water, fltrd, ug/L (61652)	Mala-thion, water, fltrd, ug/L (39532)	Meta-laxyl, water, fltrd, ug/L (61596)	Methi-althion, water, fltrd, ug/L (61598)	Methyl para-oxon, water, fltrd, ug/L (61664)	Methyl para-thion, water, fltrd, 0.7u GF (82667)	Metola-chlor, water, fltrd, ug/L (39415)
DEC 16...	<1	<.003	<.008	<.027	<.005	<.006	<.03	<.006	<.013
Date	Metri-buzin, water, fltrd, ug/L (82630)	Myclo-butanil, water, fltrd, ug/L (61599)	Pendi-meth-alin, water, fltrd, 0.7u GF (82683)	Phorate oxon, water, fltrd, ug/L (61666)	Phorate water, fltrd, 0.7u GF (82664)	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)	Prome-ton, water, fltrd, ug/L (04037)	Prome-tryn, water, fltrd, ug/L (04036)
DEC 16...	<.006	.008	.024	<.10	<.011	<.06	<.008	<.01	<.005
Date	Propy-zamide, water, fltrd, 0.7u GF (82676)	Sima-zine, water, fltrd, ug/L (04035)	Tebu-thiuron, water, fltrd, 0.7u GF (82670)	Ter-bufos oxon sulfone water, fltrd, ug/L (61674)	Terbu-fos, water, fltrd, 0.7u GF (82675)	Ter-buthyl-azine, water, fltrd, ug/L (04022)	Tri-flur-alin, water, fltrd, 0.7u GF (82661)	Di-chlor-vo-s, water, fltrd, ug/L (38775)	
DEC 16...	<.004	.021	<.02	<.07	<.02	<.01	<.009	<.01	

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Dis-charge, cfs (00060)	Temper-ature, water, deg C (00010)	Sus-pended sedi-ment concen-tration, mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)	Suspnd. sedi-ment, sieve diametr percent <.063mm (70331)
DEC 16...	SS	1700	e36	--	151	e14.7 99

&lt; Actual value known to be less than the value shown.

SS Suspended sediment data determined from a sample collected and processed according to National Water Quality Assessment protocol.

e Estimated.

## SAN JOAQUIN RIVER BASIN

372825120361401 DRY CREEK AT TURLOCK ROAD, NEAR WINTON, CA

LOCATION.—Lat 37°28'25", long 120°36'14", in NE 1/4 NE 1/4 sec.25, T.5 S., R.12 E., [Merced County](#), Hydrologic Unit 18040002, 150 ft downstream from Turlock Road and 5.7 mi north of Winton.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—December 2002 (discontinued).

CHEMICAL DATA: December 2002 (discontinued).

SEDIMENT DATA: December 2002 (discontinued).

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

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, uS/cm wat unf (00095)	Temperature, deg C (00010)	1-Naphthol, water, fltrd 0.7u GF ug/L (49295)	2,6-Diethyl-aniline, water, fltrd 0.7u GF ug/L (82660)	2-[(2-Et-6-Me-Ph)-amino]propan-1-ol, ug/L (61615)
DEC										
16...	1630	5.4	750	4.6	7.2	364	11.6	<.09	<.006	<.1
20...	1320	20	758	8.1	6.7	215	9.2	--	--	--
Date		2Chloro-2',6'-diethyl acet-anilide, wat fltrd ug/L (61618)	CIAT, water, fltrd, ug/L (04040)	2-Ethyl-6-methyl-aniline, water, fltrd, ug/L (61620)	3,4-Di-chloro-aniline, water, fltrd, ug/L (61625)	4Chloro-2methyl phenol, water, fltrd, ug/L (61633)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl oxon, water, fltrd, ug/L (61635)
DEC										
16...		<.005	<.006	<.004	.060	e.007	<.006	<.004	<.007	<.02
20...		--	--	--	--	--	--	--	--	--
Date		Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	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)	Cyflu-thrin, water, fltrd, ug/L (61585)	Cyper-methrin, water, fltrd, ug/L (61586)	DCPA, water, fltrd 0.7u GF ug/L (82682)
DEC										
16...		<.050	<.010	<.041	<.06	<.005	<.006	<.008	<.009	e.002
20...		--	--	--	--	--	--	--	--	--
Date		Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)	Diazi-non, water, fltrd, ug/L (39572)	Dicro-tophos, water, fltrd, ug/L (38454)	Diel-drin, water, fltrd, ug/L (39381)	Dimeth-oate, water, fltrd, 0.7u GF ug/L (82662)	Ethion monoxon, water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Fenami-phos sulfone, water, fltrd, ug/L (61645)	Fenami-phos sulf-oxide, water, fltrd, ug/L (61646)
DEC										
16...		<.004	<.021	<.08	<.005	<.006	<.03	<.004	<.008	<.03
20...		--	--	--	--	--	--	--	--	--

< Actual value known to be less than the value shown.

e Estimated.



## SAN JOAQUIN RIVER BASIN

372825120361401 DRY CREEK AT TURLOCK ROAD, NEAR WINTON, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	Fenamiphos, water, fltrd, ug/L (61591)	Desulf-inyl-fipro-nil amide, wat flt ug/L (62169)	Fipro-nil sulfide, water, fltrd, ug/L (62167)	Fipro-nil sulfone, water, fltrd, ug/L (62168)	Fipro-nil, water, fltrd, ug/L (62166)	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)	Ipro-dione, water, fltrd, ug/L (61593)	Isofen-phos, water, fltrd, ug/L (61594)
DEC 16...	<.03	<.009	<.005	<.005	<.007	<.002	<.003	e2	<.003
20...	--	--	--	--	--	--	--	--	--

Date	Mala-oxon, water, fltrd, ug/L (61652)	Mala-thion, water, fltrd, ug/L (39532)	Meta-laxyl, water, fltrd, ug/L (61596)	Methi-althion, water, fltrd, ug/L (61598)	Methyl para-oxon, water, fltrd, ug/L (61664)	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)	Myclo-butanil, water, fltrd, ug/L (61599)
DEC 16...	<.008	<.027	<.005	<.006	<.03	<.006	<.013	<.006	.031
20...	--	--	--	--	--	--	--	--	--

Date	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)	Prome-ton, water, fltrd, ug/L (04037)	Prome-tryn, water, fltrd, ug/L (04036)	Propy-zamide, water, fltrd, 0.7u GF ug/L (82676)	Sima-zine, water, fltrd, ug/L (04035)
DEC 16...	.028	<.10	<.011	<.06	<.008	<.01	.009	<.004	.982
20...	--	--	--	--	--	--	--	--	--

Date	Tebu-thiuron, water, fltrd, 0.7u GF ug/L (82670)	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)	Tri-flur-alin, water, fltrd, 0.7u GF ug/L (82661)	Di-chlor-vo-s, water, fltrd, ug/L (38775)
DEC 16...	<.02	<.07	<.02	<.01	.019	<.01
20...	--	--	--	--	--	--

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instan-taneous dis-charge, cfs (00061)	Temp-erature, water, deg C (00010)	Sus-pended sedi-ment concen-tration, mg/L (80154)	Sus-pended sedi-ment dis-charge, tons/d (80155)	Suspnd. sedi-ment, sieve diametr <.063mm percent (70331)
DEC 16...	SS	1630	5.4	11.6	198	99
20...	SS	1320	20	9.2	86	85

&lt; Actual value known to be less than the value shown.

e Estimated.

SS Suspended sediment data determined from a sample collected and processed according to National Water Quality Assessment protocol.

## SAN JOAQUIN RIVER BASIN

373115120382801 CULVERT DISCHARGE TO MUSTANG CREEK, AT MONTE VISTA, CA

LOCATION.—Lat 37°31'15", long 120°38'28", in SE 1/4 SW 1/4 sec.3, T.5 S., R.12 E., Merced County, Hydrologic Unit 18040002, on right bank, 10 feet north of Monte Vista Avenue at Mustang Creek bridge, and 4.2 mi southeast of Montpelier, CA.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—December 2002 to February 2004 (discontinued).

CHEMICAL DATA: December 2002 to February 2004 (discontinued).

SEDIMENT DATA: December 2002 to February 2004 (discontinued).

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

(NOT PREVIOUSLY PUBLISHED)

Date	Time	UV			Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)
		Instan- taneous dis- charge, cfs (00061)	absorb- ance, 254 nm, wat flt units /cm (50624)	SUVA, 254 nm, abs units/ mgC/L /meter (63162)						
DEC										
16...	0840	--	--	--	749	7.9	7.3	155	11.1	7.98
19...	2020	.36	--	--	752	9.2	7.4	234	7.3	15.0
19...	2310	--	--	--	753	5.6	7.5	263	6.5	18.5
FEB										
16...	0440	.06	1.30	3.2	--	--	--	443	--	26.4
16...	0530	.55	.944	2.7	--	--	--	464	--	30.0
16...	0550	.34	.886	2.6	--	--	--	441	--	29.2
16...	0630	.13	1.01	2.6	--	--	--	424	--	28.5
MAR										
15...	0750	--	.837	2.9	--	--	--	--	--	27.1
15...	0830	--	.694	2.5	--	--	--	--	--	16.9
15...	0900	--	.886	2.3	--	--	--	--	--	16.8
15...	0930	--	.674	2.5	--	--	--	--	--	16.7
JUL										
17...	1050	--	.283	3.2	758	13.3	8.2	245	28.0	20.1

Date	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alka- linity, wat flt Gran, 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 on evap. at 180degC wat flt mg/L (70300)
DEC									
16...	6.65	11.9	2.63	--	1.39	<.17	2.78	1.6	95
19...	12.5	18.6	5.45	--	2.68	<.17	6.74	3.2	187
19...	14.5	19.6	5.68	--	2.53	<.17	8.07	3.5	211
FEB									
16...	14.7	<.55	11.4	--	15.9	<.17	10.3	10.7	340
16...	14.0	<.60	12.2	--	16.8	.11	7.94	16.9	348
16...	13.6	<.60	11.6	--	14.9	.11	8.14	14.4	340
16...	13.4	<.60	11.5	--	14.9	.11	8.39	12.3	340
MAR									
15...	11.6	25.8	11.2	e85	7.27	.12	9.72	19.5	268
15...	7.34	4.00	7.18	e81	2.33	.12	8.54	5.0	169
15...	7.28	16.9	6.93	e80	2.67	.12	8.82	4.3	160
15...	7.26	8.75	6.58	e82	2.88	.12	8.41	4.4	160
JUL									
17...	4.83	16.6	16.0	107	4.57	.2	57.3	3.9	198

< Actual value is known to be less than value shown.

e Estimated.

## SAN JOAQUIN RIVER BASIN

373115120382801 CULVERT DISCHARGE TO MUSTANG CREEK, AT MONTE VISTA, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	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)	Partic- ulate nitro- gen, susp, water, mg/L (49570)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)
DEC									
16...	4.1	.65	.42	.042	1.41	2.92	3.87	8.8	.3
19...	4.4	.51	1.03	.069	1.24	3.46	3.91	7.8	<.1
19...	3.9	.29	1.21	.086	1.05	3.97	4.51	7.3	<.1
FEB									
16...	7.7	.86	5.35	.257	3.13	5.36	6.59	15.7	.2
16...	9.5	2.11	15.1	.541	2.03	4.21	5.15	10.0	<.1
16...	8.2	2.25	12.8	.478	1.62	4.47	5.42	8.9	<.1
16...	9.1	<.21	9.34	.439	1.97	4.23	5.58	9.2	<.1
MAR									
15...	6.1	.36	12.2	.400	1.67	4.23	5.09	9.2	.2
15...	4.3	.25	2.49	.117	1.65	4.34	5.13	9.7	<.1
15...	4.2	.09	2.07	.106	1.23	4.29	4.85	6.8	.2
15...	3.8	.11	2.28	.107	1.36	4.29	4.99	7.7	<.1
JUL									
17...	.94	<.04	e.05	.008	.13	1.50	1.60	.9	<.1
Date	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-Naph- thol, water, fltrd 0.7u GF ug/L (49295)	2,6-Di- ethyl- aniline water, fltrd 0.7u GF ug/L (82660)	2-[(2- Et-6-Me -Ph)- acet- propan- 1-ol, ug/L (61615)	2Chloro -2',6'- diethyl acet- anilide wat flt ug/L (61618)	CIAT, water, fltrd, ug/L (04040)
DEC									
16...	8.5	--	38	4.4	<.09	<.006	<.1	<.005	<.006
19...	7.8	--	51	11.8	<.09	<.006	<.1	<.005	<.006
19...	7.3	28.8	51	19.2	<.09	<.006	<.1	<.005	<.006
FEB									
16...	15.5	41.0	79	29.2	<.09	<.006	<.1	<.005	<.006
16...	9.9	35.0	43	22.0	<.09	<.006	<.1	<.005	<.006
16...	8.9	34.0	56	19.6	<.09	<.006	<.1	<.005	<.006
16...	9.2	38.0	43	15.4	<.09	<.006	<.1	<.005	<.006
MAR									
15...	9.0	29.1	45	38.3	<.09	<.006	<.1	<.005	<.006
15...	9.6	27.6	34	16.8	<.09	<.006	<.1	<.005	<.006
15...	6.7	39.0	58	15.2	<.09	<.006	<.1	<.005	<.006
15...	7.6	26.9	40	15.2	<.09	<.006	<.1	<.005	<.006
JUL									
17...	.9	9.0	25	3.2	<.09	<.006	<.1	<.005	<.006
Date	2-Ethyl -6- methyl- aniline water, fltrd, ug/L (61620)	3,4-Di- chloro- aniline water, fltrd, ug/L (61625)	4Chloro 2methyl phenol, water, fltrd, ug/L (61633)	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)	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)
DEC									
16...	<.004	.016	<.006	<.05	<.05	<.006	<.05	<.05	<.004
19...	<.004	.024	<.006	<.05	<.05	<.006	<.05	<.05	<.004
19...	<.004	.023	<.006	<.05	<.05	<.006	<.05	<.05	<.004
FEB									
16...	<.004	<.004	e.002	<.05	<.05	<.006	<.05	<.05	<.004
16...	e.015	<.004	e.004	<.05	<.05	<.006	<.05	<.05	<.004
16...	e.015	<.004	e.003	<.05	<.05	<.006	<.05	<.05	<.004
16...	e.013	<.004	e.003	<.05	<.05	<.006	<.05	<.05	<.004
MAR									
15...	<.004	<.004	<.006	<.05	<.05	<.006	<.05	<.05	<.004
15...	<.004	<.007	<.006	<.05	<.05	<.006	<.05	<.05	<.004
15...	<.004	<.004	<.006	<.05	<.05	<.006	<.05	<.05	<.004
15...	<.004	<.006	<.006	<.05	<.05	<.006	<.05	<.05	<.004
JUL									
17...	<.004	<.004	<.006	<.05	<.05	<.006	<.05	<.05	<.004

&lt; Actual value is known to be less than value shown.

e Estimated.

## SAN JOAQUIN RIVER BASIN

373115120382801 CULVERT DISCHARGE TO MUSTANG CREEK, AT MONTE VISTA, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	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)	Ben- flur- alin, water, fltrd, 0.7u GF ug/L (82673)	Car- baryl, water, fltrd, 0.7u GF ug/L (82680)	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)	Cyflu- thrin, water, fltrd, ug/L (61585)
DEC									
16...	<.007	<.02	<.050	<.010	<.041	<.06	.007	<.006	<.008
19...	<.007	<.02	<.050	<.010	<.041	<.06	<.025	<.006	<.008
19...	<.007	<.02	<.050	<.010	<.041	<.06	<.025	<.006	<.008
FEB									
16...	<.007	--	<.050	<.010	e.030	<.06	.006	<.006	<.008
16...	<.007	--	<.050	<.010	e.024	<.06	.007	<.006	<.008
16...	<.007	--	<.050	<.010	<.041	<.06	.006	<.006	<.008
16...	<.007	--	<.050	<.010	e.026	<.06	.006	<.006	<.008
MAR									
15...	<.007	<.02	<.050	<.010	e.020	<.06	.015	<.006	<.008
15...	<.007	<.02	<.050	<.010	e.017	<.06	.019	<.006	<.008
15...	<.007	<.02	<.050	<.010	e.015	<.06	.016	<.006	<.008
15...	<.007	<.02	<.050	<.010	e.014	<.06	.015	<.006	<.008
JUL									
17...	<.007	<.02	<.050	<.010	<.041	<.06	.083	<.006	<.008
Date	Cyper- methrin water, fltrd, ug/L (61586)	DCPA, water, fltrd, 0.7u GF ug/L (82682)	Desulf- inyl fipro- nil, water, fltrd, ug/L (62170)	Diaz- inon oxon, water, fltrd, ug/L (61638)	Diazi- non, water, fltrd, ug/L (39572)	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)
DEC									
16...	<.009	e.003	<.004	<.04	<.031	<.08	<.005	<.05	<.05
19...	<.009	e.001	<.004	--	.022	<.08	<.005	<.05	<.05
19...	<.009	e.002	<.004	--	.029	<.08	<.005	<.05	<.05
FEB									
16...	<.009	.003	<.004	<.04	.097	<.08	<.005	<.05	<.05
16...	<.009	.004	<.004	<.04	.103	<.08	<.005	<.05	<.05
16...	<.009	.004	<.004	<.04	.101	<.08	<.005	<.05	<.05
16...	<.009	.004	<.004	<.04	.100	<.08	<.005	<.05	<.05
MAR									
15...	<.009	.004	<.004	<.04	.037	<.08	<.005	<.05	<.05
15...	<.009	.003	<.004	e.01	.043	<.08	<.005	<.05	<.05
15...	<.009	.004	<.004	<.04	.040	<.08	<.005	<.05	<.05
15...	<.009	.003	<.004	<.04	.044	<.08	<.005	<.05	<.05
JUL									
17...	<.009	<.003	<.004	<.01	<.005	<.08	<.005	<.05	<.05
Date	Dimeth- oate, water, fltrd, 0.7u GF ug/L (82662)	Ethion monoxon water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Fenami- phos sulfone water, fltrd, ug/L (61645)	Fenami- phos sulf- oxide, water, fltrd, ug/L (61646)	Fenami- phos, water, fltrd, ug/L (61591)	Desulf- inyl- fipro- nil amide, wat flt ug/L (62169)	Fipro- nil sulfide water, fltrd, ug/L (62167)	Fipro- nil sulfone water, fltrd, ug/L (62168)
DEC									
16...	<.006	<.03	<.004	<.008	<.03	<.03	<.009	<.005	<.005
19...	e.018	<.03	<.004	<.008	<.03	<.03	<.009	<.005	<.005
19...	e.017	<.03	<.004	<.008	<.03	<.03	<.009	<.005	<.005
FEB									
16...	<.006	<.03	<.035	--	<.03	<.03	<.009	<.005	<.005
16...	<.006	<.03	<.025	--	<.03	<.03	<.009	<.005	<.005
16...	<.006	<.03	<.035	--	<.03	<.03	<.009	<.005	<.005
16...	<.006	<.03	<.045	--	<.03	<.03	<.009	<.005	<.005
MAR									
15...	<.006	<.03	<.004	<.100	<.03	<.03	<.009	<.005	<.005
15...	<.006	<.03	<.004	<.100	<.03	<.03	<.009	<.005	<.005
15...	<.006	<.03	<.004	<.100	<.03	<.03	<.009	<.005	<.005
15...	<.006	<.03	<.004	<.080	<.03	<.03	<.009	<.005	<.005
JUL									
17...	<.006	<.03	<.004	<.008	<.03	<.03	<.009	<.005	<.005

&lt; Actual value is known to be less than value shown.

e Estimated.

## SAN JOAQUIN RIVER BASIN

373115120382801 CULVERT DISCHARGE TO MUSTANG CREEK, AT MONTE VISTA, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	Fipro- nil, water, fltrd, ug/L (62166)	Flufen- acet ESA, water, fltrd, ug/L (61952)	Flufe- nacet OA, water, fltrd, ug/L (62483)	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)	Ipro- dione, water, fltrd, ug/L (61593)	Isofen- phos, water, fltrd, ug/L (61594)	Mala- oxon, water, fltrd, ug/L (61652)	Mala- thion, water, fltrd, ug/L (39532)
DEC									
16...	<.007	<.05	<.05	<.002	<.003	e3	<.003	<.008	<.027
19...	<.007	<.05	<.05	<.002	<.003	e2	<.003	<.008	<.027
19...	<.007	<.05	<.05	<.002	<.003	e2	<.003	<.008	<.027
FEB									
16...	<.007	<.05	<.05	<.002	<.005	--	<.003	<.008	<.027
16...	<.007	<.05	<.05	<.002	<.004	--	<.003	<.008	<.027
16...	<.007	<.05	<.05	<.002	<.004	--	<.003	<.008	<.027
16...	<.007	<.05	<.05	<.002	<.004	--	<.003	<.008	<.027
MAR									
15...	<.007	<.05	<.05	<.002	<.003	e35	<.003	<.008	<.027
15...	<.007	<.05	<.05	<.002	<.003	e35	<.003	<.008	<.027
15...	<.007	<.05	<.05	<.002	<.003	e35	<.003	<.008	<.027
15...	<.007	<.05	<.05	<.002	<.003	e29	<.003	<.008	<.027
JUL									
17...	<.007	<.05	<.05	<.002	<.003	M	<.003	<.008	<.027
Date	Meta- laxyl, water, fltrd, ug/L (61596)	Methi- althion water, fltrd, ug/L (61598)	Methyl para- oxon, water, fltrd, ug/L (61664)	Methyl para- thion, water, fltrd 0.7u GF ug/L (82667)	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)	Metri- buzin, water, fltrd, ug/L (82630)	Myclo- butanil water, fltrd, ug/L (61599)
DEC									
16...	<.005	<.006	<.03	<.006	.29	<.05	<.013	<.006	.019
19...	<.005	<.006	<.03	<.006	.71	<.05	e.004	<.006	.016
19...	<.005	<.006	<.03	<.006	.65	<.05	e.004	<.006	.030
FEB									
16...	.443	<.009	<.03	<.006	<.05	<.05	<.013	<.006	.058
16...	.660	<.015	<.03	<.006	<.05	<.05	e.008	<.006	.072
16...	.654	<.015	<.03	<.006	<.05	<.05	e.006	<.006	.068
16...	.699	<.015	<.03	<.006	<.05	<.05	e.007	<.006	.069
MAR									
15...	.149	<.006	<.03	<.006	<.05	<.05	<.013	<.006	.057
15...	.138	<.006	<.03	<.006	<.05	<.05	<.013	<.006	.045
15...	.156	<.006	<.03	<.006	<.05	<.05	<.013	<.006	.042
15...	.142	<.006	<.03	<.006	<.05	<.05	<.013	<.006	.041
JUL									
17...	<.005	<.006	<.03	<.006	<.05	<.05	<.013	<.006	.009
Date	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)	Prome- ton, water, fltrd, ug/L (04037)	Prome- tryn, water, fltrd, ug/L (04036)	Propy- zamide, water, fltrd 0.7u GF ug/L (82676)	
DEC									
16...	.026	<.10	<.011	<.06	<.008	<.01	.013	<.006	
19...	e.021	<.10	<.011	<.06	<.008	<.01	.011	<.004	
19...	e.017	<.10	<.011	<.06	<.008	<.01	.010	<.004	
FEB									
16...	.065	<.10	<.011	<.06	--	<.01	<.005	<.004	
16...	.076	<.10	<.011	<.06	--	<.01	<.005	<.004	
16...	.081	<.10	<.011	<.06	--	<.01	<.005	<.004	
16...	.078	<.10	<.011	<.06	--	<.01	<.005	<.004	
MAR									
15...	.043	<.10	<.011	<.06	<.008	<.01	<.005	<.004	
15...	.085	<.10	<.011	<.06	<.008	<.01	<.005	<.004	
15...	.079	<.10	<.011	<.06	<.008	<.01	<.005	<.004	
15...	.083	<.10	<.011	<.06	<.008	<.01	<.007	<.004	
JUL									
17...	<.022	<.10	<.011	<.06	<.008	<.01	<.005	<.004	

&lt; Actual value is known to be less than value shown.

e Estimated.

