

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

# Water Resources Data California Water Year 2003

Volume 1

Southern Great Basin from Mexican Border to Mono Lake Basin,  
and Pacific Slope Basins from Tijuana River to Santa Maria River



Water-Data Report CA-03-1

# CALENDAR FOR WATER YEAR 2003

## 2002

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

## 2003

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

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

# **Water Resources Data California Water Year 2003**

## **Volume 1. Southern Great Basin from Mexican Border to Mono Lake Basin, and Pacific Slope Basins from Tijuana River to Santa Maria River**

By G.L. Pope, J. Agajanian, L.A. Caldwell, and G.L. Rockwell

Water-Data Report CA-03-1

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, District Chief, California.

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# WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

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## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

### 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 NWIS for the period of record shown for each station.

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record (Water Year)
09424050	Chemehuevi Wash Tributary near Needles	2.04	1960–62, 1966–68
09428530	Arch Creek near Earp	1.52	1961–71
10250600	Wildrose Creek near Wildrose Station	23.7	1961–73, 1975
10250800	Darwin Creek near Darwin	173	1963–89
10251000	Big Dip Creek near Stovepipe Wells	.95	1963–69
10251100	Salt Creek near Stovepipe Wells	—	1974–88
10251350	Horsethief Creek near Tecopa	3.06	1961–70
10251375	Amargosa River at Dumont Dunes, near Death Valley	3,284	1999–2001
10252300	China Spring Creek near Mountain Pass	.94	1961–72
10252330	Wheaton Wash near Mountain Pass	10.2	1965–68
10253080	Sunflower Wash near Essex	3.04	1963–70
10253320	Quail Wash near Joshua Tree	100	1964–71
10253350	Fortynine Palms Creek near Twentynine Palms	8.55	1963–71
10253540	Corn Springs Wash near Desert Center	24.1	1964–71
10253600	Eagle Creek at Eagle Mountain	7.74	1961–66
10254670	Alamo River at Drop No. 3, near Calipatria	—	1979–2003
10255200	Myer Creek Tributary near Jacumba	.11	1966–70
10255700	San Felipe Creek near Julian	89.2	1958–83
10255800	Coyote Creek near Borrego Springs	144	1951–83
10255805	Coyote Creek below Box Canyon, near Borrego Springs	154	1984–94
10255820	Yaqui Pass Wash near Borrego	.04	1965–69
10255850	Vallecito Creek near Julian	39.7	1964–83
10255885	San Felipe Creek near Westmorland	1,693	1961–91
10256000	Whitewater River at White Water	57.5	1949–79
10256050	Whitewater Municipal Water Company Diversion at White Water	—	1967–70, 1972–73, 1975–81
10256060	Whitewater River at White Water Cutoff, at White Water	59.1	1986–87, 1989–93
10256200	San Gorgonio River near Banning	14.8	1976–81
10256300	San Gorgonio River at Banning	44.2	1981
10256400	San Gorgonio River near White Water	154	1966–73, 1975–78
10257710	Chino Canyon Creek near Palm Springs	3.88	1975–85
10257800	Long Creek near Desert Hot Springs	19.6	1963–71
10258030	Tahquitz Creek at Palm Springs	—	1983
10258100	Palm Canyon Creek Tributary near Anza	.47	1967–73
10259600	Cottonwood Wash near Cottonwood Springs	.65	1960–72
10259920	Wasteway No. 1 near Mecca	—	1966–81
10260200	Pipes Creek near Yucca Valley	15.1	1958–71
10260400	Cushenbury Creek near Lucerne Valley	6.36	1957–71
10260620	Houston Creek above Lake Gregory, at Crestline	.35	1979–93
10260630	Abondigas Creek above Lake Gregory, at Crestline	1.15	1979–93
10260650	Houston Creek below Lake Gregory, at Crestline	2.68	1979–93
10261000	West Fork Mojave River near Hesperia	70.3	1905–22, 1930–71
10261100	Mojave River below Mojave River Fork Reservoir, near Hesperia	211	1972–74, 1981–97
10261900	Mojave River at Wild Crossing, near Helendale	957	1966–70
10262000	Mojave River near Hodge	1,091	1930–32, 1970–93
10263675	Big Rock Creek Wash at Highway 138, near Llano	53.1	1989–92
10264500	Little Rock Creek near Palmdale	78.0	1968
10264502	Peach Tree Creek near Littlerock	.04	1989–94
10264508	Somerset Creek at Palmdale	.50	1989–94
10264510	Inn Creek at Palmdale	.03	1989–94
10264530	Pine Creek near Palmdale	1.78	1989–94
10264550	City Ranch Creek near Palmdale	.39	1989–94
10264555	Estates Creek near Quartz Hill	.11	1989–94