M Presence of material verified, but not quantified.

## SAN JOAQUIN RIVER BASIN

373115120382801 CULVERT DISCHARGE TO MUSTANG CREEK, AT MONTE VISTA, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	Sima- zine, water, fltrd, ug/L (04035)	Tebu- thiuron water, fltrd 0.7u GF ug/L (82670)	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)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Di- chlor- vos, water, fltrd, ug/L (38775)
DEC							
16...	.100	<.02	<.07	<.02	<.01	.029	<.01
19...	.108	<.02	<.07	<.02	<.01	.029	<.01
19...	.765	<.02	<.07	<.02	<.01	.023	<.01
FEB							
16...	1.53	<.02	<.07	<.02	<.01	.015	<.01
16...	.780	<.02	<.07	<.02	<.01	.028	<.01
16...	.538	<.02	<.07	<.02	<.01	.029	<.01
16...	.717	<.02	<.07	<.02	<.01	.027	<.01
MAR							
15...	.448	<.02	<.07	<.02	<.01	.033	<.01
15...	.305	<.02	<.07	<.02	<.01	.102	<.01
15...	.232	<.02	<.07	<.02	<.01	.083	<.01
15...	.281	<.02	<.07	<.02	<.01	.084	<.01
JUL							
17...	.025	<.02	<.07	<.02	<.01	.014	<.01

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

(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 dis- charge, tons/d (80155)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)
DEC						
16...SS	0840	--	11.1	240	--	89
19...SS	2020	.36	7.3	109	.11	86
19...SS	2310	--	6.5	251	--	92
FEB						
16...SS	0440	.06	--	180	.03	81
16...SS	0530	.55	--	162	.24	88
16...SS	0550	.34	--	116	.11	85
16...SS	0630	.13	--	92	.03	74
MAR						
15...SS	0750	--	--	184	--	94
15...SS	0830	--	--	219	--	74
15...SS	0900	--	--	130	--	84
15...SS	0930	--	--	84	--	87
JUL						
17...SS	1050	--	28.0	6	--	44

&lt; Actual value is known to be less than value shown.

SS Suspended sediment data determined from a sample collected and processed according to National Water Quality Assessment (NAWQA) protocol.

## SAN JOAQUIN RIVER BASIN

373115120382801 CULVERT DISCHARGE TO MUSTANG CREEK, AT MONTE VISTA, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	UV absorb- ance, 254 nm, wat flt units /cm (50624)	SUVA, 254 nm, abs units/ mgC/L /meter (63162)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)
DEC									
14...	0640	.403	2.0	--	--	7.5	120	9.2	8.52
14...	0720	.376	1.8	--	--	7.4	123	9.1	10.2
14...	0810	.419	1.8	--	--	7.5	134	9.1	12.0
14...	0930	.557	2.2	--	--	7.5	168	9.8	16.3
29...	1340	--	--	--	--	7.7	193	15.4	16.9
29...	1730	--	--	--	--	7.7	308	14.4	27.6
FEB									
02...	1320	.356	--	748	10.4	7.4	156	8.8	11.3
02...	1410	.342	2.0	748	10.2	7.6	160	8.9	11.8
02...	1500	.335	2.1	748	9.8	7.6	159	8.9	11.8
02...	1630	.421	2.5	748	9.7	7.6	182	8.9	14.7
18...	0640	.372	2.6	760	9.5	7.9	197	10.1	19.1
18...	0910	.317	2.4	761	9.8	6.4	183	10.6	15.6
18...	1130	.366	2.5	761	9.8	7.0	228	11.9	21.4
25...	1020	.511	2.7	753	9.9	7.3	197	11.3	17.5
25...	1440	.393	2.6	748	9.4	7.3	138	12.4	10.4

Date	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	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)
DEC								
14...	3.03	17.1	2.73	44.5	2.17	<.2	5.54	2.1
14...	3.32	13.2	3.15	39.8	3.08	<.2	5.36	2.5
14...	3.95	14.3	3.21	46.2	3.36	<.2	6.07	2.2
14...	5.30	17.4	3.85	63.6	3.97	<.2	7.98	2.6
29...	5.36	16.7	4.76	--	3.56	<.2	10.3	4.2
29...	7.79	25.9	8.20	--	12.4	<.2	10.3	8.9
FEB								
02...	7.43	13.7	3.76	62.0	3.29	<.2	4.78	6.2
02...	5.42	13.5	4.00	50.0	3.94	<.2	4.05	6.0
02...	5.91	13.4	3.86	56.0	4.15	<.2	4.17	4.4
02...	7.28	14.7	4.13	73.0	3.33	<.2	5.30	4.4
18...	8.81	17.9	4.52	88.1	3.04	<.2	5.39	3.8
18...	6.42	14.9	3.54	81.9	1.87	<.2	5.01	1.8
18...	9.35	18.0	4.68	99.5	3.03	<.2	6.38	3.7
25...	6.52	15.3	5.17	e74	4.83	<.2	5.33	5.1
25...	4.31	10.2	2.71	e60	2.07	<.2	3.82	1.7

&lt; Actual value is known to be less than value shown.

e Estimated.

## SAN JOAQUIN RIVER BASIN

373115120382801 CULVERT DISCHARGE TO MUSTANG CREEK, AT MONTE VISTA, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Residue	Nitrite		Partic- ulate nitro- gen, susp, water, mg/L (49570)	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)	Total carbon, suspnd sedimnt total, mg/L (00694)	
	on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)	nitrate water fltrd, mg/L as N (00631)						Nitrite water, fltrd, mg/L as N (00613)
DEC									
14...	89	.21	1.10	.024	2.29	.416	1.86	5.29	19.2
14...	92	<.04	2.07	.058	1.99	.407	1.84	6.00	16.4
14...	101	.17	1.57	.055	1.28	.419	1.18	4.26	10.9
14...	121	.09	1.54	.073	1.11	.550	1.21	3.87	11.7
29...	118	.23	2.87	.030	3.08	.92	3.51	9.74	27.0
29...	225	1.37	4.65	.110	2.32	1.06	2.10	12.4	13.6
FEB									
02...	113	.18	1.86	.043	4.99	.73	2.89	9.29	43.7
02...	119	.36	2.44	.041	3.49	.93	2.43	7.98	28.9
02...	110	.07	1.85	.048	1.54	1.00	1.69	5.16	12.9
02...	129	.05	1.79	.068	1.45	1.35	1.86	4.55	9.0
18...	147	.10	1.45	.087	2.09	1.41	2.34	5.20	14.4
18...	128	<.04	.47	.037	1.25	1.40	1.92	3.20	7.2
18...	159	<.04	1.40	.068	1.31	1.65	2.23	4.07	7.4
25...	140	.17	2.50	.052	1.89	1.01	1.71	7.35	11.4
25...	106	.07	.45	.025	1.43	.913	1.51	4.24	9.7
Date	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-Naph- thol, water, fltrd 0.7u GF ug/L (49295)	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)	2-[(2- Ethyl- 6methyl phenyl) amino]2 oxoESA ug/L (62850)
DEC									
14...	<.1	19.2	20.2	31	7.5	<.09	<.006	<.1	<.02
14...	.2	16.2	20.6	28	15.9	<.09	<.006	<.1	<.02
14...	<.1	10.9	23.6	27	25.3	<.09	<.006	<.1	<.02
14...	<.1	11.7	25.6	33	35.8	<.09	<.006	<.1	<.02
29...	<.1	27.0	--	32	16.8	<.09	<.006	<.1	--
29...	<.1	13.6	--	87	22.0	<.09	<.006	<.1	--
FEB									
02...	.9	42.8	--	16	5.9	<.09	<.006	<.1	<.02
02...	.7	28.2	16.9	36	27.3	<.09	<.006	<.1	<.02
02...	<.1	12.9	16.4	17	22.2	M	<.006	<.1	<.02
02...	<.1	8.9	17.2	24	19.3	<.09	<.006	<.1	<.02
18...	<.1	14.3	14.6	23	11.4	<.09	<.006	--	<.02
18...	<.1	7.2	13.1	22	9.3	<.09	<.006	--	<.02
18...	<.1	7.4	14.6	24	8.9	<.09	<.006	--	<.02
25...	<.1	11.3	19.1	27	31.3	M	<.006	--	<.02
25...	<.1	9.6	15.1	46	18.9	<.09	<.006	--	<.02

&lt; Actual value is known to be less than value shown.

M Presence of material verified, but not quantified.



## SAN JOAQUIN RIVER BASIN

373115120382801 CULVERT DISCHARGE TO MUSTANG CREEK, AT MONTE VISTA, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	2Chloro-2',6'-diethyl acet-anilide CIAT, water, wat flt ug/L (61618)	2-Ethyl-6-methyl-aniline water, fltrd, ug/L (04040)	3,4-Di-chloro-aniline water, fltrd, ug/L (61625)	4Chloro-2methyl phenol, water, fltrd, ug/L (61633)	Aceto-chlor ESA, water, fltrd, 0.7u GF ug/L (61029)	Aceto-chlor OA, water, fltrd, 0.7u GF ug/L (61030)	Aceto-chlor SAA, water, fltrd, ug/L (62847)	Aceto-chlor, water, fltrd, ug/L (49260)	
DEC									
14...	<.005	<.006	<.004	<.004	<.006	<.02	<.02	<.02	<.006
14...	<.005	<.006	<.004	<.004	<.006	<.02	<.02	<.02	<.006
14...	<.005	<.006	<.004	<.004	<.006	<.02	<.02	<.02	<.006
14...	<.005	<.006	<.004	<.004	<.006	<.02	<.02	<.02	<.006
29...	<.005	<.006	<.004	<.004	<.006	--	--	--	<.006
29...	<.005	<.006	<.004	<.004	<.006	--	--	--	<.006
FEB									
02...	<.005	<.006	<.004	<.006	e.005	<.02	<.02	<.02	<.006
02...	<.005	<.006	<.004	<.004	e.005	<.02	<.02	<.02	<.006
02...	<.005	<.006	<.004	.013	e.009	<.02	<.02	<.02	<.006
02...	<.005	<.006	<.004	<.006	e.011	<.02	<.02	<.02	<.006
18...	<.005	<.006	<.004	e.004	<.006	<.02	<.02	<.02	<.006
18...	<.005	<.006	<.004	.014	<.006	<.02	<.02	<.02	<.006
18...	<.005	<.006	<.004	e.004	<.006	<.02	<.02	<.02	<.006
25...	<.005	<.006	<.004	.005	<.006	<.02	<.02	<.02	<.006
25...	<.005	<.006	<.004	.005	<.006	<.02	<.02	<.02	<.006
Ala-chlor ESA SA, water, fltrd, ug/L (62849)									
Ala-chlor ESA, water, fltrd, 0.7u GF ug/L (50009)									
Ala-chlor OA, water, fltrd, 0.7u GF ug/L (61031)									
Ala-chlor SAA, water, fltrd, ug/L (62848)									
Ala-chlor, water, fltrd, ug/L (46342)									
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)									
Ben-flur-alin, water, fltrd, 0.7u GF ug/L (82673)									
DEC									
14...	<.02	<.02	<.02	<.02	<.005	<.007	<.02	<.050	<.010
14...	<.02	<.02	<.02	<.02	<.005	<.007	<.02	<.050	<.010
14...	<.02	<.02	<.02	<.02	<.005	<.007	<.02	<.050	<.010
14...	<.02	<.02	<.02	<.02	<.005	<.007	<.02	<.050	<.010
29...	--	--	--	--	<.005	<.007	<.02	<.050	<.010
29...	--	--	--	--	<.005	<.007	<.02	<.050	<.010
FEB									
02...	<.02	<.02	<.02	<.02	<.005	<.007	<.02	<.050	<.010
02...	<.02	<.02	<.02	<.02	<.005	<.007	<.02	<.050	<.010
02...	<.02	<.02	<.02	<.02	<.005	<.007	<.02	e.027	<.010
02...	<.02	<.02	<.02	<.02	<.005	<.007	<.02	<.050	<.010
18...	<.02	<.02	<.02	<.02	<.005	<.007	<.03	<.050	<.010
18...	<.02	<.02	<.02	<.02	<.005	<.007	<.03	<.050	<.010
18...	<.02	<.02	<.02	<.02	<.005	e.006	<.03	<.050	<.010
18...	<.02	<.02	<.02	<.02	<.005	<.007	<.03	<.050	<.010
25...	<.02	<.02	<.02	<.02	<.005	<.007	<.03	<.050	<.010
25...	<.02	.06	<.02	<.02	<.005	<.007	<.03	<.050	<.010

&lt; Actual value is known to be less than value shown.

e Estimated.

## SAN JOAQUIN RIVER BASIN

373115120382801 CULVERT DISCHARGE TO MUSTANG CREEK, AT MONTE VISTA, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Carbaryl, water, fltrd, 0.7u GF (82680) ug/L	Chlorpyrifos water, fltrd, (61636) ug/L	Chlorpyrifos water, fltrd, (38933) ug/L	cis-Permethrin water, fltrd, 0.7u GF (82687) ug/L	Cyfluthrin, water, fltrd, (61585) ug/L	Cypermethrin water, fltrd, (61586) ug/L	DCPA, water, fltrd, (82682) ug/L	Desulfinyl fipronil, water, fltrd, (62170) ug/L	Diazinon water, fltrd, (61638) ug/L
DEC									
14...	<.041	<.06	.006	<.006	<.008	<.009	.003	<.012	<.01
14...	<.041	<.06	e.005	<.006	<.008	<.009	.004	<.012	<.01
14...	<.041	<.06	.007	<.006	<.008	<.009	.004	<.012	<.01
14...	<.041	<.06	<.005	<.006	<.008	e.018	.003	<.012	<.01
29...	<.041	<.06	.009	<.006	<.008	<.009	e.003	<.012	.03
29...	<.041	<.06	.008	<.006	<.008	<.009	<.003	<.012	.02
FEB									
02...	<.041	<.06	.053	.146	<.008	<.009	e.003	<.012	.05
02...	<.041	<.03	.050	.105	<.008	<.009	.003	<.012	.07
02...	<.041	<.06	.052	.108	<.008	<.009	.004	<.012	.06
02...	<.041	<.06	.053	.128	<.008	<.009	e.002	<.012	<.04
18...	<.041	<.06	.019	.051	<.008	<.009	e.002	<.012	<.01
18...	<.041	<.06	.025	.049	<.008	<.009	e.002	<.012	e.01
18...	<.041	<.06	.019	.057	<.008	<.009	e.002	<.012	e.01
25...	e.010	<.06	.018	e.061	<.008	<.009	e.002	<.012	<.01
25...	e.011	<.06	.016	e.049	<.008	<.009	e.003	<.012	<.01
Date	Diazinon, water, fltrd, (39572) ug/L	Dicrotophos, water, fltrd, (38454) ug/L	Dieldrin, water, fltrd, (39381) ug/L	Dimethenamid ESA, water, fltrd, (61951) ug/L	Dimethenamid OA, water, fltrd, (62482) ug/L	Dimethenamid water, fltrd, (61588) ug/L	Dimethoate, water, fltrd, (82662) 0.7u GF ug/L	Ethion monoxon water, fltrd, (61644) ug/L	Ethion, water, fltrd, (82346) ug/L
DEC									
14...	.011	--	<.009	<.02	<.02	<.02	<.006	<.03	<.004
14...	.013	--	<.009	<.02	<.02	<.02	<.006	<.03	<.004
14...	.011	--	<.009	<.02	<.02	<.02	<.006	<.03	<.004
14...	.009	--	<.009	<.02	<.02	<.02	<.006	<.03	<.004
29...	.281	<.08	<.009	--	--	--	<.006	<.03	<.004
29...	.297	<.08	<.009	--	--	--	<.006	<.03	<.004
FEB									
02...	.270	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004
02...	.271	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004
02...	.252	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004
02...	.218	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004
18...	.056	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004
18...	.059	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004
18...	.057	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004
25...	.032	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004
25...	.034	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004

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

## SAN JOAQUIN RIVER BASIN

373115120382801 CULVERT DISCHARGE TO MUSTANG CREEK, AT MONTE VISTA, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Fenami-phos sulfone water, fltrd, ug/L (61645)	Fenami-phos sulf-oxide, water, fltrd, ug/L (61646)	Fenami-phos, water, fltrd, ug/L (61591)	Desulf-inyl-fipro-nil amide, wat flt ug/L (62169)	Fipro-nil sulfide water, fltrd, ug/L (62167)	Fipro-nil sulfone water, fltrd, ug/L (62168)	Fipro-nil, water, fltrd, ug/L (62166)	Flufen-acet ESA, water, fltrd, ug/L (61952)	Flufe-nacet OA, water, fltrd, ug/L (62483)
DEC									
14...	<.025	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02
14...	<.008	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02
14...	<.025	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02
14...	<.008	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02
29...	<.008	<.03	<.03	<.029	<.013	<.024	<.016	--	--
29...	<.008	<.03	<.03	<.029	<.013	<.024	<.016	--	--
FEB									
02...	<.008	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02
02...	<.008	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02
02...	<.008	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02
02...	<.008	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02
18...	<.008	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02
18...	<.008	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02
18...	<.008	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02
18...	<.008	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02
25...	--	<.03	<.03	<.029	<.013	<.024	e.010	<.02	<.02
25...	--	<.03	<.03	<.029	<.013	<.024	e.009	<.02	<.02
Date	Flufe-nacet, water, fltrd, ug/L (62481)	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos, water, fltrd, ug/L (04095)	Hexa-zinone, water, fltrd, ug/L (04025)	Ipro-dione, water, fltrd, ug/L (61593)	Isofen-phos, water, fltrd, ug/L (61594)	Mala-oxon, water, fltrd, ug/L (61652)	Mala-thion, water, fltrd, ug/L (39532)	Meta-laxyl, water, fltrd, ug/L (61596)
DEC									
14...	<.02	<.002	<.003	<.013	e4	<.003	<.008	<.027	<.005
14...	<.02	<.002	<.003	<.013	e4	<.003	<.008	<.027	<.009
14...	<.02	<.002	<.003	<.013	e4	<.003	<.008	<.027	.007
14...	<.02	<.002	<.003	<.013	e3	<.003	<.008	<.027	.008
29...	--	<.002	<.003	<.013	e2	<.003	<.008	<.027	<.005
29...	--	<.002	<.003	<.013	e2	<.003	<.008	<.027	<.005
FEB									
02...	<.02	<.002	<.003	e.011	M	<.003	<.008	<.027	<.005
02...	<.02	<.002	<.003	<.013	e2	<.003	<.008	<.027	<.005
02...	<.02	<.002	<.003	<.025	e3	<.003	<.008	<.027	<.005
02...	<.02	<.002	<.003	.014	e2	<.003	<.008	<.027	<.005
18...	<.02	<.002	<.003	<.013	e2	<.003	<.008	<.027	<.005
18...	<.02	<.002	<.003	<.013	e2	<.003	<.008	<.027	<.005
18...	<.02	<.002	<.003	<.013	e2	<.003	<.008	<.027	<.005
18...	<.02	<.002	<.003	<.013	e2	<.003	<.008	<.027	<.005
25...	<.02	<.002	<.003	<.013	e141	<.003	<.008	<.027	<.005
25...	<.02	<.002	<.003	<.013	e114	<.003	<.008	<.027	<.005

&lt; Actual value is known to be less than value shown.

e Estimated.

M Presence of material verified, but not quantified.

## SAN JOAQUIN RIVER BASIN

373115120382801 CULVERT DISCHARGE TO MUSTANG CREEK, AT MONTE VISTA, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Methi- althion water, fltrd, ug/L (61598)	Methyl para- oxon, water, fltrd, ug/L (61664)	Methyl para- thion, water, fltrd 0.7u GF ug/L (82667)	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)	Metri- buzin, water, fltrd, ug/L (82630)	Myclo- butanil water, fltrd, ug/L (61599)	Pendi- meth- alin, water, fltrd 0.7u GF ug/L (82683)
DEC									
14...	<.006	<.03	<.015	<.02	<.02	<.013	<.006	.011	e.013
14...	<.006	<.03	<.015	<.02	<.02	e.005	<.006	.013	<.022
14...	<.006	<.03	<.015	<.02	<.02	e.005	<.006	.014	e.010
14...	<.006	<.03	<.015	<.02	<.02	e.006	<.006	.013	<.022
29...	<.015	<.03	<.015	--	--	<.013	<.006	.014	<.022
29...	<.006	<.03	<.015	--	--	e.006	<.006	.021	<.022
FEB									
02...	.030	<.03	<.015	<.02	<.02	<.013	<.006	<.010	e.023
02...	.030	<.03	<.015	.36	<.02	<.013	<.006	<.015	e.017
02...	.046	<.03	<.015	.47	<.02	<.013	<.006	.016	e.018
02...	<.035	<.03	<.015	<.02	<.02	<.013	<.006	<.008	e.015
18...	<.006	<.03	<.015	<.02	<.02	<.013	<.006	.017	e.125
18...	<.006	<.03	<.015	<.02	<.02	<.013	<.006	.056	e.082
18...	<.006	<.03	<.015	<.02	<.02	<.013	<.006	.015	e.105
25...	<.006	<.03	<.015	<.02	<.02	e.006	<.006	.079	.061
25...	<.006	<.03	<.015	<.02	<.02	<.013	<.006	.064	.059
Phorate      Phorate      Phosmet      Phosmet      Promete-      Promete-      Propy-      Propa-      Propa- oxon,      water      oxon,      water,      ton,      tryn,      zamide,      chlor      chlor water,      fltrd      water,      water,      water,      water,      water,      water,      water, fltrd,      0.7u GF      fltrd,      fltrd,      fltrd,      fltrd,      fltrd      fltrd      fltrd ug/L      ug/L      ug/L      ug/L      ug/L      ug/L      0.7u GF      0.7u GF      0.7u GF (61666)      (82664)      (61668)      (61601)      (04037)      (04036)      (82676)      (62766)      (62767)									
DEC									
14...	<.10	<.011	<.06	<.008	<.01	.009	.007	<.05	<.02
14...	<.10	<.011	<.06	<.008	<.01	.009	<.004	<.05	<.02
14...	<.10	<.011	<.06	<.008	<.01	.009	<.004	<.05	<.02
14...	<.10	<.011	<.06	<.008	<.01	.008	<.004	<.05	<.02
29...	<.10	<.011	<.06	<.008	<.01	<.005	<.004	--	--
29...	<.10	<.011	<.06	<.008	<.01	<.005	<.004	--	--
FEB									
02...	<.10	<.011	<.06	<.008	<.01	<.005	<.004	<.05	<.02
02...	<.10	<.011	<.06	<.008	<.01	<.005	<.004	<.05	<.02
02...	<.10	<.011	<.06	<.008	<.01	<.005	<.004	<.05	<.02
02...	<.10	<.011	<.06	<.008	<.01	<.005	<.004	<.05	<.02
18...	<.10	<.011	<.06	<.008	<.01	<.005	<.004	<.05	<.02
18...	<.10	<.011	<.06	<.008	<.01	<.005	<.004	<.05	<.02
18...	<.10	<.011	<.06	<.008	<.01	<.005	<.004	<.05	<.02
18...	<.10	<.011	<.06	<.008	<.01	<.005	<.004	<.05	<.02
25...	<.10	<.011	<.06	--	<.01	<.005	<.004	<.05	<.02
25...	<.10	<.011	<.06	--	<.01	<.005	<.004	<.05	<.02

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

## SAN JOAQUIN RIVER BASIN

373115120382801 CULVERT DISCHARGE TO MUSTANG CREEK, AT MONTE VISTA, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Sima- zine, water, fltrd, ug/L (04035)	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Ter- bufos oxon sulfone fltrd, ug/L (61674)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Ter- buthyl- azine, water, fltrd, ug/L (04022)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Di- chlor- vos, water fltrd, ug/L (38775)
DEC							
14...	.036	<.02	<.07	<.02	<.01	e.008	<.01
14...	.055	<.02	<.07	<.02	<.01	.015	<.01
14...	.045	<.02	<.07	<.02	<.01	.016	<.01
14...	.045	<.02	<.07	<.02	<.01	.013	<.01
29...	.078	<.02	<.07	<.02	<.01	<.009	<.01
29...	.079	<.02	<.07	<.02	<.01	.010	<.01
FEB							
02...	.164	<.02	<.07	<.02	<.01	e.013	<.01
02...	.430	<.02	<.07	<.02	<.01	e.016	<.01
02...	.242	e.00	<.07	<.02	<.01	.023	<.01
02...	.223	<.02	<.07	<.02	<.01	e.022	<.01
18...	.291	<.02	<.07	<.02	<.01	.014	<.01
18...	2.11	<.02	<.07	<.02	<.01	.017	<.01
18...	.188	<.02	<.07	<.02	<.01	.013	<.01
25...	.227	<.02	<.07	<.02	<.01	.030	<.01
25...	.144	<.02	<.07	<.02	<.01	.019	<.01

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Temper- ature, water, deg C (00010)	Sus- pended sedi- ment concen- tration mg/L (80154)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)
DEC				
14...SS	0640	9.2	385	97
14...SS	0720	9.1	1260	76
14...SS	0810	9.1	198	94
14...SS	0930	9.8	171	89
29...SS	1340	15.4	2550	97
FEB				
02...SS	1320	8.8	2010	94
02...SS	1410	8.9	2330	59
02...SS	1500	8.9	660	65
02...SS	1630	8.9	217	89
18...SS	0640	10.1	190	99
18...SS	0910	10.6	90	94
18...SS	1130	11.9	59	98
25...SS	1020	11.3	363	93
25...SS	1440	12.4	255	94

&lt; Actual value is known to be less than value shown.

e Estimated.

SS Suspended sediment data determined from a sample collected and processed according to National Water Quality Assessment (NAWQA) protocol.

## SAN JOAQUIN RIVER BASIN

373112120382901 MUSTANG CREEK AT MONTE VISTA AVENUE, NEAR MONTPELIER, CA

LOCATION.—Lat 37°31'12", long 120°38'29", in NE 1/4 NW 1/4 sec.10, T.5 S., R.12 E., Merced County, Hydrologic Unit 18040002, on right bank on south side of Monte Vista Avenue, 2.3 mi east of Montpelier Road, and 3.9 mi southeast of Montpelier, CA.

DRAINAGE AREA.—7.0 mi<sup>2</sup>.

PERIOD OF RECORD.—December 2002 to March 2004.

CHEMICAL DATA: December 2002 to March 2004.

SEDIMENT DATA: December 2002 to February 2004.

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

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	UV	SUVA,	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH,	Specif. conduc-	Temper-ature, deg C (00010)	Calcium water, fltrd, mg/L (00915)
			absorbance, 254 nm, wat flt units/cm (50624)	254 nm, abs mgC/L/meter (63162)			water, unfltrd field, std units (00400)	tance, wat unfltrd, uS/cm 25 degC (00095)		
DEC										
16...	1020	139	--	--	750	7.8	6.8	94	10.6	6.24
16...	2020	9.3	--	--	--	--	e7.1	e102	--	8.77
19...	2150	12	--	--	753	9.0	7.1	106	7.1	9.47
20...	0310	4.2	--	--	--	--	6.9	92	--	7.59
20...	0720	5.4	--	--	--	--	7.6	117	--	10.4
JUL										
17...	1120	.21	.127	2.6	759	103	7.7	175	24.0	12.0

Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alka-	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 on evap. at 180degC, wat flt mg/L (70300)
				linity, wat flt Gran, field, mg/L as CaCO3 (29802)					
DEC									
16...	1.83	9.15	2.15	--	1.42	<.17	4.32	12.4	70
16...	2.38	10.3	2.73	--	2.51	<.17	7.19	13.6	95
19...	3.06	8.91	3.96	--	6.67	<.17	5.78	5.6	103
20...	2.06	8.14	2.60	--	3.00	<.17	6.23	10.8	75
20...	2.81	9.55	3.39	--	2.87	<.17	8.57	11.1	99
JUL									
17...	3.35	6.71	16.5	66.0	5.53	.2	56.7	3.1	151

Date	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)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L (00665)	Total carbon, suspnd, sedimnt total, mg/L (00694)	Inorganic carbon, suspnd, sedimnt total, mg/L (00688)
	DEC								
16...	8.3	<.04	.69	.021	--	.64	3.92	--	--
16...	2.2	.05	1.30	.025	.40	.26	.81	2.8	<.1
19...	3.2	.13	.69	.021	1.74	.41	1.38	12.8	<.1
20...	2.6	.05	1.04	.017	1.77	.39	1.35	10.5	<.1
20...	1.9	<.04	.73	.018	.38	.17	.59	3.4	<.1
JUL									
17...	.57	.23	.44	.068	.18	.18	.34	1.2	<.1

e Estimated.

< Actual value is known to be less than value shown.

## SAN JOAQUIN RIVER BASIN

373112120382901 MUSTANG CREEK AT MONTE VISTA AVENUE, NEAR MONTPELIER, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	Organic carbon, suspd sediment total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)	1-Naphthol, water, fltrd, ug/L (49295)	2,6-Diethyl-aniline, water, fltrd, ug/L (82660)	2-[(2-Et-6-Me-Ph)-amino]propan-1-ol, wat flt, ug/L (61615)	2Chloro-2',6'-diethyl acet-anilide, ug/L (61618)	CIAT, water, fltrd, ug/L (04040)
DEC									
16...	--	--	56	4.8	<.09	<.006	<.1	<.005	<.006
16...	2.8	--	35	7.3	<.09	<.006	<.1	<.005	<.006
19...	12.7	13.7	39	26.7	<.09	<.006	<.1	<.005	<.006
20...	10.5	9.2	11	4.3	<.09	<.006	<.1	<.005	<.006
20...	3.4	16.4	36	5.2	<.09	<.006	<.1	<.005	<.006
JUL									
17...	1.2	4.8	61	9.9	<.09	<.006	<.1	<.005	<.006
Date	2-Ethyl-6-methyl-aniline, water, fltrd, ug/L (61620)	3,4-Di-chloro-aniline, water, fltrd, ug/L (61625)	4Chloro-2methyl phenol, water, fltrd, ug/L (61633)	Aceto-chlor-ESA, water, fltrd, ug/L (61029)	Aceto-chlor-OA, water, fltrd, ug/L (61030)	Aceto-chlor-SAA, water, fltrd, ug/L (62847)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor-ESA, water, fltrd, ug/L (50009)	Ala-chlor-OA, water, fltrd, ug/L (61031)
DEC									
16...	<.004	.053	<.006	<.05	<.05	--	<.006	<.05	<.05
16...	<.004	.016	<.006	<.05	<.05	--	<.006	<.05	<.05
19...	<.004	.024	<.006	<.05	<.05	--	<.006	<.05	<.05
20...	<.004	.013	<.006	<.05	<.05	--	<.006	<.05	<.05
20...	<.004	<.008	<.006	<.05	<.05	--	<.006	<.05	<.05
JUL									
17...	<.004	<.004	<.006	<.05	<.05	--	<.006	<.05	<.05
Date	Ala-chlor, water, fltrd, ug/L (46342)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl oxon, water, fltrd, ug/L (61635)	Azin-phos-methyl, water, fltrd, ug/L (82686)	Ben-flur-alin, water, fltrd, ug/L (82673)	Car-baryl, water, fltrd, ug/L (82680)	Chlor-pyrifos oxon, water, fltrd, ug/L (61636)	Chlor-pyrifos, water, fltrd, ug/L (38933)	cis-Per-methrin, water, fltrd, ug/L (82687)
DEC									
16...	<.004	<.024	<.02	<.050	<.010	<.041	<.06	.008	<.006
16...	<.004	<.070	<.02	<.050	<.010	<.041	<.06	.018	<.006
19...	<.004	<.007	<.02	<.050	<.010	<.041	<.06	e.068	<.006
20...	<.004	<.007	<.02	<.050	<.010	<.041	<.06	.005	<.006
20...	<.004	<.007	<.02	<.050	<.010	<.041	<.06	<.040	<.006
JUL									
17...	<.004	<.007	<.02	<.050	<.010	<.041	<.06	.033	<.006
Date	Cyflu-methrin, water, fltrd, ug/L (61585)	Cyper-methrin, water, fltrd, ug/L (61586)	DCPA, water, fltrd, ug/L (82682)	Desulf-inyl-fipro-nil, water, fltrd, ug/L (62170)	Diaz-inon oxon, water, fltrd, ug/L (61638)	Diazi-non, water, fltrd, ug/L (39572)	Dicro-tophos, water, fltrd, ug/L (38454)	Diel-drin, water, fltrd, ug/L (39381)	Dimeth-enamid-ESA, water, fltrd, ug/L (61951)
DEC									
16...	<.008	<.009	e.003	<.004	<.04	<.009	<.08	<.005	<.05
16...	<.008	<.009	e.002	<.004	--	<.012	<.08	<.005	<.05
19...	<.008	<.009	e.003	<.004	--	<.005	<.08	<.005	<.05
20...	<.008	<.009	e.003	<.004	--	.008	<.08	<.005	<.05
20...	<.008	<.009	e.002	<.004	--	.012	<.08	<.005	<.05
JUL									
17...	<.008	<.009	<.003	<.004	<.01	<.005	<.08	<.005	<.05

&lt; Actual value is known to be less than value shown.

e Estimated.

## SAN JOAQUIN RIVER BASIN

373112120382901 MUSTANG CREEK AT MONTE VISTA AVENUE, NEAR MONTPELIER, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	Dimeth- enamid OA, water, fltrd, ug/L (62482)	Dimeth- oate, water, fltrd, 0.7u GF ug/L (82662)	Ethion monoxon water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Fenami- phos sulfone water, fltrd, ug/L (61645)	Fenami- phos sulf- oxide, water, fltrd, ug/L (61646)	Fenami- phos, water, fltrd, ug/L (61591)	Desulf- inyl- fipro- nil amide, wat flt ug/L (62169)	Fipro- nil sulfide water, fltrd, ug/L (62167)
DEC									
16...	<.05	<.006	<.03	<.004	<.008	<.03	<.03	<.009	<.005
16...	<.05	<.006	<.03	<.004	<.008	<.03	<.03	<.009	<.005
19...	<.05	<.006	<.03	<.004	<.008	<.03	<.03	<.009	<.005
20...	<.05	<.006	<.03	<.004	<.008	<.03	<.03	<.009	<.005
20...	<.05	<.006	<.03	<.004	<.008	<.03	<.03	<.009	<.005
JUL									
17...	<.05	<.006	<.03	<.004	<.008	<.03	<.03	<.009	<.005
Date	Fipro- nil sulfone water, fltrd, ug/L (62168)	Fipro- nil, water, fltrd, ug/L (62166)	Flufen- acet ESA, water, fltrd, ug/L (61952)	Flufe- nacet OA, water, fltrd, ug/L (62483)	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)	Hexa- zinone, water, fltrd, ug/L (04025)	Ipro- dione, water, fltrd, ug/L (61593)	Isofen- phos, water, fltrd, ug/L (61594)
DEC									
16...	<.005	<.007	<.05	<.05	<.002	<.003	--	M	<.003
16...	<.005	<.007	<.05	<.05	<.002	<.003	--	M	<.003
19...	<.005	<.007	<.05	<.05	<.002	<.003	--	e1	<.003
20...	<.005	<.007	<.05	<.05	<.002	<.003	--	M	<.003
20...	<.005	<.007	<.05	<.05	<.002	<.003	--	M	<.003
JUL									
17...	<.005	<.007	<.05	<.05	<.002	<.003	<.013	M	<.003
Date	Mala- oxon, water, fltrd, ug/L (61652)	Mala- thion, water, fltrd, ug/L (39532)	Meta- laxyl, water, fltrd, ug/L (61596)	Methi- althion water, fltrd, ug/L (61598)	Methyl para- oxon, water, fltrd, ug/L (61664)	Methyl para- thion, water, fltrd 0.7u GF ug/L (82667)	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)
DEC									
16...	<.008	<.027	<.005	<.006	<.03	<.006	<.05	<.05	<.013
16...	<.008	<.027	<.005	<.006	<.03	<.006	.08	<.05	.021
19...	<.008	<.027	<.005	<.006	<.03	<.006	<.05	.07	e.005
20...	<.008	<.027	.023	<.006	<.03	<.006	<.05	<.05	e.004
20...	<.008	<.027	<.005	<.006	<.03	<.006	<.05	<.05	e.011
JUL									
17...	<.008	<.027	<.005	<.006	<.03	<.006	<.05	<.05	<.013
Date	Metri- buzin, water, fltrd, ug/L (82630)	Myclo- butanil water, fltrd, ug/L (61599)	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)	Prome- ton, water, fltrd, ug/L (04037)	Prome- tryn, water, fltrd, ug/L (04036)
DEC									
16...	<.006	.474	.031	<.10	<.011	<.06	<.011	<.01	.014
16...	<.006	.384	.030	<.10	<.011	<.10	<.008	<.01	.013
19...	<.006	.195	.027	<.10	<.011	<.06	<.008	<.01	<.005
20...	<.006	.507	.037	<.10	<.011	<.02	<.008	<.01	.011
20...	<.006	.364	.026	<.10	<.011	<.05	<.008	<.01	.011
JUL									
17...	<.006	.010	<.022	<.10	<.011	<.06	<.008	<.01	<.005

&lt; Actual value is known to be less than value shown.

M Presence of material verified, but not quantified.

e Estimated.



## SAN JOAQUIN RIVER BASIN

373112120382901 MUSTANG CREEK AT MONTE VISTA AVENUE, NEAR MONTPELIER, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	Propy- zamide, water, fltrd 0.7u GF ug/L (82676)	Sima- zine, water, fltrd, ug/L (04035)	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	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)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Di- chlor- vos, water fltrd, ug/L (38775)
DEC								
16...	.007	e34.6	<.02	<.07	<.02	<.01	.037	<.01
16...	<.004	36.1	<.02	<.07	<.02	<.01	.018	<.01
19...	<.004	13.0	<.02	<.07	<.02	<.01	.033	<.01
20...	.009	34.1	<.02	<.07	<.02	<.01	.017	<.01
20...	<.004	24.1	<.02	<.07	<.02	<.01	.013	<.01
JUL								
17...	<.004	.007	<.02	<.07	<.02	<.01	e.003	<.01

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, deg C (00010)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge, tons/d (80155)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)
DEC						
16...SS	1020	139	10.6	3110	1170	98
16...SS	2020	9.3	--	437	11	98
19...SS	2150	12	7.1	777	25	98
20...SS	0310	4.2	--	619	7.0	99
20...SS	0720	5.4	--	317	4.6	97
JUL						
17...SS	1120	.21	24.1	14	<.01	96

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	UV absorb- ance, 254 nm, wat flt units /cm (50624)	SUVA, 254 nm, abs units/ mgC/L /meter (63162)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)
DEC									
14...	0710	.365	.5	--	--	7.5	147	9.2	11.3
14...	0800	.428	2.0	--	--	7.4	145	9.2	12.1
14...	1120	.510	1.9	--	--	7.2	170	9.6	12.2
FEB									
02...	1410	.294	2.3	748	9.6	7.7	179	8.6	13.9
02...	1510	.385	2.6	748	9.8	7.5	120	8.9	9.63
02...	1900	.249	2.6	748	9.1	7.3	123	8.3	9.88
03...	0030	.260	2.6	748	8.7	6.8	116	7.8	8.33
03...	1400	.359	2.7	--	--	e6.6	--	--	9.99
18...	0650	.230	2.8	760	10.2	7.4	116	10.0	8.17
18...	1200	.259	2.8	761	10.2	6.9	111	11.1	8.18
18...	1700	.296	2.8	761	8.9	6.9	129	15.0	9.73
19...	0910	.353	3.2	763	10.3	7.2	162	7.8	13.4
19...	1800	.364	3.2	760	8.5	7.0	180	13.3	14.7
25...	1040	.512	2.5	750	9.4	7.3	242	10.9	17.9
25...	1500	.273	2.6	748	9.5	7.2	189	12.2	15.9
26...	0050	.219	2.7	--	--	e7.3	--	--	6.97
26...	0600	.205	2.8	--	--	e7.1	--	--	7.80
MAR									
02...	1210	--	--	--	--	--	--	--	--

e Estimated.

&lt; Actual value is known to be less than value shown.

SS Suspended sediment data determined from a sample collected and processed according to National Water Quality Assessment (NAWQA) protocol.