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

## DISCONTINUED GAGING STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record (Water Year)
10264590	Cottonwood Creek near Rosamond	35.7	1965–72
10264600	Oak Creek near Mojave	15.8	1957–86
10264605	Joshua Creek near Mojave	3.83	1989–94
10264636	Sled Track Canal at Lancaster Boulevard, near Rogers Lake	—	1996–2001
10264640	Buckhorn Creek at East 120th Avenue, near Rogers Lake	—	1996–2001
10264658	Mojave Creek at Forbes Avenue, at Edwards Air Force Base	168	1996–2000
10264660	Mojave Creek at Rosamond Boulevard, at Edwards Air Force Base	175	1998–2001
10264675	Rogers Lake Tributary at Edwards Air Force Base	1.73	1989–2001
10264710	Goler Gulch near Randsburg	41.3	1966–72
10264740	Cache Creek near Mojave	96.5	1965–72
10264750	Pine Tree Creek near Mojave	33.5	1958–79
10264770	Cottonwood Creek near Cantil	163	1966–72
10264870	Little Lake Creek near Little Lake	8.60	1964–68
10264878	Ninemile Creek near Brown	10.4	1962–71
10265160	Little Hot Creek below Hot Springs, near Mammoth Lakes	6.37	1990–95
10265200	Convict Creek near Mammoth Lakes	18.2	1925–78
10265500	Owens River near Round Valley	425	1909–23, 1928–40
10265700	Rock Creek at Little Round Valley, near Bishop	35.8	1925–78
10267000	Pine Creek at Division Box, near Bishop	36.4	1922–79
10268000	Owens River at Pleasant Valley, near Bishop	583	1918–40
10268700	Silver Canyon Creek near Laws	19.7	1930–78
10270960	Coyote Creek near Bishop	25.8	1991–96
10271210	Bishop Creek below Powerplant No. 6, near Bishop	104	1936–90
10276000	Big Pine Creek near Big Pine	39.0	1921–78
10276002	Giroux Ditch lower below Big Pine	—	1975–78
10276500	Tinemaha Creek near Big Pine	27.3	1907–11
10277000	Birch Creek near Big Pine	11.7	1907–11
10277400	Owens River below Tinemaha Reservoir, near Big Pine	1,964	1975–84
10277500	Owens River near Big Pine	1,976	1912–74
10278000	Taboose Creek near Aberdeen	11.2	1906–11
10278500	Goodale Creek near Aberdeen	11.2	1906–11
10281500	Oak Creek near Independence	24.1	1906–11
10281800	Independence Creek below Pi Canyon Creek, near Independence	18.1	1923–78
10282000	Independence Creek near Independence	18.8	1907–11
10282480	Mazourka Creek near Independence	15.6	1961–72
10284800	Inyo Creek near Lone Pine	1.54	1968–73
10285500	Tuttle Creek near Lone Pine	14.0	1909–11
10285700	Owens River at Keeler Bridge, near Lone Pine	2,604	1961–79
10286000	Cottonwood Creek near Olancho	40.1	1906–11, 1914–18, 1920–38, 1960–78
10286001	Cottonwood Creek Penstock weir, near Lone Pine	—	1906–11, 1914–78
10286002	Cottonwood Creek Diversion to powerhouse	—	1939–50, 1974–78
10287070	Mill Creek below Lundy Lake, near Mono Lake	18.1	1942–90
10287290	Rush Creek below Agnew Lake, near June Lake	23.3	1951–90
10287400	Rush Creek above Grant Lake, near June Lake	51.3	1937–79
10287780	Lee Vining Creek below Poole Powerplant, near Lee Vining	26.3	1999–2001
10287900	Lee Vining Creek near Lee Vining	34.9	1935–79
10290000	Summers Creek near Bridgeport	8.26	1954–59
11010900	Wilson Creek Tributary near Dulzura	.61	1968–73
11011900	Potrero Creek Tributary near Barrett Junction	.78	1966–69
11012100	Miller Creek near Live Oak Springs	1.00	1962–64
11013000	Tijuana River near Dulzura	481	1937–90
11013500	Tijuana River near Nestor	1,695	1937–82
11013600	Jamul Creek at Lee Valley, near Jamul	2.26	1984–85, 1987–88
11013700	Jamul Creek Tributary near Jamul	2.47	1973

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## DISCONTINUED GAGING STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record (Water Year)
11014700	Telegraph Canyon Creek at Chula