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD SITES

## SAN JOAQUIN RIVER BASIN

373112120382901 MUSTANG CREEK AT MONTE VISTA AVENUE, NEAR MONTPELIER, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	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 on evap. at 180degC wat flt mg/L (70300)
DEC									
14...	3.62	14.6	4.52	42.0	4.09	<.2	5.52	3.0	145
14...	3.80	14.8	4.84	50.4	5.34	<.2	7.41	3.8	108
14...	3.68	21.2	7.51	50.8	7.61	<.2	8.88	5.8	126
FEB									
02...	5.41	13.2	4.71	55.0	4.73	<.2	4.71	12.2	117
02...	3.89	14.0	4.04	44.0	3.89	<.2	3.79	4.7	91
02...	2.61	11.0	4.53	23.0	2.80	<.2	4.27	15.2	87
03...	2.13	12.9	3.26	23.0	2.07	<.2	4.91	13.8	77
03...	2.88	13.8	4.70	36.0	2.39	<.2	9.29	8.3	98
18...	2.19	12.1	2.38	26.1	2.61	.2	5.24	8.4	144
18...	2.25	12.7	3.07	30.5	1.61	<.2	7.34	7.5	91
18...	2.88	14.2	3.83	34.5	1.79	<.2	9.46	8.3	107
19...	4.11	15.5	5.39	e46	2.36	<.2	13.6	11.0	129
19...	4.37	16.3	6.26	e49	3.12	<.2	14.0	12.7	139
25...	6.53	15.3	5.41	e75	5.01	<.2	5.49	5.5	155
25...	3.75	9.45	3.92	e40	3.00	<.2	4.92	26.6	127
26...	1.89	10.5	1.97	e29	1.30	<.2	5.91	5.7	73
26...	2.08	13.2	2.46	e31	1.67	<.2	6.53	7.0	84
MAR									
02...	--	--	--	--	--	--	--	--	--
Date	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)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unfltrd by analysis, mg/L (62855)	Total carbon, suspnd sediment total, mg/L (00694)	Inorganic carbon, suspnd sediment total, mg/L (00688)
DEC									
14...	.15	3.59	.114	4.72	.549	2.48	8.99	42.4	.1
14...	.17	1.44	.058	1.02	.455	1.17	3.83	8.7	.2
14...	.09	2.14	.053	1.21	.528	1.33	4.72	9.1	<.1
FEB									
02...	.32	1.62	.046	2.73	.64	1.82	6.45	22.2	.1
02...	.15	1.33	.034	1.47	.81	1.39	4.37	11.9	<.1
02...	.29	2.30	.034	2.23	.71	1.63	5.49	16.6	<.1
03...	.38	1.88	.040	2.26	.91	1.82	4.94	13.4	.2
03...	.34	2.27	.062	1.17	.83	1.26	5.21	7.5	<.1
18...	<.04	<.06	.013	1.80	1.45	3.12	4.16	13.6	<.1
18...	.12	1.22	.056	1.18	1.39	2.14	3.66	9.6	<.1
18...	.09	2.17	.099	1.18	1.55	2.21	4.58	8.6	<.1
19...	.11	3.22	.085	.77	1.40	1.78	5.62	4.3	<.1
19...	e.04	3.67	.089	.70	1.26	1.66	5.67	4.4	<.1
25...	.16	2.30	.053	2.25	.97	1.83	7.05	13.5	.3
25...	.07	1.75	.030	2.13	.909	2.18	6.07	14.1	<.1
26...	.20	.97	.037	2.17	1.04	2.10	4.30	14.9	.2
26...	.18	1.38	.045	1.91	1.00	1.87	4.13	11.3	<.1
MAR									
02...	--	--	--	--	--	--	--	--	--

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

## SAN JOAQUIN RIVER BASIN

373112120382901 MUSTANG CREEK AT MONTE VISTA AVENUE, NEAR MONTPELIER, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Organic carbon, suspd sediment total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)	1-Naphthol, water, fltrd, ug/L (49295)	2,6-Diethyl-aniline, water, fltrd, ug/L (82660)	2-[(2-Et-6-Me-Ph)-amino]propan-1-ol, ug/L (61615)	2-[(2-Ethyl-6methyl-phenyl)amino]2-oxoESA, ug/L (62850)	2Chloro-2',6'-diethyl acet-wat flt, ug/L (61618)
DEC									
14...	42.2	78.0	97	14.2	<.09	<.006	<.1	<.02	<.005
14...	8.4	21.5	74	38.7	<.09	<.006	<.1	<.02	<.005
14...	9.1	26.6	105	64.6	<.09	<.006	<.1	<.02	<.005
FEB									
02...	22.1	12.7	29	43.4	e.01	<.006	<.1	<.02	<.005
02...	11.9	14.6	64	34.8	e.01	<.006	<.1	<.02	<.005
02...	16.5	9.7	33	26.1	e.01	<.006	<.1	<.02	<.005
03...	13.2	10.1	29	9.8	M	<.006	<.1	<.02	<.005
03...	7.5	13.5	47	7.2	M	<.006	<.1	<.02	<.005
18...	13.6	8.3	44	6.8	M	<.006	--	<.02	<.005
18...	9.6	9.3	e38	13.3	<.09	<.006	--	<.02	<.005
18...	8.6	10.5	41	7.3	<.09	<.006	--	<.02	<.005
19...	4.2	11.1	38	4.7	<.09	<.006	--	<.02	<.005
19...	4.4	11.5	46	9.1	M	<.006	--	<.02	<.005
25...	13.2	20.2	36	32.6	M	<.006	--	<.02	<.005
25...	14.0	10.6	24	20.3	e.01	<.006	--	<.02	<.005
26...	14.7	8.1	94	15.0	<.09	<.006	--	<.02	<.005
26...	11.2	7.4	34	5.9	M	<.006	--	<.02	<.005
MAR									
02...	--	--	--	--	<.09	<.006	--	--	<.005
Date	CIAT, water, fltrd, ug/L (04040)	2-Ethyl-6-methyl-aniline, water, fltrd, ug/L (61620)	3,4-Di-chloro-aniline, water, fltrd, ug/L (61625)	4Chloro-2methyl phenol, water, fltrd, ug/L (61633)	Aceto-chlor ESA, water, fltrd, ug/L (61029)	Aceto-chlor OA, water, fltrd, ug/L (61030)	Aceto-chlor SAA, water, fltrd, ug/L (62847)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor ESA SA, water, fltrd, ug/L (62849)
DEC									
14...	<.006	<.004	<.004	<.006	<.02	<.02	<.02	<.006	<.02
14...	<.006	<.004	<.004	<.006	<.02	<.02	.03	<.006	<.02
14...	<.006	<.004	.009	<.006	<.02	<.02	<.02	<.006	<.02
FEB									
02...	<.006	<.004	.030	e.017	<.02	<.02	<.02	<.006	<.02
02...	<.006	<.004	.339	e.052	<.02	<.02	<.02	<.006	<.02
02...	<.006	<.004	.626	e1.27	<.02	<.02	<.02	<.006	<.02
03...	<.006	<.004	.526	e.139	<.02	<.02	<.02	<.006	<.02
03...	<.006	<.004	.172	e.038	<.02	<.02	<.02	<.006	<.02
18...	<.006	<.004	.088	e.004	<.02	<.02	<.02	<.006	<.02
18...	<.006	<.004	.036	e.003	<.02	<.02	<.02	<.006	<.02
18...	<.006	<.004	.057	e.003	<.02	<.02	<.02	<.006	<.02
19...	<.006	<.004	.025	e.003	<.02	<.02	<.02	<.006	<.02
19...	<.006	<.004	.035	e.004	<.02	<.02	<.02	<.006	<.02
25...	<.006	<.004	.013	e.001	<.02	<.02	<.02	<.006	<.02
25...	<.006	<.004	.114	e.006	<.02	<.02	<.02	<.006	<.02
26...	<.006	<.004	.025	e.002	<.02	<.02	<.02	<.006	<.02
26...	<.006	<.004	.043	<.006	<.02	<.02	<.02	<.006	<.02
MAR									
02...	<.006	<.004	.248	e.012	--	--	--	<.006	--

&lt; Actual value is known to be less than value shown.

e Estimated.

M Presence of material verified, but not quantified.

## SAN JOAQUIN RIVER BASIN

373112120382901 MUSTANG CREEK AT MONTE VISTA AVENUE, NEAR MONTPELIER, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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 SAA, water, fltrd 0.7u GF ug/L (62848)	Ala-chlor, water, fltrd, ug/L (46342)	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)	Ben-flur- alin, water, fltrd 0.7u GF ug/L (82673)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)
DEC									
14...	<.02	<.02	<.02	<.005	<.007	<.02	<.050	<.010	e.018
14...	<.02	<.02	.03	<.005	<.007	<.02	<.050	<.010	<.041
14...	<.02	<.02	<.02	<.005	<.007	<.02	<.050	<.010	<.041
FEB									
02...	<.02	<.02	<.02	<.005	.009	<.02	e.017	<.010	<.041
02...	<.02	<.02	<.02	<.005	<.007	<.02	e.024	<.010	<.041
02...	<.02	<.02	<.02	<.005	.021	<.02	e.014	<.010	e.028
03...	<.02	<.02	<.02	<.005	--	<.02	<.050	<.010	e.014
03...	<.02	<.02	<.02	<.005	--	<.02	<.050	<.010	<.041
18...	<.02	<.02	<.02	<.005	--	<.03	<.050	<.010	e.007
18...	<.02	<.02	<.02	<.005	--	<.03	<.050	<.010	<.041
18...	<.02	<.02	<.02	<.005	--	<.03	<.050	<.010	<.041
19...	<.02	<.02	<.02	<.005	--	<.02	<.050	<.010	<.041
19...	<.02	<.02	<.02	<.005	--	<.02	<.050	<.010	<.041
25...	.06	<.02	<.02	<.005	<.007	<.03	<.050	<.010	e.009
25...	<.02	<.02	<.02	<.005	.014	<.03	<.050	<.010	e.019
26...	<.02	<.02	<.02	<.005	.025	<.03	<.050	<.010	e.008
26...	<.02	<.02	<.02	<.005	--	<.03	<.050	<.010	e.008
MAR									
02...	--	--	--	<.005	.013	<.02	<.050	<.010	<.041
Date	Chlor-pyri- floxon, water, fltrd, ug/L (61636)	Chlor-pyri- floxon, water, fltrd, ug/L (38933)	cis-Per- methrin water fltrd 0.7u GF ug/L (82687)	Cyflu- thrin, water, fltrd, ug/L (61585)	Cyper- methrin water, fltrd, ug/L (61586)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulf- inyl fiprol- nil, water, fltrd, ug/L (62170)	Diaz- inon oxon, water, fltrd, ug/L (61638)	Diazi- non, water, fltrd, ug/L (39572)
DEC									
14...	<.06	.010	<.006	<.008	<.009	.004	<.012	<.01	.013
14...	<.06	.006	<.006	<.008	<.009	.003	<.012	<.01	.008
14...	<.06	.010	<.006	<.008	<.009	.003	<.012	<.01	.011
FEB									
02...	<.06	.056	.102	<.008	<.009	.004	<.012	.06	.275
02...	e.01	.056	.066	<.008	<.009	.005	<.012	.05	.256
02...	e.03	.143	.032	<.008	<.009	.005	<.012	.04	.289
03...	e.02	.105	.015	<.008	<.009	.004	<.012	.03	.359
03...	<.06	.056	<.006	<.008	<.009	.003	<.012	.02	.161
18...	e.02	.065	<.006	<.008	<.009	e.002	<.012	.01	.094
18...	<.06	.057	.018	<.008	<.009	e.003	<.012	e.01	.058
18...	<.06	.044	.015	<.008	<.009	.003	<.012	.01	.053
19...	<.06	.028	<.006	<.008	<.009	e.001	<.012	<.01	.031
19...	<.06	.029	<.006	<.008	<.009	e.002	<.012	<.01	.033
25...	<.06	.019	e.048	<.008	<.009	e.003	<.012	<.01	.033
25...	<.06	.057	e.021	<.008	<.009	e.003	<.012	<.01	.040
26...	<.06	.065	<.006	<.008	<.009	.003	<.012	.01	.042
26...	<.06	.046	<.006	<.008	<.009	.003	<.012	.01	.038
MAR									
02...	<.06	.029	<.006	<.008	<.009	e.002	<.012	<.01	.034

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

## SAN JOAQUIN RIVER BASIN

373112120382901 MUSTANG CREEK AT MONTE VISTA AVENUE, NEAR MONTPELIER, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	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- enamid water, fltrd, ug/L (61588)	Dimeth- oate, water, fltrd 0.7u GF ug/L (82662)	Ethion monoxon water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Fenami- phos sulfone water, fltrd, ug/L (61645)
DEC									
14...	--	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008
14...	--	<.009	.04	<.02	<.02	<.006	<.03	<.004	<.008
14...	--	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008
FEB									
02...	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008
02...	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008
02...	<.08	<.009	<.02	<.02	<.02	<.006	<.04	<.004	<.008
03...	<.08	<.009	<.02	<.02	<.02	<.006	<.04	<.004	<.008
03...	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008
18...	<.08	<.009	<.02	<.02	<.02	<.006	<.04	<.004	<.025
18...	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008
18...	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008
19...	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008
19...	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008
25...	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004	--
25...	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004	--
26...	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004	--
26...	<.08	<.009	<.02	<.02	<.02	<.006	<.04	<.004	--
MAR									
02...	<.08	<.009	--	--	--	<.006	<.03	<.004	<.008
Date	Fenami- phos sulf- oxide, water, fltrd, ug/L (61646)	Fenami- phos, water, fltrd, ug/L (61591)	Desulf- inyl- fipro- nil amide, wat flt ug/L (62169)	Fipro- nil sulfide water, fltrd, ug/L (62167)	Fipro- nil sulfone water, fltrd, ug/L (62168)	Fipro- nil, water, fltrd, ug/L (62166)	Flufen- acet ESA, water, fltrd, ug/L (61952)	Flufe- nacet OA, water, fltrd, ug/L (62483)	Flufe- nacet, water, fltrd, ug/L (62481)
DEC									
14...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
14...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
14...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
FEB									
02...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
02...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
02...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
03...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
03...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
18...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
18...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
18...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
19...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
19...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
25...	<.03	<.03	<.029	<.013	<.024	e.010	<.02	<.02	<.02
25...	<.03	<.03	<.029	<.013	<.024	e.008	<.02	<.02	<.02
26...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
26...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
MAR									
02...	<.03	<.03	<.029	<.013	<.024	<.016	--	--	--

&lt; Actual value is known to be less than value shown.

e Estimated.

## SAN JOAQUIN RIVER BASIN

373112120382901 MUSTANG CREEK AT MONTE VISTA AVENUE, NEAR MONTPELIER, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)	Hexa- zinone, water, fltrd, ug/L (04025)	Ipro- dione, water, fltrd, ug/L (61593)	Isofen- phos, water, fltrd, ug/L (61594)	Mala- oxon, water, fltrd, ug/L (61652)	Mala- thion, water, fltrd, ug/L (39532)	Meta- laxyl, water, fltrd, ug/L (61596)	Methi- althion water, fltrd, ug/L (61598)
DEC									
14...	<.002	<.003	<.013	e3	<.003	<.008	<.027	.012	<.006
14...	<.002	<.003	<.013	e4	<.003	<.008	<.027	<.005	<.006
14...	<.002	<.003	<.013	e2	<.003	<.008	<.027	<.005	<.006
FEB									
02...	<.002	<.003	<.013	e2	<.003	<.008	<.027	<.005	.040
02...	<.002	<.003	.015	e2	<.003	<.008	<.027	<.005	.035
02...	<.002	<.003	<.013	M	<.003	<.008	<.027	<.025	.029
03...	<.002	<.003	<.013	M	<.003	<.008	<.027	<.005	.020
03...	<.002	<.003	e.010	e1	<.003	<.008	<.027	<.005	.034
18...	<.002	<.003	<.013	e4	<.003	<.008	<.027	<.005	<.006
18...	<.002	<.003	<.013	e1	<.003	<.008	<.027	<.005	<.006
18...	<.002	<.003	<.013	M	<.003	<.008	<.027	<.005	<.006
19...	<.002	<.003	<.013	M	<.003	<.008	<.027	<.005	<.006
19...	<.002	<.003	<.013	M	<.003	<.008	<.027	<.005	<.006
25...	<.002	<.003	<.013	e127	<.003	<.008	<.027	<.005	<.006
25...	<.002	<.003	<.013	e108	<.003	<.008	<.027	<.005	<.006
26...	<.002	<.003	<.013	e54	<.003	<.008	<.027	<.005	<.006
26...	<.002	<.003	<.013	e42	<.003	<.008	<.027	<.005	<.006
MAR									
02...	<.002	<.003	<.013	e6	<.003	<.008	<.027	<.005	<.006
Date	Methyl para- oxon, water, fltrd, ug/L (61664)	Methyl para- thion, water, fltrd 0.7u GF ug/L (82667)	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)	Metri- buzin, water, fltrd, ug/L (82630)	Myclo- butanil water, fltrd, ug/L (61599)	Pendi- meth- alin, water, fltrd 0.7u GF ug/L (82683)	Phorate oxon, water, fltrd, ug/L (61666)
DEC									
14...	<.03	<.015	<.02	<.02	<.013	<.006	.027	<.022	<.10
14...	<.03	<.015	.02	<.02	e.005	<.006	.018	<.022	<.10
14...	<.03	<.015	<.02	<.02	<.013	<.006	.019	<.022	<.10
FEB									
02...	<.03	<.015	<.02	<.02	e.007	<.006	.099	.023	<.10
02...	<.03	<.015	<.02	<.02	e.006	<.006	.028	e.021	<.10
02...	<.03	<.015	<.02	<.02	e.006	<.006	.386	.022	<.10
03...	<.03	<.015	.02	<.02	e.006	<.006	.328	e.022	<.10
03...	<.03	<.015	<.02	<.02	e.007	<.006	.191	e.016	<.10
18...	<.03	<.015	<.02	<.02	<.013	<.006	.402	e.047	<.10
18...	<.03	<.015	<.02	<.02	e.006	<.006	.294	e.051	<.10
18...	<.03	<.015	<.02	<.02	e.007	<.006	.267	e.041	<.10
19...	<.03	<.015	<.02	<.02	e.004	<.006	.158	e.016	<.10
19...	<.03	<.015	<.02	<.02	e.004	<.006	.163	e.016	<.10
25...	<.03	<.015	<.02	<.02	<.013	<.006	.088	.065	<.10
25...	<.03	<.015	<.02	<.02	e.006	<.006	.274	.051	<.10
26...	<.03	<.015	<.02	<.02	e.009	<.006	.274	.045	<.10
26...	<.03	<.015	<.02	<.02	e.007	<.006	.438	.039	<.10
MAR									
02...	<.03	<.015	--	--	--	<.006	.169	e.020	<.10

&lt; Actual value is known to be less than value shown.

e Estimated.

M Presence of material verified, but not quantified.

## SAN JOAQUIN RIVER BASIN

373112120382901 MUSTANG CREEK AT MONTE VISTA AVENUE, NEAR MONTPELIER, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Phorate water fltrd 0.7u GF ug/L (82664)	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)	Prome- ton, water, fltrd, ug/L (04037)	Prome- tryn, water, fltrd, ug/L (04036)	Propy- zamide, water, fltrd 0.7u GF ug/L (82676)	Propa- chlor ESA, water, fltrd 0.7u GF ug/L (62766)	Propa- chlor OA, water, fltrd 0.7u GF ug/L (62767)	Sima- zine, water, fltrd, ug/L (04035)
DEC									
14...	<.011	<.06	<.008	<.01	.013	<.004	<.05	<.02	.280
14...	<.011	<.06	<.008	<.01	.012	<.004	<.05	<.02	.120
14...	<.011	<.06	<.008	<.01	.012	<.004	<.05	<.02	.082
FEB									
02...	<.011	<.06	<.008	<.01	<.005	<.004	<.05	<.02	1.23
02...	<.011	<.06	<.008	<.01	<.005	<.004	<.05	<.02	.432
02...	<.011	<.06	<.008	<.01	<.005	<.004	<.05	<.02	7.58
03...	<.011	<.06	<.008	<.01	<.005	<.004	<.05	<.02	e36.6
03...	<.011	e.03	<.008	<.01	<.005	<.004	<.05	<.02	e21.7
18...	<.011	<.06	<.008	<.01	<.005	<.004	<.05	<.02	36.4
18...	<.011	e.01	<.008	<.01	<.005	<.004	<.05	<.02	33.8
18...	<.011	e.02	<.008	<.01	<.005	<.004	<.05	<.02	57.9
19...	<.011	<.06	<.008	<.01	<.005	<.004	<.05	<.02	e64.5
19...	<.011	<.06	<.008	<.01	<.005	<.004	<.05	<.02	e58.6
25...	<.011	<.06	--	<.01	<.005	<.004	<.05	<.02	.369
25...	<.011	<.06	--	<.01	<.005	<.004	<.05	<.02	5.18
26...	<.011	<.06	<.210	<.01	<.005	<.004	<.05	<.02	22.6
26...	<.011	<.06	--	<.01	<.005	<.004	<.05	<.02	21.6
MAR									
02...	<.011	<.06	--	<.01	<.005	<.004	--	--	3.88

Date	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	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)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Di- chlor- vos, water fltrd, ug/L (38775)
DEC						
14...	<.02	<.07	<.02	<.01	.013	<.01
14...	<.02	<.07	<.02	<.01	.013	<.01
14...	<.02	<.07	<.02	<.01	e.009	<.01
FEB						
02...	<.02	<.07	<.02	<.01	.018	<.01
02...	<.02	<.07	<.02	<.01	.020	<.01
02...	<.02	<.07	<.02	<.01	.027	<.01
03...	<.02	<.07	<.02	<.01	.023	<.01
03...	<.02	<.07	<.02	<.01	.018	<.01
18...	<.02	<.07	<.02	<.01	.018	<.01
18...	<.02	<.07	<.02	<.01	.011	<.01
18...	<.02	<.07	<.02	<.01	e.008	<.01
19...	<.02	<.07	<.02	<.01	e.009	<.01
19...	<.02	<.07	<.02	<.01	e.009	<.01
25...	<.02	<.07	<.02	<.01	.035	<.01
25...	<.02	<.07	<.02	<.01	.011	<.01
26...	<.02	<.07	<.02	<.01	.043	<.01
26...	<.02	<.07	<.02	<.01	.056	<.01
MAR						
02...	<.02	<.07	<.02	<.01	e.008	<.01

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

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD SITES

## SAN JOAQUIN RIVER BASIN

373112120382901 MUSTANG CREEK AT MONTE VISTA AVENUE, NEAR MONTPELIER, CA—Continued

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment, sieve diameter percent <.063mm (70331)
DEC				
14...SS	0800	9.2	309	85
14...SS	1120	9.6	217	88
FEB				
02...SS	1410	8.6	406	97
02...SS	1510	8.9	241	97
02...SS	1900	8.3	589	100
03...SS	0030	7.8	409	100
03...SS	1400	--	186	99
18...SS	0650	10.0	609	100
18...SS	1200	11.1	353	100
18...SS	1700	15.0	258	100
19...SS	0910	7.8	155	100
19...SS	1800	13.3	116	99
25...SS	1040	10.9	330	100
25...SS	1500	12.2	835	99
26...SS	0050	--	902	98
26...SS	0600	--	640	97

SS Suspended sediment data determined from a sample collected and processed according to National Water Quality Assessment (NAWQA) protocol.



## SAN JOAQUIN RIVER BASIN

373020120385201 MUSTANG CREEK 1.1 MILE SOUTH OF MONTE VISTA AVENUE, NEAR MONTPELIER, CA

LOCATION.—Lat 37°30'20", long 120°38'52", in NE 1/4 NW 1/4 sec.15, T.5 S., R.12 E., Merced County, Hydrologic Unit 18040002, 1.1 mi downstream of Monte Vista Avenue, and 4 mi southeast of Montpelier.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—July 2003 (discontinued).

CHEMICAL DATA: July 2003 (discontinued).

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

(NOT PREVIOUSLY PUBLISHED)

Date	Time	UV absorb- ance, 254 nm, wat flt units /cm (50624)	SUVA, 254 nm, abs units/ /meter (63162)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf 25 degC (00095)	Temper- ature, deg C (00010)	Calcium water, fltrd, mg/L (00915)
JUL 17...	1230	.238	2.7	762	3.2	8.4	178	32.5	12.4
Date	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	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 on evap. at 180degC wat flt mg/L (70300)
JUL 17...	3.20	8.23	16.9	70.0	5.43	.2	47.1	2.8	139
Date	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)	Partic- ulate nitro- gen, water, fltrd mg/L (49570)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)
JUL 17...	1.0	<.04	<.06	<.008	.26	.49	.67	1.6	<.1
Date	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Iron, water, fltrd, mg/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)	1-Naph- thol, water, fltrd 0.7u GF ug/L (49295)	2,6-Di- ethyl- aniline water, fltrd 0.7u GF ug/L (82660)	2-[(2- Et-6-Me -Ph)- amino] propan- 1-ol, water, fltrd ug/L (61615)	2Chloro -2',6'- diethyl acet- anilide wat flt ug/L (61618)	CIAT, water, fltrd, ug/L (04040)
JUL 17...	1.6	8.8	188	37.5	<.09	<.006	<.1	<.005	<.006
Date	2-Ethyl -6- methyl- aniline water, fltrd, ug/L (61620)	3,4-Di- chloro- aniline water, fltrd, ug/L (61625)	4Chloro 2methyl phenol, water, fltrd, ug/L (61633)	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)	Ala- chlor ESA, water, fltrd 0.7u GF ug/L (50009)	Ala- chlor OA, water, fltrd 0.7u GF ug/L (61031)	
JUL 17...	<.004	<.004	<.006	<.05	<.05	<.006	<.05	<.05	<.05

< Actual value is known to be less than value shown.

## SAN JOAQUIN RIVER BASIN

373020120385201 MUSTANG CREEK 1.1 MILE SOUTH OF MONTE VISTA AVE, NEAR MONTPELIER, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	Ala-chlor, water, fltrd, ug/L (46342)	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)	Ben-flur-alin, water, fltrd, 0.7u GF ug/L (82673)	Car-baryl, water, fltrd, 0.7u GF ug/L (82680)	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)
JUL 17...	<.004	<.007	<.03	<.050	<.010	<.041	<.01	.029	<.006
Date	Cyflu-thrin, water, fltrd, ug/L (61585)	Cyper-methrin, water, fltrd, ug/L (61586)	DCPA, water, fltrd, 0.7u GF (82682)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)	Diaz-inon oxon, water, fltrd, ug/L (61638)	Diazi-non, water, fltrd, ug/L (39572)	Dicro-tophos, water, fltrd, ug/L (38454)	Diel-drin, water, fltrd, ug/L (39381)	Dimeth-enamid ESA, water, fltrd, ug/L (61951)
JUL 17...	<.008	<.009	<.003	<.004	<.01	<.005	<.08	<.005	<.05
Date	Dimeth-enamid OA, water, fltrd, ug/L (62482)	Dimeth-oate, water, fltrd, 0.7u GF ug/L (82662)	Ethion monoxon, water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Fenami-phos sulfone, water, fltrd, ug/L (61645)	Fenami-phos sulf-oxide, water, fltrd, ug/L (61646)	Fenami-phos, water, fltrd, ug/L (61591)	Desulf-inyl-fipro-nil amide, wat flt ug/L (62169)	Fipro-nil sulfide, fltrd, ug/L (62167)
JUL 17...	<.05	<.006	<.03	<.004	<.008	<.03	<.03	<.009	<.005
Date	Fipro-nil sulfone, water, fltrd, ug/L (62168)	Fipro-nil, water, fltrd, ug/L (62166)	Flufen-acet ESA, water, fltrd, ug/L (61952)	Flufe-nacet OA, water, fltrd, ug/L (62483)	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos, water, fltrd, ug/L (04095)	Hexa-zinone, water, fltrd, ug/L (04025)	Ipro-dione, water, fltrd, ug/L (61593)	Isofen-phos, water, fltrd, ug/L (61594)
JUL 17...	<.005	<.007	<.05	<.05	<.002	<.003	<.013	M	<.003
Date	Mala-oxon, water, fltrd, ug/L (61652)	Mala-thion, water, fltrd, ug/L (39532)	Meta-laxyl, water, fltrd, ug/L (61596)	Methi-althion, water, fltrd, ug/L (61598)	Methyl para-oxon, water, fltrd, ug/L (61664)	Methyl para-thion, water, fltrd, 0.7u GF ug/L (82667)	Metola-chlor ESA, water, fltrd, ug/L (61043)	Metola-chlor OA, water, fltrd, ug/L (61044)	Metola-chlor, water, fltrd, ug/L (39415)
JUL 17...	<.008	<.027	<.005	<.006	<.03	<.006	<.05	<.05	<.013

&lt; Actual value is known to be less than value shown.

M Presence verified, not quantified

## SAN JOAQUIN RIVER BASIN

373020120385201 MUSTANG CREEK 1.1 MILE SOUTH OF MONTE VISTA AVENUE, NEAR MONTPELIER, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	Metri- buzin, water, fltrd, ug/L (82630)	Myclo- butanil water, fltrd, ug/L (61599)	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)	Prome- ton, water, fltrd, ug/L (04037)	Prome- tryn, water, fltrd, ug/L (04036)
JUL 17...	<.006	.030	<.022	<.10	<.011	<.06	<.008	<.01	<.005
Date	Propy- zamide, water, fltrd 0.7u GF ug/L (82676)	Sima- zine, water, fltrd, ug/L (04035)	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	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)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Di- chlor- vos, water fltrd, ug/L (38775)	
JUL 17...	<.004	.009	<.02	<.07	<.02	<.01	<.009	<.01	

&lt; Actual value is known to be less than value shown.

## SAN JOAQUIN RIVER BASIN

373012120393401 MUSTANG CREEK BELOW RESERVOIR, NEAR OAKDALE ROAD, NEAR MONTPELIER, CA

LOCATION.—Lat 37°30'09", long 120°39'28", in SE 1/4 NW 1/4 sec.16, T.5 S., R.12 E., Merced County, Hydrologic Unit 18040002, 0.39 mi east of Oakdale Road and 3.2 mi southeast of Montpelier.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—December 2002 (discontinued).

CHEMICAL DATA: December 2002 (discontinued).

SEDIMENT DATA: December 2002 (discontinued).

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

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instan- taneous dis- charge, cfs (00061)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)
DEC										
16...	1530	13	748	5.7	6.6	126	11.8	7.92	2.47	12.3
17...	0930	16	756	7.8	6.3	135	10.8	8.94	2.90	12.6
20...	1110	5.1	759	9.6	6.3	105	7.1	7.36	2.31	8.80
20...	2000	3.5	761	7.5	6.6	193	9.1	10.5	3.14	11.6
Date		Sodium, water, fltrd, mg/L (00930)	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 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)
DEC										
16...		3.95	2.95	<.17	6.49	18.0	97	4.3	.14	1.06
17...		4.56	3.34	<.17	8.57	15.3	110	2.1	<.04	1.51
20...		3.32	2.66	<.17	7.30	11.2	91	2.1	<.04	.95
20...		5.12	4.17	<.17	10.4	12.2	114	1.8	<.04	.73
Date		Nitrite water, fltrd, mg/L as N (00613)	Partic- ulate nitro- gen, susp, water, mg/L (49570)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	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)
DEC										
16...		.024	3.12	.64	2.32	21.4	<.1	21.3	--	25
17...		.035	--	.45	1.00	--	--	--	--	71
20...		.015	.91	.40	1.18	6.7	.1	6.6	16.0	40
20...		.014	.70	.27	.67	4.3	<.1	4.3	16.4	53
Date		Mangan- ese, water, fltrd, ug/L (01056)	1-Naph- thol, water, fltrd 0.7u GF ug/L (49295)	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)	2Chloro -2',6'- diethyl acet- anilide water, wat flt ug/L (61618)	CIAT, water, fltrd, ug/L (04040)	2-Ethyl -6- methyl- aniline water, fltrd, ug/L (61620)	3,4-Di- chloro- aniline water, fltrd, ug/L (61625)	4Chloro 2methyl phenol, water, fltrd, ug/L (61633)
DEC										
16...		8.7	<.09	<.006	<.1	<.005	<.006	<.004	.025	<.006
17...		20.1	<.09	<.006	<.1	<.005	<.006	<.004	<.023	<.006
20...		10.7	<.09	<.006	<.1	<.005	<.006	<.004	<.021	<.006
20...		21.2	<.09	<.006	<.1	<.005	<.006	<.004	<.021	<.006

< Actual value is known to be less than value shown.

## SAN JOAQUIN RIVER BASIN

373012120393401 MUSTANG CREEK BELOW RESERVOIR, NEAR OAKDALE ROAD, NEAR MONTPELIER, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	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)	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)	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)
DEC									
16...	<.05	<.05	<.006	<.05	<.05	<.004	<.040	<.02	<.050
17...	<.05	<.05	<.006	<.05	<.05	<.004	<.050	<.02	<.050
20...	<.05	<.05	<.006	.05	<.05	<.004	<.041	<.02	<.050
20...	<.05	<.05	<.006	<.05	<.05	<.004	<.031	<.02	<.050
Date	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	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)	Cyflu-thrin, water, fltrd, ug/L (61585)	Cyper-methrin water, fltrd, ug/L (61586)	DCPA, water, fltrd 0.7u GF ug/L (82682)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)
DEC									
16...	<.010	<.041	<.06	.005	<.006	<.008	<.009	e.002	<.004
17...	<.010	<.041	<.06	.005	<.006	<.008	<.009	e.002	<.004
20...	<.010	e.004	<.06	.007	<.006	<.008	<.009	e.003	<.004
20...	<.010	<.041	<.06	<.011	<.006	<.008	<.009	<.003	<.004
Date	Diaz-inon oxon, water, fltrd, ug/L (61638)	Diazi-non, water, fltrd, ug/L (39572)	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)	Ethion monoxon fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)
DEC									
16...	--	.013	<.08	<.005	<.05	<.05	<.006	<.03	<.004
17...	--	.022	<.08	<.005	<.05	<.05	<.006	<.03	<.004
20...	<.04	<.021	<.08	<.005	<.05	<.05	<.006	<.03	<.004
20...	<.04	<.031	<.08	<.005	<.05	<.05	<.006	<.03	<.004
Date	Fenami-phos sulfone water, fltrd, ug/L (61645)	Fenami-phos sulf-oxide, water, fltrd, ug/L (61646)	Fenami-phos, water, fltrd, ug/L (61591)	Desulf-inyl fipro-nil amide, wat flt ug/L (62169)	Fipro-nil sulfide water, fltrd, ug/L (62167)	Fipro-nil sulfone water, fltrd, ug/L (62168)	Fipro-nil, water, fltrd, ug/L (62166)	Flufen- acet ESA, water, fltrd, ug/L (61952)	Flufe-nacet OA, water, fltrd, ug/L (62483)
DEC									
16...	<.008	<.03	<.03	<.009	<.005	<.005	<.007	<.05	<.05
17...	<.008	<.03	<.03	<.009	<.005	<.005	<.007	<.05	<.05
20...	<.008	<.03	<.03	<.009	<.005	<.005	<.007	<.05	<.05
20...	<.008	<.03	<.03	<.009	<.005	<.005	<.007	<.05	<.05
Date	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)	Ipro-dione, water, fltrd, ug/L (61593)	Isofen-phos, water, fltrd, ug/L (61594)	Mala-oxon, water, fltrd, ug/L (61652)	Mala-thion, water, fltrd, ug/L (39532)	Meta-laxyl, water, fltrd, ug/L (61596)	Methi- althion water, fltrd, ug/L (61598)	Methyl para-oxon, water, fltrd, ug/L (61664)
DEC									
16...	<.002	<.003	M	<.003	<.008	<.027	<.005	<.006	<.03
17...	<.002	<.003	M	<.003	<.008	<.027	<.005	<.006	<.03
20...	<.002	<.003	M	<.003	<.008	<.027	.020	<.006	<.03
20...	<.002	<.003	M	<.003	<.008	<.027	<.005	<.006	<.03

&lt; Actual value is known to be less than value shown.

e Estimated.

M Presence of material verified, but not quantified.

## SAN JOAQUIN RIVER BASIN

373012120393401 MUSTANG CREEK BELOW RESERVOIR, NEAR OAKDALE ROAD, NEAR MONTPELIER, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	Methyl- para- thion, water, fltrd 0.7u GF ug/L (82667)	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)	Metri- buzin, water, fltrd, ug/L (82630)	Myclo- butanil water, fltrd, ug/L (61599)	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)
DEC									
16...	<.006	<.05	<.05	e.007	<.006	.423	.029	<.10	<.011
17...	<.006	.08	<.05	.019	<.006	.290	e.020	<.10	<.011
20...	<.006	<.05	<.05	e.007	<.006	.384	e.022	<.10	<.011
20...	<.006	<.05	.06	.013	<.006	.290	<.022	<.10	<.011

Date	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)	Prome- ton, water, fltrd, ug/L (04037)	Prome- tryn, water, fltrd, ug/L (04036)	Propy- zamide, water, fltrd 0.7u GF ug/L (82676)	Sima- zine, water, fltrd, ug/L (04035)
DEC						
16...	<.06	<.008	<.01	.012	<.004	26.0
17...	<.06	<.008	<.01	.010	<.004	21.7
20...	<.06	<.008	<.01	.010	<.008	8.22
20...	<.06	<.008	<.01	<.011	<.007	19.2

Date	Tebu- thiuron water, fltrd 0.7u GF ug/L (82670)	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)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Di- chlor vos, water fltrd ug/L (38775)
DEC						
16...	<.02	<.07	<.02	<.01	.016	<.01
17...	<.02	<.07	<.02	<.01	.012	<.01
20...	<.02	<.07	<.02	<.01	.014	<.01
20...	<.02	<.07	<.02	<.01	.011	<.01

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Sus- sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge tons/ (80155)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)
DEC						
20...SS	1110	5.1	7.1	471	6.5	97
20...SS	2000	3.5	9.1	181	1.7	82

&lt; Actual value is known to be less than value shown.

e Estimated.

SS Suspended sediment data determined from a sample collected and processed according to National Water Quality Assessment (NAWQA) protocol.

## SAN JOAQUIN RIVER BASIN

372839120413901 MUSTANG CREEK AT BIFURCATION STRUCTURE, NEAR BALLICO, CA

LOCATION.—Lat 37°28'39", long 120°41'39", in SW 1/4 SE 1/4 sec.19, T.5 S., R.12 E., Merced County, Hydrologic Unit 18040002, near south end of Turlock airport, 1.6 mi north of Ballico.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—December 2002 to February 2004.

CHEMICAL DATA: December 2002 to February 2004.

SEDIMENT DATA: December 2002 to February 2004.

REMARKS.—Estimated pH and specific conductivity values are from laboratory analysis rather than field measurements.

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

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	
DEC										
20...	1340	758	7.5	6.5	245	8.4	14.4	4.91	21.4	
21...	0115	--	--	e7.5	e138	--	10.8	3.88	3.24	
Date	Time	Sodium, water, fltrd, mg/L (00930)	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 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)
DEC										
20...	11.0	11.1	<.17	15.0	14.9	193	3.5	1.23	2.26	
21...	8.88	8.78	<.17	9.21	8.0	93	.58	.11	1.58	
Date	Time	Nitrite water, fltrd, mg/L as N (00613)	Partic- ulate nitro- gen, susp, water, mg/L (49570)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	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)
DEC										
20...		.129	.70	.55	1.53	4.0	<.1	4.0	21.5	71
21...		.023	.11	.12	.193	1.4	<.1	1.3	17.0	128
Date	Time	Mangan- ese, water, fltrd, ug/L (01056)	1-Naph- thol, water, fltrd 0.7u GF ug/L (49295)	2,6-Di- ethyl- aniline water, fltrd 0.7u GF ug/L (82660)	2-[(2- Et-6-Me -Ph)- -amino] propan- 1-ol, 1-ol, ug/L (61615)	2Chloro -2',6'- diethyl acet- anilide water fltrd ug/L (61618)	CIAT, water, fltrd, ug/L (04040)	2-Ethyl -6- methyl- aniline water, fltrd, ug/L (61620)	3,4-Di- chloro- aniline water, fltrd, ug/L (61625)	4Chloro 2methyl phenol, water, fltrd, ug/L (61633)
DEC										
20...		3.2	<.09	<.006	<.1	<.005	<.006	<.004	.061	<.006
21...		21.8	<.09	<.006	<.1	<.005	<.006	<.004	.074	<.006
Date	Time	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 0.7u GF ug/L (49260)	Ala- chlor ESA, water, fltrd 0.7u GF ug/L (50009)	Ala- chlor OA, water, fltrd 0.7u GF ug/L (61031)	Ala- chlor OA, water, fltrd, ug/L (46342)	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)
DEC										
20...		.06	<.05	<.006	<.05	<.05	<.004	<.021	<.02	<.050
21...		--	--	<.006	--	--	<.004	<.021	<.02	<.050

e Estimated.

< Actual value is known to be less than value shown.

## SAN JOAQUIN RIVER BASIN

372839120413901 MUSTANG CREEK AT BIFURCATION STRUCTURE, NEAR BALLICO, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	Ben- flu- alin, water, fltrd 0.7u GF ug/L (82673)	Car- baryl, water, fltrd 0.7u GF ug/L (82680)	Chlor- pyrifos water, fltrd, ug/L (61636)	Chlor- pyrifos water, fltrd, ug/L (38933)	cis- Per- methrin water fltrd 0.7u GF ug/L (82687)	Cyflu- thrin, water, fltrd, ug/L (61585)	Cyper- methrin water, fltrd, ug/L (61586)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulf- inyl fipro- nil, water, fltrd, ug/L (62170)
DEC									
20...	<.010	e.007	<.06	<.006	<.006	<.008	<.009	<.003	<.004
21...	<.010	<.041	<.06	<.005	<.006	<.008	<.009	<.003	<.004
Date	Diaz- inon water, fltrd, ug/L (61638)	Diazi- non, water, fltrd, ug/L (39572)	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)	Ethion monoxon water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)
DEC									
20...	<.04	<.061	<.08	<.005	<.05	<.05	<.006	<.03	<.004
21...	<.04	<.021	<.08	<.005	--	--	<.006	<.03	<.004
Date	Fenami- phos sulfone water, fltrd, ug/L (61645)	Fenami- phos sulf- oxide, water, fltrd, ug/L (61646)	Fenami- phos, water, fltrd, ug/L (61591)	Desulf- inyl- fipro- nil amide, wat flt ug/L (62169)	Fipro- nil sulfide water, fltrd, ug/L (62167)	Fipro- nil sulfone water, fltrd, ug/L (62168)	Fipro- nil, water, fltrd, ug/L (62166)	Flufen- acet ESA, water, fltrd, ug/L (61952)	Flufe- nacet OA, water, fltrd, ug/L (62483)
DEC									
20...	<.008	<.03	<.03	<.009	<.005	<.005	<.007	<.05	<.05
21...	<.008	<.03	<.03	<.009	<.005	<.005	<.007	--	--
Date	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)	Ipro- dione, water, fltrd, ug/L (61593)	Isofen- phos, water, fltrd, ug/L (61594)	Mala- oxon, water, fltrd, ug/L (61652)	Mala- thion, water, fltrd, ug/L (39532)	Meta- laxyl, water, fltrd, ug/L (61596)	Methi- althion water, fltrd, ug/L (61598)	Methyl para- oxon, water, fltrd, ug/L (61664)
DEC									
20...	<.002	<.003	M	<.003	<.008	<.027	<.005	<.006	<.03
21...	<.002	<.003	M	<.003	<.008	<.027	<.005	<.006	<.03
Date	Methyl para- thion, water, fltrd 0.7u GF ug/L (82667)	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)	Metri- buzin, water, fltrd, ug/L (82630)	Myclo- butanil water, fltrd, ug/L (61599)	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)
DEC									
20...	<.006	<.05	<.05	e.011	<.006	.115	e.017	<.10	<.011
21...	<.006	--	--	.058	<.006	.119	.026	<.10	<.011

&lt; Actual value is known to be less than value shown.

e Estimated.

M Presence of material verified, but not quantified.



## SAN JOAQUIN RIVER BASIN

372839120413901 MUSTANG CREEK AT BIFURCATION STRUCTURE, NEAR BALLICO, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)	Prome- ton, water, fltrd, ug/L (04037)	Prome- tryn, water, fltrd, ug/L (04036)	Propy- zamide, water, fltrd 0.7u GF ug/L (82676)	Sima- zine, water, fltrd, ug/L (04035)
------	---	--	---	--	--	---

DEC						
20...	<.06	<.008	<.01	.010	<.006	7.80
21...	<.06	<.008	<.01	.009	<.005	8.68

Date	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	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)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Di- chlor- vos, water fltrd, ug/L (38775)
------	--	---	---	--	---	---

DEC						
20...	<.02	<.07	<.02	<.01	e.009	<.01
21...	<.02	<.07	<.02	<.01	.009	<.01

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Temper- ature, water, deg C (00010)	Sus- pended sedi- ment concen- tration mg/L (80154)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)
DEC				
20...SS	1340	8.4	155	83
21...SS	0115	--	248	99

&lt; Actual value is known to be less than value shown.

e Estimated.

SS Suspended sediment data determined from a sample collected and processed according to National Water Quality Assessment (NAWQA) protocol.

## SAN JOAQUIN RIVER BASIN

372839120413901 MUSTANG CREEK AT BIFURCATION STRUCTURE, NEAR BALLICO, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	UV absorb- ance, 254 nm, wat flt units /cm (50624)	SUVA, 254 nm, abs units/ meter (63162)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std, units (00400)	Specif. conduc- tance, wat unf us/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)
FEB									
04...	0250	.631	3.2	--	e7.3	--	--	37.2	12.6
04...	1200	.531	3.1	6.2	7.0	651	10.0	39.3	12.1
04...	1700	.525	3.0	5.8	7.0	515	10.5	31.8	9.50
04...	2350	.533	3.2	--	e7.3	--	--	27.9	8.36
05...	0800	.490	3.2	--	e7.2	--	--	23.8	7.23
18...	1430	.503	3.4	--	e7.4	--	--	14.6	4.72
18...	1750	.721	3.3	6.6	7.0	500	12.2	23.3	6.99
18...	2350	.550	3.2	--	e7.1	--	--	21.9	5.51
19...	0600	.507	3.2	--	e7.0	--	--	16.2	4.61
19...	1840	.543	3.0	--	e7.3	--	--	17.9	5.25
20...	1600	.579	3.7	5.5	6.8	256	12.4	18.5	5.37
23...	1540	.515	3.2	--	7.2	377	15.5	26.8	7.81
25...	1630	.623	3.4	8.6	7.1	315	11.5	22.1	6.63
25...	2350	.467	3.2	--	e7.1	--	--	14.8	3.90
26...	0600	.456	3.5	--	e7.1	--	--	11.9	3.38
26...	1500	.457	3.4	7.0	6.2	142	11.4	10.6	3.16
27...	1300	.358	3.3	7.0	6.0	133	11.4	10.3	3.03

Date	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	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 on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)
FEB									
04...	47.8	30.7	e115	35.2	<.2	31.6	70.3	385	.24
04...	59.2	26.0	e100	27.8	<.2	21.7	136	442	10.5
04...	47.7	23.2	e87.0	24.9	<.2	19.4	87.3	339	5.48
04...	42.4	20.6	e81.0	20.4	<.2	17.9	68.0	313	3.33
05...	35.8	18.4	e76.0	17.3	<.2	17.3	54.5	270	2.02
18...	23.2	13.3	e57.9	10.7	<.2	21.7	18.3	181	.04
18...	97.4	14.3	121	15.7	<.2	10.8	54.8	380	1.19
18...	27.2	10.7	49	9.65	<.2	10.0	36.0	213	1.02
19...	23.0	9.04	45	8.30	<.2	10.2	25.8	177	.68
19...	23.7	10.1	50	9.02	<.2	12.8	25.4	178	.75
20...	23.6	11.6	56	10.7	<.2	14.3	26.5	207	.41
23...	34.9	19.2	84	16.0	<.2	19.8	48.0	281	<.04
25...	26.7	15.5	76	16.4	<.2	15.7	36.2	240	e.03
25...	20.8	6.11	48	5.31	<.2	7.66	16.0	147	.35
26...	14.1	5.48	40	5.01	<.2	7.63	12.0	122	.20
26...	12.0	5.46	37	4.63	<.2	8.64	12.4	125	.17
27...	12.2	5.08	34	3.35	<.2	9.05	11.4	106	.05

e Estimated.

&lt; Actual value is known to be less than value shown.

## SAN JOAQUIN RIVER BASIN

372839120413901 MUSTANG CREEK AT BIFURCATION STRUCTURE, NEAR BALLICO, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, mg/L (49570)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L (00665)	Total nitrogen, wat unf ysis, mg/L (62855)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd total, mg/L (00688)	Organic carbon, suspnd total, mg/L (00689)
FEB									
04...	.83	.043	.31	.91	1.17	6.05	2.0	<.1	2.0
04...	5.25	.111	.49	.96	1.23	19.0	2.7	<.1	2.7
04...	4.43	.102	.50	.90	1.22	12.3	2.9	<.1	2.9
04...	4.59	.104	.49	.93	1.25	10.7	3.2	<.1	3.2
05...	3.89	.091	.56	.88	1.25	8.17	3.7	<.1	3.7
18...	1.57	.030	.83	.63	1.01	4.05	6.1	<.1	6.1
18...	6.01	.205	1.09	2.16	2.67	11.5	5.7	<.1	5.7
18...	3.95	.123	.98	1.71	2.39	8.64	6.0	<.1	5.9
19...	3.11	.119	1.03	1.68	2.37	6.87	6.2	<.1	6.2
19...	3.26	.102	.94	1.58	2.05	6.58	5.9	<.1	5.9
20...	3.74	.122	.66	1.68	2.17	6.90	4.4	<.1	4.4
23...	4.53	.026	.28	.99	1.27	6.67	1.5	<.1	1.5
25...	2.18	.019	.41	.947	1.13	4.67	2.6	<.1	2.6
25...	3.19	.080	1.41	1.65	2.07	6.59	7.3	<.1	7.3
26...	1.76	.072	1.00	1.55	2.04	4.93	6.3	<.1	6.3
26...	1.62	.043	1.19	1.15	1.64	4.26	6.8	<.1	6.8
27...	1.78	.035	.89	1.04	1.55	4.04	5.0	<.1	4.9

Date	Organic carbon, water, fltrd, ug/L (00681)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)	1-Naphthol, water, fltrd 0.7u GF (49295)	2,6-Diethyl- aniline water, fltrd 0.7u GF (82660)	2-[(2-Et-6-Me- -Ph)- -amino] propan- 1-ol, ug/L (61615)	2-[(2-Ethyl- -2',6'- 6methyl phenyl) amino]2 oxoESA ug/L (62850)	2Chloro- -2',6'- diethyl acet- anilide wat flt ug/L (61618)	CIAT, water, fltrd, ug/L (04040)
FEB									
04...	19.6	86	5.5	<.09	<.006	<.1	<.02	<.005	<.006
04...	16.9	90	4.2	<.09	<.006	<.1	<.02	<.005	<.006
04...	17.4	104	3.9	<.09	<.006	<.1	<.02	<.005	<.006
04...	16.4	85	3.0	<.09	<.006	<.1	<.02	<.005	<.006
05...	15.1	67	2.5	<.09	<.006	<.1	<.02	<.005	<.006
18...	15.0	44	5.5	<.09	<.006	--	<.02	<.005	<.006
18...	22.1	168	5.5	<.09	<.006	--	<.02	<.005	<.006
18...	17.1	100	14.7	<.09	<.006	--	<.02	<.005	<.006
19...	15.8	88	10.6	<.09	<.006	--	<.02	<.005	<.006
19...	18.2	107	6.2	<.09	<.006	--	<.02	<.005	<.006
20...	15.6	115	3.2	<.09	<.006	--	<.02	<.005	<.006
23...	15.9	61	2.4	<.09	<.006	--	<.02	<.005	<.006
25...	18.4	94	3.5	<.09	<.006	--	<.02	<.005	<.006
25...	14.8	77	9.1	e.01	<.006	--	<.02	<.005	<.006
26...	13.0	92	13.5	M	<.006	--	<.02	<.005	<.006
26...	13.4	87	14.8	M	<.006	--	<.02	<.005	<.006
27...	10.9	92	7.1	<.09	<.006	--	<.02	<.005	<.006

&lt; Actual value is known to be less than value shown.

e Estimated.

M Presence of material verified, but not quantified.

## SAN JOAQUIN RIVER BASIN

372839120413901 MUSTANG CREEK AT BIFURCATION STRUCTURE, NEAR BALLICO, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	2-Ethyl-6-methyl-aniline water, fltrd, ug/L (61620)	3,4-Di-chloro-aniline water, fltrd, ug/L (61625)	4Chloro-2methyl phenol, water, fltrd, ug/L (61633)	Aceto-chlor ESA, water, fltrd, 0.7u GF ug/L (61029)	Aceto-chlor OA, water, fltrd, 0.7u GF ug/L (61030)	Aceto-chlor SAA, water, fltrd, ug/L (62847)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor ESA SA, water, fltrd, ug/L (62849)	Ala-chlor ESA, water, fltrd, 0.7u GF ug/L (50009)
FEB									
04...	<.004	<.008	<.006	<.02	<.02	<.02	<.006	<.02	<.02
04...	<.004	.017	<.006	<.02	<.02	<.02	<.006	<.02	<.02
04...	<.004	.014	<.006	<.02	<.02	<.02	<.006	<.02	<.02
04...	<.004	.013	e.004	<.02	<.02	<.02	<.006	<.02	<.02
05...	<.004	.017	e.009	<.02	<.02	<.02	<.006	<.02	<.02
18...	<.004	.013	e.004	<.02	<.02	<.02	<.006	<.02	<.02
18...	<.004	.012	e.004	<.02	<.02	<.02	<.006	<.02	<.02
18...	<.004	.017	e.036	<.02	<.02	<.02	<.006	<.02	<.02
19...	<.004	.024	e.034	<.02	<.02	<.02	<.006	<.02	<.02
19...	<.004	.023	e.020	<.02	<.02	<.02	<.006	<.02	<.02
20...	<.004	.022	e.037	<.02	<.02	<.02	<.006	<.02	<.02
23...	<.004	.013	e.012	<.02	<.02	<.02	<.006	<.02	<.02
25...	<.004	.025	e.004	<.02	<.02	<.02	<.006	<.02	<.02
25...	<.004	.034	<.006	<.02	<.02	<.02	<.006	<.02	<.02
26...	<.004	.086	e.032	<.02	<.02	<.02	<.006	<.02	<.02
26...	<.004	.089	e.023	<.02	<.02	<.02	<.006	<.02	<.02
27...	<.004	<.015	e.009	<.02	<.02	<.02	<.006	<.02	<.02
Date	Ala-chlor OA, water, fltrd, ug/L (61031)	Ala-chlor SAA, water, fltrd, ug/L (62848)	Ala-chlor, water, fltrd, ug/L (46342)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl oxon, water, fltrd, ug/L (61635)	Azin-phos-methyl, water, fltrd, ug/L (82686)	Ben-flur-alin, water, fltrd, ug/L (82673)	Car-baryl, water, fltrd, ug/L (82680)	Chlor-pyrifos oxon, water, fltrd, ug/L (61636)
FEB									
04...	<.02	<.02	<.005	<.007	<.02	<.050	<.010	<.041	<.06
04...	<.02	<.02	<.005	--	<.02	<.050	<.010	<.041	<.06
04...	<.02	<.02	<.005	<.015	<.02	<.050	<.010	<.041	<.06
04...	<.02	<.02	<.005	<.009	<.02	<.050	<.010	<.041	<.06
05...	<.02	<.02	<.005	<.010	<.02	<.050	<.010	<.041	<.06
18...	<.02	<.02	<.005	e.006	<.03	<.050	<.010	<.041	<.06
18...	<.02	<.02	<.005	<.007	<.02	<.050	<.010	<.041	<.06
18...	<.02	<.02	<.005	--	<.02	<.050	<.010	<.041	<.06
19...	<.02	<.02	<.005	--	<.02	<.050	<.010	<.041	<.06
19...	<.02	<.02	<.005	--	<.02	<.050	<.010	<.041	<.06
20...	<.02	<.02	<.005	--	<.02	<.050	<.010	<.041	<.06
23...	<.02	<.02	<.005	--	<.02	<.050	<.010	<.041	<.06
25...	<.02	<.02	<.005	.020	<.03	<.050	<.010	<.041	<.06
25...	<.02	<.02	<.005	.013	<.03	<.050	<.010	e.019	<.06
26...	<.02	<.02	<.005	.012	<.03	<.050	<.010	e.010	<.06
26...	<.02	<.02	<.005	.012	<.03	<.050	<.010	e.009	<.06
27...	<.02	<.02	<.005	--	<.02	<.050	<.010	e.004	<.06

&lt; Actual value is known to be less than value shown.

e Estimated.

## SAN JOAQUIN RIVER BASIN

372839120413901 MUSTANG CREEK AT BIFURCATION STRUCTURE, NEAR BALLICO, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Chlor- pyrifos water, fltrd, ug/L (38933)	cis- Per- methrin water, 0.7u GF ug/L (82687)	Cyflu- thrin, water, fltrd, ug/L (61585)	Cyper- methrin water, fltrd, ug/L (61586)	DCPA, water, fltrd, 0.7u GF ug/L (82682)	Desulf- inyl fipro- nil, water, fltrd, ug/L (62170)	Diaz- inon oxon, water, fltrd, ug/L (61638)	Diazi- non, water, fltrd, ug/L (39572)	Dicro- tophos, water, fltrd, ug/L (38454)
FEB									
04...	.015	<.006	<.008	<.009	e.001	<.012	<.01	.085	<.08
04...	.017	.012	<.008	<.009	e.002	<.012	e.01	.091	<.08
04...	.014	.007	<.008	<.009	e.001	<.012	e.01	.080	<.08
04...	.013	<.007	<.008	<.009	e.001	<.012	<.01	.079	<.08
05...	.011	<.006	<.008	<.009	e.001	<.012	<.01	.077	<.08
18...	.009	<.006	<.008	<.009	e.002	<.012	<.01	.027	<.08
18...	.017	.016	<.008	<.009	e.002	<.012	<.01	.041	<.08
18...	.173	.012	<.008	<.009	e.002	<.012	<.01	.045	<.08
19...	.190	.007	<.008	<.009	e.002	<.012	<.01	.042	<.08
19...	.147	<.007	<.008	<.009	e.001	<.012	<.01	.037	<.08
20...	.102	<.006	<.008	<.009	e.001	<.012	<.01	.031	<.08
23...	.055	<.006	<.008	<.009	e.001	<.012	<.01	.024	<.08
25...	.041	<.006	<.008	<.009	e.002	<.012	<.01	.024	<.08
25...	.199	e.027	<.008	<.009	.004	<.012	.01	.042	<.08
26...	.300	e.015	<.008	<.009	.003	<.012	.01	.176	<.08
26...	.179	e.013	<.008	<.009	.003	<.012	.01	.134	<.08
27...	.115	<.007	<.008	<.009	e.002	<.012	M	.039	<.08
Date	Diel- drin, water, fltrd, ug/L (39381)	Dimeth- enamid ESA, water, fltrd, ug/L (61951)	Dimeth- enamid OA, water, fltrd, ug/L (62482)	Dimeth- enamid water, fltrd, ug/L (61588)	Dimeth- oate, water, fltrd, 0.7u GF ug/L (82662)	Ethion monoxon water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Fenami- phos sulfone fltrd, ug/L (61645)	Fenami- phos sulf- oxide, water, fltrd, ug/L (61646)
FEB									
04...	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008	<.03
04...	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008	<.03
04...	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008	<.03
04...	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008	<.03
05...	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008	<.03
18...	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008	<.03
18...	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008	<.03
18...	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008	<.03
19...	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008	<.03
19...	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008	<.03
20...	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008	<.03
23...	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008	<.03
25...	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008	<.03
25...	<.009	<.02	<.02	<.02	<.006	<.03	<.004	--	<.03
26...	<.009	<.02	<.02	<.02	<.006	<.03	<.004	--	<.03
26...	<.009	<.02	<.02	<.02	<.006	<.03	<.004	--	<.03
27...	<.009	<.02	<.02	<.02	<.006	<.03	<.004	--	<.03

&lt; Actual value is known to be less than value shown.

e Estimated.

M Presence of material verified, but not quantified.

## SAN JOAQUIN RIVER BASIN

372839120413901 MUSTANG CREEK AT BIFURCATION STRUCTURE, NEAR BALLICO, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Fenami- phos, water, fltrd, ug/L (61591)	Desulf- inyl- fipro- nil wat flt ug/L (62169)	Fipro- nil sulfide water, fltrd, ug/L (62167)	Fipro- nil sulfone water, fltrd, ug/L (62168)	Fipro- nil, water, fltrd, ug/L (62166)	Flufen- acet ESA, water, fltrd, ug/L (61952)	Flufe- nacet OA, water, fltrd, ug/L (62483)	Flufe- nacet, water, fltrd, ug/L (62481)	Fonofos oxon, water, fltrd, ug/L (61649)
	FEB								
04...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002
04...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002
04...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002
04...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002
05...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002
18...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002
18...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002
18...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002
19...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002
19...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002
20...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002
23...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002
25...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002
25...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002
25...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002
26...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002
26...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002
27...	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02	<.002

Date	Fonofos water, fltrd, ug/L (04095)	Hexa- zinone, water, fltrd, ug/L (04025)	Ipro- dione, water, fltrd, ug/L (61593)	Isufen- phos, water, fltrd, ug/L (61594)	Mala- oxon, water, fltrd, ug/L (61652)	Mala- thion, water, fltrd, ug/L (39532)	Meta- laxyl, water, fltrd, ug/L (61596)	Methi- althion water, fltrd, ug/L (61598)	Methyl para- oxon, water, fltrd, ug/L (61664)
	FEB								
04...	<.003	e.011	M	<.003	<.008	<.027	<.005	<.006	<.03
04...	<.003	.013	M	<.003	<.008	<.027	<.005	<.006	<.03
04...	<.003	e.010	M	<.003	<.008	<.027	<.005	<.006	<.03
04...	<.003	e.011	M	<.003	<.008	<.027	<.005	<.006	<.03
05...	<.003	e.011	M	<.003	<.008	<.027	<.005	<.006	<.03
18...	<.003	e.010	M	<.003	<.008	<.027	<.005	<.006	<.03
18...	<.003	e.009	M	<.003	<.008	<.027	<.005	<.006	<.03
18...	<.003	<.013	e2	<.003	<.008	<.027	<.005	<.006	<.03
19...	<.003	<.013	e2	<.003	<.008	<.027	<.055	<.006	<.03
19...	<.003	e.007	M	<.003	<.008	<.027	<.005	<.006	<.03
20...	<.003	<.013	M	<.003	<.008	<.027	<.005	<.006	<.03
23...	<.003	e.007	M	<.003	<.008	<.027	<.005	<.006	<.03
25...	<.003	<.013	M	<.003	<.008	<.027	<.005	<.006	<.03
25...	<.003	<.013	e94	<.003	<.008	<.027	<.005	<.006	<.03
26...	<.003	<.013	e42	<.003	<.008	<.027	<.005	<.006	<.03
26...	<.003	<.013	e34	<.003	<.008	<.027	<.005	<.006	<.03
27...	<.003	<.013	e20	<.003	<.008	<.027	<.005	<.006	<.03

&lt; Actual value is known to be less than value shown.

e Estimated.

M Presence of material verified, but not quantified.

## SAN JOAQUIN RIVER BASIN

372839120413901 MUSTANG CREEK AT BIFURCATION STRUCTURE, NEAR BALLICO, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Methyl- para- thion, water, fltrd 0.7u GF (82667)	Metola- chlor ESA, water, fltrd 0.7u GF (61043)	Metola- chlor OA, water, fltrd 0.7u GF (61044)	Metola- chlor, water, fltrd, ug/L (39415)	Metri- buzin, water, fltrd, ug/L (82630)	Myclo- butanil water, fltrd, ug/L (61599)	Pendi- meth- alin, water, fltrd 0.7u GF (82683)	Phorate oxon, water, fltrd, ug/L (61666)	Phorate water fltrd 0.7u GF (82664)
FEB									
04...	<.015	.04	.07	<.013	<.006	.030	<.022	<.10	<.011
04...	<.015	.05	.06	e.006	<.006	.043	<.022	<.10	<.011
04...	<.015	.05	.04	<.013	<.006	.039	<.022	<.10	<.011
04...	<.015	.06	.04	e.003	<.006	.041	<.022	<.10	<.011
05...	<.015	.03	.02	e.003	<.006	.041	<.022	<.10	<.011
18...	<.015	<.02	<.02	e.004	<.006	.026	e.011	<.10	<.011
18...	<.015	.18	.03	e.009	<.006	.033	e.027	<.10	<.011
18...	<.015	.03	<.02	e.005	<.006	.063	e.023	<.10	<.011
19...	<.015	.02	<.02	.051	<.006	.121	e.022	<.10	<.011
19...	<.015	.03	.03	.045	<.006	.118	e.021	<.10	<.011
20...	<.015	.03	.05	.032	<.006	.095	e.015	<.10	<.011
23...	<.015	.03	.06	.014	<.006	.082	<.022	<.10	<.011
25...	<.015	<.02	.04	e.011	<.006	.092	e.011	<.10	<.011
25...	<.015	<.02	<.02	e.009	<.006	.057	.070	<.10	<.011
26...	<.015	<.02	.04	.096	<.006	.084	.248	<.10	<.011
26...	<.015	<.02	<.02	.069	<.006	.118	.228	<.10	<.011
27...	<.015	<.02	<.02	.018	<.006	.166	e.045	<.10	<.011
Date	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)	Prome- ton, water, fltrd, ug/L (04037)	Prome- tryn, water, fltrd, ug/L (04036)	Propy- zamide, water, fltrd 0.7u GF (82676)	Propa- chlor ESA, water, fltrd 0.7u GF (62766)	Propa- chlor OA, water, fltrd 0.7u GF (62767)	Sima- zine, water, fltrd, ug/L (04035)	Tebu- thiuron water fltrd 0.7u GF (82670)
FEB									
04...	<.06	<.008	<.01	<.005	<.004	<.05	<.02	1.70	<.02
04...	e.01	<.008	<.01	<.005	<.004	<.05	<.02	7.67	<.02
04...	<.06	<.008	<.01	<.005	<.004	<.05	<.02	3.86	<.02
04...	<.06	<.008	<.01	<.005	<.004	<.05	<.02	2.74	<.02
05...	<.06	<.008	<.01	<.005	<.004	<.05	<.02	3.11	<.02
18...	<.06	<.008	<.01	<.005	<.004	<.05	<.02	1.94	<.02
18...	<.06	<.008	<.01	<.005	<.004	<.05	<.02	1.20	<.02
18...	<.06	<.008	<.01	<.005	<.004	<.05	<.02	12.0	<.02
19...	<.06	<.008	<.01	<.005	<.004	<.05	<.02	14.5	<.02
19...	<.06	<.008	<.01	<.005	<.004	<.05	<.02	21.4	<.02
20...	<.06	<.008	<.01	<.005	<.004	<.05	<.02	22.9	<.02
23...	<.06	<.008	<.01	<.005	<.004	<.05	<.02	13.2	<.02
25...	e.01	<.008	<.01	<.005	<.004	<.05	<.02	8.02	<.02
25...	<.06	--	<.01	<.005	<.004	<.05	<.02	6.13	<.02
26...	<.06	<.210	<.01	<.005	<.004	<.05	<.02	5.83	<.02
26...	<.06	--	<.01	<.005	<.004	<.05	<.02	10.3	<.02
27...	<.06	--	<.01	<.005	<.004	<.05	<.02	12.5	<.02

&lt; Actual value is known to be less than value shown.

e Estimated.

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD SITES

## SAN JOAQUIN RIVER BASIN

372839120413901 MUSTANG CREEK AT BIFURCATION STRUCTURE, NEAR BALLICO, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	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)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Di- chlor- vos, water fltrd, ug/L (38775)
FEB					
04...	<.07	<.02	<.01	e.003	<.01
04...	<.07	<.02	<.01	.010	<.01
04...	<.07	<.02	<.01	e.003	<.01
04...	<.07	<.02	<.01	e.003	<.01
05...	<.07	<.02	<.01	e.003	<.01
18...	<.07	<.02	<.01	e.003	<.01
18...	<.07	<.02	<.01	e.006	<.01
18...	<.07	<.02	<.01	e.006	<.01
19...	<.07	<.02	<.01	e.007	<.01
19...	<.07	<.02	<.01	e.005	<.01
20...	<.07	<.02	<.01	e.005	<.01
23...	<.07	<.02	<.01	e.004	<.01
25...	<.07	<.02	<.01	e.002	<.01
25...	<.07	<.02	<.01	e.002	<.01
26...	<.07	<.02	<.01	e.004	<.01
26...	<.07	<.02	<.01	e.008	<.01
27...	<.07	<.02	<.01	e.008	<.01

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	Temper- ature, water, deg C (00010)	sedi- ment concen- tration mg/L (80154)	Sus- pended ment, sieve diametr percent <.063mm (70331)
FEB				
04...SS	1200	10.0	84	96
04...SS	1700	10.5	67	100
04...SS	2350	--	87	95
05...SS	0800	--	110	97
18...SS	1430	--	102	92
18...SS	1750	12.2	78	98
19...SS	1840	--	136	99
20...SS	1600	12.4	89	100
23...SS	1540	15.5	72	99
25...SS	1630	11.5	68	99
25...SS	2350	--	199	100
26...SS	0600	--	278	100
26...SS	1500	11.4	250	99
27...SS	1300	11.4	310	100

&lt; Actual value is known to be less than value shown.

e Estimated.

SS Suspended sediment data determined from a sample collected and processed according to National Water Quality Assessment (NAWQA) protocol.



## SAN JOAQUIN RIVER BASIN

372829120420801 MUSTANG CREEK AT NEWPORT ROAD, NEAR BALLICO, CA

LOCATION.—Lat 37°28'29", long 120°42'08", in NE 1/4 NE 1/4 sec.25, T.5 S., R.12 E., Merced County, Hydrologic Unit 18040002, on left bank, on west side of Newport Road, 0.2 mi south of Linwood Road, and 1.4 mi north of Ballico.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—November 2002 to December 2002 (discontinued).

CHEMICAL DATA: November 2002 to December 2002 (discontinued).

SEDIMENT DATA: December 2002 (discontinued)

REMARKS.—Estimated pH and specific conductivity values are from laboratory analysis rather than field measurements.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)
NOV	08...	--	--	--	5.9	56	--	--	--	--
DEC	16...	--	750	8.0	6.5	25	12.5	1.24	.392	2.20
	17...	--	--	--	e7.2	e195	--	11.4	4.33	16.3
	20...	--	--	--	6.7	161	--	10.4	3.51	14.0
	20...	--	--	--	7.5	191	--	12.8	4.32	17.1
	20...	4.0	757	8.4	6.5	249	9.0	15.9	5.43	22.3
	20...	--	--	--	e7.2	e226	--	14.2	4.89	20.8

Date	Sodium, water, fltrd, mg/L (00930)	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 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, fltrd, mg/L as N (00631)
NOV	08...	--	--	--	--	--	2.5	1.19	.24
DEC	16...	.86	.53	<.17	1.43	30	1.5	.86	.22
	17...	10.3	8.49	<.17	12.9	139	3.6	1.09	1.70
	20...	7.52	6.73	<.17	11.7	143	2.1	.47	1.40
	20...	9.71	8.71	<.17	14.4	154	2.1	.36	1.53
	20...	11.6	13.3	<.17	17.5	193	2.7	.72	1.76
	20...	11.3	13.0	<.17	15.4	197	3.2	.98	2.22

Date	Nitrite water, fltrd, mg/L as N (00613)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	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)	Iron, water, fltrd, ug/L (01046)
NOV	08...	.029	--	.38	.51	--	--	--	--
DEC	16...	.017	--	.16	.22	--	--	--	117
	17...	.094	.77	1.17	1.57	<.1	4.7	--	230
	20...	.069	.39	.50	.68	<.1	2.7	14.1	92
	20...	.076	.49	.58	.89	<.1	3.9	15.2	96
	20...	.101	.59	.86	1.14	<.1	3.9	19.5	84
	20...	.123	.43	.98	1.36	<.1	3.4	18.1	102

e Estimated.

< Actual value is known to be less than value shown.

## SAN JOAQUIN RIVER BASIN

372829120420801 MUSTANG CREEK AT NEWPORT ROAD, NEAR BALLICO, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	Mangan- ese, water, fltrd, ug/L (01056)	1-Naph- thol, water, fltrd, ug/L (49295)	2,6-Di- ethyl- aniline water, fltrd, ug/L (82660)	2-[(2- Et-6-Me -Ph)- -amino] propan- 1-ol, wat flt ug/L (61615)	2Chloro -2',6'- diethyl acet- anilide wat flt ug/L (61618)	CIAT, water, fltrd, ug/L (04040)	2-Ethyl -6- methyl- aniline water, fltrd, ug/L (61620)	3,4-Di- chloro- aniline water, fltrd, ug/L (61625)	4Chloro 2methyl phenol, water, fltrd, ug/L (61633)
NOV 08...	--	<.09	<.006	<.1	<.005	<.006	<.004	.123	<.006
DEC 16...	2.7	<.09	<.006	<.1	<.005	<.006	<.004	.134	e.005
17...	11.0	<.09	<.006	<.1	<.005	<.006	<.004	.044	<.006
20...	2.9	<.09	<.006	<.1	<.005	<.006	<.004	.050	<.006
20...	2.8	<.09	<.006	<.1	<.005	<.006	<.004	.039	<.006
20...	3.3	<.09	<.006	<.1	<.005	<.006	<.004	.039	<.006
20...	3.2	<.09	<.006	<.1	<.005	<.006	<.004	.063	<.006
Date	Aceto- chlor ESA, water, fltrd, ug/L (61029)	Aceto- chlor OA, water, fltrd, ug/L (61030)	Aceto- chlor water, fltrd, ug/L (49260)	Ala- chlor ESA, water, fltrd, ug/L (50009)	Ala- chlor OA, water, fltrd, ug/L (61031)	Ala- chlor water, fltrd, ug/L (46342)	Atra- zine, water, fltrd, ug/L (39632)	Azin- phos- methyl oxon, water, fltrd, ug/L (61635)	Azin- phos- methyl, water, fltrd, ug/L (82686)
NOV 08...	--	--	<.006	--	--	<.004	<.007	<.02	<.050
DEC 16...	<.05	<.05	<.006	<.05	<.05	<.004	<.007	<.02	<.050
17...	<.05	<.05	<.006	<.05	<.05	<.004	<.007	<.02	<.050
20...	<.05	<.05	<.006	<.05	<.05	<.004	<.035	<.02	<.050
20...	<.05	<.05	<.006	<.05	<.05	<.004	<.007	<.02	<.050
20...	<.05	<.05	<.006	<.05	<.05	<.004	<.021	<.02	<.050
20...	.11	<.05	<.006	.06	.06	<.004	<.021	<.02	<.050
Date	Ben- flur- alin, water, fltrd, ug/L (82673)	Car- baryl, water, fltrd, ug/L (82680)	Chlor- pyrifos oxon, water, fltrd, ug/L (61636)	Chlor- pyrifos water, fltrd, ug/L (38933)	cis- Per- methrin water, fltrd, ug/L (82687)	Cyflu- thrin, water, fltrd, ug/L (61585)	Cyper- methrin water, fltrd, ug/L (61586)	DCPA, water, fltrd, ug/L (82682)	Desulf- inyl fipro- nil, water, fltrd, ug/L (62170)
NOV 08...	<.010	e.019	<.06	<.005	<.006	<.008	<.009	.006	<.004
DEC 16...	<.010	e.016	<.06	<.035	<.006	<.008	<.009	.005	<.004
17...	<.010	e.007	<.06	e.004	<.006	<.008	<.009	e.002	<.004
20...	<.010	<.041	<.06	.006	<.006	<.008	<.009	e.002	<.004
20...	<.010	<.041	<.06	e.004	<.006	<.008	<.009	e.002	<.004
20...	<.010	<.041	<.06	.005	<.006	<.008	<.009	<.003	<.004
20...	<.010	e.006	<.06	<.005	<.006	<.008	<.009	<.003	<.004
Date	Diaz- inon oxon, water, fltrd, ug/L (61638)	Diaz- inon, water, fltrd, ug/L (39572)	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, ug/L (82662)	Ethion monoxon water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)
NOV 08...	--	.019	<.08	<.005	--	--	<.006	<.03	<.004
DEC 16...	--	e.098	<.08	<.005	<.05	<.05	<.006	<.03	<.004
17...	--	.069	<.08	<.005	<.05	<.05	<.006	<.03	<.004
20...	--	.026	<.08	<.005	<.05	<.05	<.006	<.03	<.004
20...	--	.024	<.08	<.005	<.05	<.05	<.006	<.03	<.004
20...	<.04	<.041	<.08	<.005	<.05	<.05	<.006	<.03	<.004
20...	<.04	<.051	<.08	<.005	<.05	<.05	<.006	<.03	<.004

&lt; Actual value is known to be less than value shown.

e Estimated.

## SAN JOAQUIN RIVER BASIN

372829120420801 MUSTANG CREEK AT NEWPORT ROAD, NEAR BALLICO, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	Fenami-phos sulfone water, fltrd, ug/L (61645)	Fenami-phos sulf-oxide, water, fltrd, ug/L (61646)	Fenami-phos, water, fltrd, ug/L (61591)	Desulf-inyl-fipro-nil amide, wat flt ug/L (62169)	Fipro-nil sulfide water, fltrd, ug/L (62167)	Fipro-nil sulfone water, fltrd, ug/L (62168)	Fipro-nil, water, fltrd, ug/L (62166)	Flufen-acet ESA, water, fltrd, ug/L (61952)	Flufe-nacet OA, water, fltrd, ug/L (62483)
NOV 08...	<.008	<.03	<.03	<.009	<.005	<.005	<.007	--	--
DEC 16...	<.008	<.03	<.03	<.009	<.005	<.005	<.007	<.05	<.05
17...	<.008	<.03	<.03	<.009	<.005	<.005	<.007	<.05	<.05
20...	<.008	<.03	<.03	<.009	<.005	<.005	<.007	<.05	<.05
20...	<.008	<.03	<.03	<.009	<.005	<.005	<.007	<.05	<.05
20...	<.008	<.03	<.03	<.009	<.005	<.005	<.007	<.05	<.05
20...	<.008	<.03	<.03	<.009	<.005	<.005	<.007	<.05	<.05
Date	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)	Ipro-dione, water, fltrd, ug/L (61593)	Isofen-phos, water, fltrd, ug/L (61594)	Mala-oxon, water, fltrd, ug/L (61652)	Mala-thion, water, fltrd, ug/L (39532)	Meta-laxyl, water, fltrd, ug/L (61596)	Methi-althion water, fltrd, ug/L (61598)	Methyl para-oxon, water, fltrd, ug/L (61664)
NOV 08...	<.002	<.003	M	<.003	<.008	e.013	<.005	.006	<.03
DEC 16...	<.002	<.003	M	<.003	<.008	<.027	<.005	<.006	<.03
17...	<.002	<.003	M	<.003	<.008	<.027	<.005	<.006	<.03
20...	<.002	<.003	M	<.003	<.008	<.027	<.005	<.006	<.03
20...	<.002	<.003	M	<.003	<.008	<.027	<.005	<.006	<.03
20...	<.002	<.003	M	<.003	<.008	<.027	<.005	<.006	<.03
20...	<.002	<.003	M	<.003	<.008	<.027	<.005	<.006	<.03
Date	Methyl para-thion, water, fltrd, 0.7u GF ug/L (82667)	Metola-chlor ESA, water, fltrd, ug/L (61043)	Metola-chlor OA, water, fltrd, ug/L (61044)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Myclo-butanil, water, fltrd, ug/L (61599)	Pendi-meth-alin, water, fltrd, ug/L (82683)	Phorate oxon, water, fltrd, ug/L (61666)	Phorate water, fltrd, 0.7u GF ug/L (82664)
NOV 08...	<.010	--	--	<.013	<.006	.019	e.012	<.10	<.011
DEC 16...	<.006	<.05	<.05	<.013	<.006	.009	e.038	<.10	<.011
17...	<.006	.06	<.05	e.010	<.006	.023	e.023	<.10	<.011
20...	<.006	<.05	<.05	e.013	<.006	.123	.022	<.10	<.011
20...	<.006	.06	<.05	.015	<.006	.152	.024	<.10	<.011
20...	<.006	<.05	<.05	.015	<.006	.143	e.018	<.10	<.011
20...	<.006	<.05	.06	e.012	<.006	.121	<.022	<.10	<.011
Date	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)	Prome-ton, water, fltrd, ug/L (04037)	Prome-tryn, water, fltrd, ug/L (04036)	Propy-zamide, water, fltrd, 0.7u GF ug/L (82676)	Sima-zine, water, fltrd, ug/L (04035)			
NOV 08...		<.06	<.012	<.01	<.005	<.004	<.005		
DEC 16...		<.06	<.008	<.01	.023	<.004	.857		
17...		<.06	<.008	<.01	.013	<.004	.090		
20...		<.03	<.008	<.01	.009	.005	10.8		
20...		<.03	<.008	<.01	.009	e.004	14.9		
20...		<.06	<.008	<.01	.009	<.005	9.99		
20...		<.06	<.008	<.01	.010	<.005	8.27		

&lt; Actual value is known to be less than value shown.

M Presence of material verified, but not quantified.

e Estimated.

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD SITES

## SAN JOAQUIN RIVER BASIN

372829120420801 MUSTANG CREEK AT NEWPORT ROAD, NEAR BALLICO, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Ter- bufos sulfone water, fltrd, ug/L (61674)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Ter- buthyl- azine, water, fltrd, ug/L (04022)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Di- chlor vos, water fltrd ug/L (38775)
NOV 08...	<.02	<.07	<.02	<.01	e.005	<.01
DEC 16...	<.02	<.07	<.02	<.01	e.005	<.01
17...	<.02	<.07	<.02	<.01	e.006	<.01
20...	<.02	<.07	<.02	<.01	e.009	<.01
20...	<.02	<.07	<.02	<.01	.009	<.01
20...	<.02	<.07	<.02	<.01	e.009	<.01
20...	<.02	<.07	<.02	<.01	e.008	<.01

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Sus- sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment dis- charge tons/d (80155)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)
DEC 16...SS	1410	--	12.5	16	--	95
17...SS	0210	--	--	79	--	99
20...SS	0130	--	--	109	--	92
20...SS	0600	--	--	107	--	96
20...SS	1650	4.0	9.0	130	1.4	91
20...SS	2105	--	--	123	--	95

&lt; Actual value is known to be less than value shown.

e Estimated.

SS Suspended sediment data determined from a sample collected and processed according to National Water Quality Assessment (NAWQA) protocol.

## 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, on south side of paved levee road.

DRAINAGE AREA.—Indeterminate.

PERIOD OF RECORD.—Water years 1994, 2000, published in WDR-CA-03-3; 2001–03, published in WDR-CA-04-3; 2004.

CHEMICAL DATA: Water years 1994, 2000, 2001–04.

SEDIMENT DATA: Water year 2004.

REMARKS.—Discharge data provided by Turlock Irrigation District, not reviewed by U.S. Geological Survey. Discharge not available for water years 2002 and 2003.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
(NOT PREVIOUSLY PUBLISHED)

Date	Time	Instantaneous discharge, cfs (00061)	2,6-Diethyl-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-methyl, water, fltrd, 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd, 0.7u GF ug/L (82673)
JUN 20...	1110	e4.2	<.002	<.006	<.004	<.002	<.005	e.001	e.019	<.010
AUG 01...	1020	e.17	<.002	<.006	<.004	<.002	<.005	<.007	<.050	<.010
Date		Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd, ug/L (82680)	Carbo-furan, water, fltrd, ug/L (82674)	Chlor-pyrifos, water, fltrd, ug/L (38933)	cis-Per-methrin, water, fltrd, ug/L (82687)	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water, fltrd, ug/L (82682)	Diazi-non, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)
JUN 20...		<.002	<.041	<.020	e.003	<.006	<.018	<.003	e.001	<.005
AUG 01...		<.002	<.041	<.020	<.005	<.006	<.018	<.003	e.004	<.005
Date		Disul-foton, water, fltrd, ug/L (82677)	EPTC, water, fltrd, ug/L (82668)	Ethal-flur-alin, water, fltrd, ug/L (82663)	Etho-prop, water, fltrd, ug/L (82672)	Fonofos, water, fltrd, ug/L (04095)	Lindane, water, fltrd, ug/L (39341)	Linuron, water, fltrd, ug/L (82666)	Mala-thion, water, fltrd, ug/L (39532)	Methyl para-thion, water, fltrd, ug/L (82667)
JUN 20...		<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.006
AUG 01...		<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.006
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, ug/L (82669)	Pendi-meth-alin, water, fltrd, ug/L (82683)	Phorate, water, fltrd, ug/L (82664)
JUN 20...		e.002	<.006	<.005	<.007	<.003	<.007	<.002	<.010	<.011
AUG 01...		<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.011

e Estimated.

< Actual value is known to be less than value shown.

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD SITES

## SAN JOAQUIN RIVER BASIN

372323120481700 HIGHLINE CANAL SPILL NEAR HILMAR, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

(NOT PREVIOUSLY PUBLISHED)

Date	Prometon, water, fltrd, ug/L (04037)	Propy-zamide, 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)
JUN 20...	<.01	<.004	<.010	<.011	.04	e.004	<.02	<.034	<.02
AUG 01...	<.01	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02

Date	Ter-butyl-azine, water, fltrd, ug/L (04022)	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)
JUN 20...	U	e.002	<.002	<.009
AUG 01...	U	<.005	<.002	<.009

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Dis-solved oxygen, mg/L (00300)	pH, unfltrd field, std units (00400)	Specif. conduc-tance, wat unfltrd, uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	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)	2,5-Di-chloro-aniline water, fltrd, ug/L (61614)	
MAR 07...	0930	9.7	7.5	85	15.0	<.05	<.09	<.01	<.03	
Date		2,6-Di-ethyl-aniline water, fltrd, 0.7u GF ug/L (82660)	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)	2-Ethyl-6-methyl-aniline water, fltrd, ug/L (61620)	3-(Tri-fluoro-methyl)aniline water, fltrd, ug/L (61630)	3,4-Di-chloro-aniline water, fltrd, ug/L (61625)	3,5-Di-chloro-aniline water, fltrd, ug/L (61627)	3-Phen-oxy-benzyl alcohol water, fltrd, ug/L (61629)
MAR 07...		<.006	<.005	<.005	<.006	<.004	<.01	.576	.017	<.10
Date		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)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-Endo-sulfan, water, fltrd, ug/L (34362)	alpha-HCH, water, fltrd, ug/L (34253)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl oxon, water, fltrd, ug/L (61635)
MAR 07...		<.016	<.003	<.006	<.006	<.004	<.005	<.005	<.007	<.02

< Actual value is known to be less than value shown.  
e Estimated.  
U Material specifically analyzed for, but not detected.

## SAN JOAQUIN RIVER BASIN

372323120481700 HIGHLINE CANAL SPILL NEAR HILMAR, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

(NOT PREVIOUSLY PUBLISHED)

Date	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	beta-Endo-sulfan, water, fltrd ug/L (34357)	Bifen-thrin, water, fltrd ug/L (61580)	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 (61636)	Chlor-pyrifos, water, fltrd ug/L (38933)
MAR 07...	<.050	<.010	<.01	<.005	<.002	<.041	<.020	<.06	<.007
Date	cis-Per-methrin, water, fltrd 0.7u GF ug/L (82687)	cis-Propi-cona-zole, water, fltrd ug/L (79846)	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)	DCPA, water, fltrd 0.7u GF ug/L (82682)	Diazi-non, water, fltrd ug/L (39572)
MAR 07...	<.006	<.008	<.018	<.005	<.008	<.009	<.009	<.003	.026
Date	Dicro-tophos, water, fltrd ug/L (38454)	Diel-drin, water, fltrd ug/L (39381)	Dimeth-oate, water, fltrd 0.7u GF ug/L (82662)	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)	(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)
MAR 07...	<.08	<.005	<.006	<.02	<.002	<.02	<.02	<.004	<.006
Date	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	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)
MAR 07...	<.075	<.009	<.03	<.004	<.005	<.008	<.03	<.03	<.008
Date	Fen-thion, water, fltrd ug/L (38801)	Flume-tralin, water, fltrd ug/L (61592)	Fonofos oxon, water, fltrd ug/L (61649)	Fonofos, water, fltrd ug/L (04095)	Hexa-zinone, water, fltrd ug/L (04025)	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 (82666)
MAR 07...	<.02	<.004	<.002	<.003	e.010	M	<.003	<.004	<.035

&lt; Actual value is known to be less than value shown.

e Estimated.

M Presence of material verified, but not quantified.

## SAN JOAQUIN RIVER BASIN

372323120481700 HIGHLINE CANAL SPILL NEAR HILMAR, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

(NOT PREVIOUSLY PUBLISHED)

Date	Mala-oxon, water, fltrd, ug/L (61652)	Mala-thion, water, fltrd, ug/L (39532)	Meta-laxyl, water, fltrd, ug/L (61596)	Methi-althion, water, fltrd, ug/L (61598)	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, water, fltrd, ug/L (39415)
MAR 07...	<.008	<.027	<.005	.008	<.04	<.03	<.006	<.03	<.013
Date	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd, 0.7u GF ug/L (82671)	Myclo-butanil, water, fltrd, ug/L (61599)	Naprop-amide, water, fltrd, 0.7u GF ug/L (82684)	O-Et-O-Me-S-Pr-phos-thioate, wat flt ug/L (61660)	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)
MAR 07...	<.006	<.002	.044	<.007	<.008	.021	<.003	<.008	<.010
Date	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)	Pro-fenofos, water, fltrd, ug/L (61603)	Prome-ton, water, fltrd, ug/L (04037)
MAR 07...	<.004	2.08	<.10	<.011	<.06	<.008	<.005	<.006	<.01
Date	Prome-tryn, water, fltrd, ug/L (04036)	Propy-zamide, 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)	Sima-zine, water, fltrd, ug/L (04035)	Sulfo-tepp, water, fltrd, ug/L (61605)	Sulpro-fos, water, fltrd, ug/L (38716)
MAR 07...	<.005	<.004	<.010	<.011	<.02	<.004	.172	<.003	<.02
Date	Tebu-pirim-oxon, water, fltrd, ug/L (61669)	Tebu-thiuron, water, fltrd, 0.7u GF ug/L (82670)	Teflu-thrin metab-olite, wat flt ug/L (61671)	Teflu-thrin metab-olite, 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)	Ter-bufos-oxon sulfone, water, fltrd, ug/L (61674)	Terbu-fos, water, fltrd, 0.7u GF ug/L (82675)
MAR 07...	<.006	<.02	<.02	<.01	<.008	<.3	<.034	<.07	<.02

&lt; Actual value is known to be less than value shown.



## SAN JOAQUIN RIVER BASIN

372323120481700 HIGHLINE CANAL SPILL NEAR HILMAR, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

(NOT PREVIOUSLY PUBLISHED)

Date	Ter-butyl-azine, water, fltrd, ug/L (04022)	Thio-bencarb water, fltrd, 0.7u GF, ug/L (82681)	trans-Propiconazole, water, fltrd, ug/L (79847)	Tri-allate, water, fltrd, ug/L (82678)	Tribu-phos, water, fltrd, ug/L (61610)	Tri-flur-alin, water, fltrd, 0.7u GF, ug/L (82661)	(Z)-Di-morph, water, fltrd, ug/L (79845)	Di-chlorvos, water, fltrd, ug/L (38775)
MAR 07...	<.01	<.005	<.30	<.002	<.004	<.009	<.05	<.01

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

(NOT PREVIOUSLY PUBLISHED)

Date	Time	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unfltrd, 25 degC, uS/cm (00095)	Temper-ature, water, deg C (00010)	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)
DEC 20...	1820	758	8.7	6.8	359	9.0	6.4	1.61	1.13	.072
20...	2240	--	11.2	7.4	370	8.0	5.0	.42	1.07	.066
21...	1215	--	--	--	--	--	6.3	1.84	1.13	.069
Date		Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd, mg/L (00665)	1-Naph-thol, water, fltrd, 0.7u GF, ug/L (49295)	2,6-Di-ethyl-aniline, water, fltrd, 0.7u GF, ug/L (82660)	2-[(2-Et-6-Me-Ph)-amino]propan-1-ol, wat flt, ug/L (61615)	2Chloro-2',6'-diethyl anilide, wat flt, ug/L (61618)	CIAT, water, fltrd, ug/L (04040)	2-Ethyl-6-methyl-aniline, water, fltrd, ug/L (61620)	3,4-Di-chloro-aniline, water, fltrd, ug/L (61625)
DEC 20...		3.04	3.79	<.09	<.006	<.1	<.005	<.006	<.004	.218
20...		2.24	3.20	<.09	<.006	<.1	<.005	<.006	<.004	.143
21...		2.58	3.21	--	--	--	--	--	--	--
Date		4Chloro-2methyl phenol, water, fltrd, ug/L (61633)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	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)	Ben-flur-alin, water, fltrd, 0.7u GF, ug/L (82673)	Car-baryl, water, fltrd, ug/L (82680)	Chlor-pyrifos oxon, water, fltrd, ug/L (61636)
DEC 20...		<.006	<.006	<.004	<.090	<.02	<.050	<.010	<.041	<.06
20...		<.006	<.006	<.004	<.041	<.02	<.050	<.010	<.041	<.06
21...		--	--	--	--	--	--	--	--	--

&lt; Actual value is known to be less than value shown.

## SAN JOAQUIN RIVER BASIN

372323120481700 HIGHLINE CANAL SPILL NEAR HILMAR, CA—Continued

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

(NOT PREVIOUSLY PUBLISHED)

Date	Chlor- pyrifos water, fltrd, ug/L (38933)	cis- Per- methrin water, fltrd 0.7u GF ug/L (82687)	Cyflu- thrin, water, fltrd, ug/L (61585)	Cyper- methrin water, fltrd, ug/L (61586)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulf- inyl fipro- nil, water, fltrd, ug/L (62170)	Diaz- inon oxon, water, fltrd, ug/L (61638)	Diazi- non, water, fltrd, ug/L (39572)	Dicro- tophos, water fltrd, ug/L (38454)
DEC									
20...	<.009	<.006	<.008	<.009	<.003	<.004	<.04	<.021	<.08
20...	.007	<.006	<.008	<.009	<.003	<.004	<.04	<.021	<.08
21...	--	--	--	--	--	--	--	--	--
Date	Diel- drin, water, fltrd, ug/L (39381)	Dimeth- oate, water, fltrd 0.7u GF ug/L (82662)	Ethion monoxon water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Fenami- phos sulfone water, fltrd, ug/L (61645)	Fenami- phos sulf- oxide, water, fltrd, ug/L (61646)	Fenami- phos, water, fltrd, ug/L (61591)	Desulf- inyl fipro- nil amide, wat flt ug/L (62169)	Fipro- nil sulfide water, fltrd, ug/L (62167)
DEC									
20...	<.005	<.006	<.03	<.004	<.008	<.03	<.03	<.009	<.005
20...	<.005	<.006	<.03	<.004	<.008	<.03	<.03	<.009	<.005
21...	--	--	--	--	--	--	--	--	--
Date	Fipro- nil sulfone water, fltrd, ug/L (62168)	Fipro- nil, water, fltrd, ug/L (62166)	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)	Ipro- dione, water, fltrd, ug/L (61593)	Isofen- phos, water, fltrd, ug/L (61594)	Mala- oxon, water, fltrd, ug/L (61652)	Mala- thion, water, fltrd, ug/L (39532)	Meta- laxyl, water, fltrd, ug/L (61596)
DEC									
20...	<.005	<.007	<.002	<.003	M	<.003	<.008	<.027	<.005
20...	<.005	<.007	<.002	<.003	M	<.003	<.008	<.027	<.005
21...	--	--	--	--	--	--	--	--	--
Date	Methi- althion water, fltrd, ug/L (61598)	Methyl para- oxon, water, fltrd, ug/L (61664)	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)	Myclo- butanil water, fltrd, ug/L (61599)	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)
DEC									
20...	<.006	<.03	<.006	.182	<.006	.098	.210	<.10	<.011
20...	<.006	<.03	<.006	.187	<.006	.098	.168	<.10	<.011
21...	--	--	--	--	--	--	--	--	--
Date	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)	Prome- ton, water, fltrd, ug/L (04037)	Prome- tryn, water, fltrd, ug/L (04036)	Propy- zamide, water, fltrd 0.7u GF ug/L (82676)	Sima- zine, water, fltrd, ug/L (04035)	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Ter- bufos oxon sulfone water, fltrd, ug/L (61674)	
DEC									
20...	<.06	<.008	<.01	.014	<.006	22.7	<.02	<.07	
20...	<.06	<.008	<.01	.014	<.006	18.3	<.02	<.07	
21...	--	--	--	--	--	--	--	--	

&lt; Actual value is known to be less than value shown.

M Presence of material verified, but not quantified.

## SAN JOAQUIN RIVER BASIN

372323120481700 HIGHLINE CANAL SPILL NEAR HILMAR, CA—Continued  
WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
(NOT PREVIOUSLY PUBLISHED)

Date	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Ter- buthyl- azine, water, fltrd ug/L (04022)	Tri- flur- alin, water, fltrd ug/L (82661)	Di- chlor- vos, water fltrd ug/L (38775)
DEC				
20...	<.02	<.01	e.007	<.01
20...	<.02	<.01	e.009	<.01
21...	--	--	--	--

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
(NOT PREVIOUSLY PUBLISHED)

Date	Time	Temper- ature, water, deg C (00010)	Sus- pended sedi- ment concen- tration mg/L (80154)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)
DEC				
20...SS	1820	9.0	133	87
20...SS	2240	8.0	135	92
21...SS	1215	--	154	85

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	UV absorb- ance, 254 nm, dis- charge, cfs (00061)	SUVA, 254 nm, abs units/ mgC/L /meter (63162)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf std uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	
FEB									
20...	1730	e14	.557	3.1	757	10.7	7.4	314	
26...	1420	e75	.525	2.8	757	9.9	6.5	353	
27...	1350	e41	.487	3.1	762	10.6	6.4	216	
Date	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alka- linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	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)
FEB									
20...	19.1	5.99	38.5	11.9	63	17.0	<.2	9.20	26.8
26...	20.0	6.98	35.4	11.0	--	19.1	<.2	10.2	14.1
27...	14.0	4.24	22.1	7.87	51	9.81	.2	9.47	12.5

e Estimated.

&lt; Actual value is known to be less than value shown.

SS Suspended sediment data determined from a sample collected and processed according to National Water Quality Assessment (NAWQA) protocol.

## SAN JOAQUIN RIVER BASIN

372323120481700 HIGHLINE CANAL SPILL NEAR HILMAR, CA—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Residue on evap. at 180degC wat flt mg/L (70300)	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)	Particulate nitrogen, susp, water, mg/L (49570)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, wat unfltrd, by analysis, mg/L (62855)	Total carbon, carbon, suspnd sedimnt total, mg/L (00694)
FEB									
20...	222	1.71	2.73	.134	1.25	1.46	2.16	8.29	7.4
26...	246	4.98	2.65	.195	3.13	1.88	3.19	14.3	19.8
27...	157	1.39	2.13	.080	1.55	1.48	2.12	6.90	9.5
Date	Inorganic 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)	Manganese, water, fltrd, ug/L (01056)	1-Naphthol, water, fltrd, 0.7u GF ug/L (49295)	2,6-Diethyl-aniline water, fltrd, 0.7u GF ug/L (82660)	2-[(2-Et-6-Me-Ph)-amino]propan-1-ol, ug/L (61615)	2-[(2-Ethyl-6methylphenyl)amino]2 oxoESA, ug/L (62850)
FEB									
20...	<.1	7.4	17.9	101	4.5	<.09	<.006	--	<.02
26...	.2	19.6	19.0	115	6.9	e.01	<.006	--	<.02
27...	.3	9.2	15.7	74	3.6	<.09	<.006	--	<.02
Date	2Chloro-2',6'-diethylacet-anilide wat flt mg/L (61618)	CIAT, water, fltrd, ug/L (04040)	2-Ethyl-6-methyl-aniline water, fltrd, ug/L (61620)	3,4-Di-chloro-aniline water, fltrd, ug/L (61625)	4Chloro-2methyl phenol, water, fltrd, ug/L (61633)	Aceto-chlor ESA, water, fltrd, 0.7u GF ug/L (61029)	Aceto-chlor OA, water, fltrd, 0.7u GF ug/L (61030)	Aceto-chlor SAA, water, fltrd, ug/L (62847)	Aceto-chlor, water, fltrd, ug/L (49260)
FEB									
20...	<.005	<.006	<.004	.128	e.019	<.02	<.02	<.02	<.006
26...	<.005	<.006	<.004	.295	e.019	<.02	<.02	<.02	<.006
27...	<.005	<.006	<.004	.065	e.012	<.02	<.02	<.02	<.006
Date	Ala-chlor ESA SA, water, fltrd, ug/L (62849)	Ala-chlor ESA, water, fltrd, 0.7u GF ug/L (50009)	Ala-chlor OA, water, fltrd, 0.7u GF ug/L (61031)	Ala-chlor SAA, water, fltrd, ug/L (62848)	Ala-chlor, water, fltrd, ug/L (46342)	Azin-phos-methyl oxon, water, fltrd, ug/L (61635)	Azin-phos-methyl, water, fltrd, 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd, ug/L (82673)	Car-baryl, water, fltrd, 0.7u GF ug/L (82680)
FEB									
20...	<.02	<.02	<.02	<.02	<.005	<.02	<.050	<.010	<.041
26...	<.02	<.02	<.02	<.02	<.005	<.03	<.050	<.010	e.013
27...	<.02	<.02	<.02	<.02	<.005	<.02	<.050	<.010	e.004

< 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 2003 TO SEPTEMBER 2004

Date	Chlor-pyrifos water, fltrd, ug/L (61636)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water, fltrd, 0.7u GF ug/L (82687)	Cyflu-thrin, water, fltrd, ug/L (61585)	Cyper-methrin, water, fltrd, ug/L (61586)	DCPA, water, fltrd, 0.7u GF ug/L (82682)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)	Diaz-inon, water, fltrd, ug/L (61638)	Diazi-non, water, fltrd, ug/L (39572)
FEB									
20...	<.06	.090	<.008	<.008	<.009	e.002	<.012	<.01	.054
26...	<.06	.093	e.018	<.008	<.009	.003	<.012	.01	.045
27...	<.06	.130	<.006	<.008	<.009	e.003	<.012	<.01	.064
Date	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-enamid, water, fltrd, ug/L (61588)	Dimeth-oate, water, fltrd, 0.7u GF ug/L (82662)	Ethion monoxon, water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Fenami-phos sulfone, water, fltrd, ug/L (61645)
FEB									
20...	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004	<.008
26...	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004	--
27...	<.08	<.009	<.02	<.02	<.02	<.006	<.03	<.004	--
Date	Fenami-phos sulf-oxide, water, fltrd, ug/L (61646)	Fenami-phos, water, fltrd, ug/L (61591)	Desulf-inyl fipro-nil amide, wat flt ug/L (62169)	Fipro-nil sulfide, water, fltrd, ug/L (62167)	Fipro-nil sulfone, water, fltrd, ug/L (62168)	Fipro-nil, water, fltrd, ug/L (62166)	Flufen-acet ESA, water, fltrd, ug/L (61952)	Flufe-nacet OA, water, fltrd, ug/L (62483)	Flufe-nacet, water, fltrd, ug/L (62481)
FEB									
20...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
26...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
27...	<.03	<.03	<.029	<.013	<.024	<.016	<.02	<.02	<.02
Date	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos, water, fltrd, ug/L (04095)	Hexa-zinone, water, fltrd, ug/L (04025)	Ipro-dione, water, fltrd, ug/L (61593)	Isofen-phos, water, fltrd, ug/L (61594)	Mala-oxon, water, fltrd, ug/L (61652)	Mala-thion, water, fltrd, ug/L (39532)	Meta-laxyl, water, fltrd, ug/L (61596)	Methi-althion, water, fltrd, ug/L (61598)
FEB									
20...	<.002	<.003	e.012	M	<.003	<.008	<.027	<.005	<.006
26...	<.002	<.003	<.013	e45	<.003	<.008	<.027	<.005	<.006
27...	<.002	<.003	<.013	e10	<.003	<.008	<.027	<.005	<.006
Date	Methyl para-oxon, water, fltrd, ug/L (61664)	Methyl para-thion, water, fltrd, 0.7u GF ug/L (82667)	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)	Metri-buzin, water, fltrd, ug/L (82630)	Myclo-butanil, water, fltrd, ug/L (61599)	Pendi-meth-alin, water, fltrd, 0.7u GF ug/L (82683)	Phorate oxon, water, fltrd, ug/L (61666)
FEB									
20...	<.03	<.015	.03	.03	.032	<.006	.073	e.177	<.10
26...	<.03	<.015	<.02	.03	.019	.009	.067	.109	<.10
27...	<.03	<.015	.06	.06	.029	<.006	.073	e.117	<.10

&lt; Actual value is known to be less than value shown.

e Estimated.

M Presence of material verified, but not quantified.

## SAN JOAQUIN RIVER BASIN

372323120481700 HIGHLINE CANAL SPILL NEAR HILMAR, CA—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Phorate water fltrd 0.7u GF ug/L (82664)	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)	Prome- ton, water, fltrd, ug/L (04037)	Prome- tryn, water, fltrd, ug/L (04036)	Propy- zamide, water, fltrd 0.7u GF ug/L (82676)	Propa- chlor ESA, water, fltrd 0.7u GF ug/L (62766)	Propa- chlor OA, water, fltrd 0.7u GF ug/L (62767)	Sima- zine, water, fltrd, ug/L (04035)
FEB									
20...	<.011	<.06	<.008	<.01	<.005	<.004	<.05	<.02	e34.5
26...	<.011	e.05	<.200	<.01	<.005	<.004	<.05	<.02	7.31
27...	<.011	<.06	--	<.01	<.005	<.004	<.05	<.02	14.7

Date	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	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)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Di- chlor- vos, water fltrd, ug/L (38775)
FEB						
20...	<.02	<.07	<.02	<.01	e.006	<.01
26...	<.02	<.07	<.02	<.01	e.001	<.01
27...	<.02	<.07	<.02	<.01	e.006	<.01

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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 dis- charge, tons/d (80155)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)
FEB						
20...	SS	1730	e14	12.9	144	e5.4
26...	SS	1420	e75	12.2	354	e72
27...	SS	1350	e41	12.7	255	e28

&lt; Actual value is known to be less than value shown.

e Estimated.

SS Suspended sediment data determined from a sample collected and processed according to National Water Quality Assessment (NAWQA) protocol.

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# Conversion Factors

<b>Multiply</b>	<b>By</b>	<b>To obtain</b>
<b>Length</b>		
inch (in.)	$2.54 \times 10^1$	millimeter (mm)
	$2.54 \times 10^{-2}$	meter
foot (ft)	$3.048 \times 10^{-1}$	meter (m)
mile (mi)	$1.609 \times 10^0$	kilometer (km)
<b>Area</b>		
acre	$4.047 \times 10^3$	square meter (m <sup>2</sup> )
	$4.047 \times 10^{-1}$	square hectometer (hm <sup>2</sup> )
	$4.047 \times 10^{-3}$	square kilometer (km <sup>2</sup> )
square mile (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometer (km <sup>2</sup> )
<b>Volume</b>		
gallon (gal)	$3.785 \times 10^0$	liter (L)
	$3.785 \times 10^{-3}$	cubic meter (m <sup>3</sup> )
	$3.785 \times 10^0$	cubic decimeter (dm <sup>3</sup> )
million gallons (Mgal)	$3.785 \times 10^3$	cubic meter (m <sup>3</sup> )
	$3.785 \times 10^{-3}$	cubic hectometer (hm <sup>3</sup> )
cubic foot (ft <sup>3</sup> )	$2.832 \times 10^{-2}$	cubic meter (m <sup>3</sup> )
	$2.832 \times 10^1$	cubic decimeter (dm <sup>3</sup> )
cubic-foot-per-second-per-day [(ft <sup>3</sup> /s/d)]	$2.447 \times 10^3$	cubic meter (m <sup>3</sup> )
	$2.447 \times 10^{-3}$	cubic hectometer (hm <sup>3</sup> )
acre-foot (acre-ft)	$1.223 \times 10^3$	cubic meter (m <sup>3</sup> )
	$1.223 \times 10^{-3}$	cubic hectometer (hm <sup>3</sup> )
	$1.223 \times 10^{-6}$	cubic kilometer (km <sup>3</sup> )
<b>Flow rate</b>		
cubic foot per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liter (L/s)
	$2.832 \times 10^{-2}$	cubic meter per second (m <sup>3</sup> /s)
	$2.832 \times 10^1$	cubic decimeter per second (dm <sup>3</sup> /s)
gallon per minute (gal/min)	$6.309 \times 10^{-2}$	liter per second (L/s)
	$6.309 \times 10^{-5}$	cubic meter per second (m <sup>3</sup> /s)
	$6.309 \times 10^{-2}$	cubic decimeter per second (dm <sup>3</sup> /s)
million gallons per day (Mgal/d)	$4.381 \times 10^{-2}$	cubic meter per second
	$4.381 \times 10^1$	cubic decimeter per second (dm <sup>3</sup> /s)
<b>Mass</b>		
ton, short (2,000 lb)	$9.072 \times 10^{-1}$	megagram (Mg) or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32$$

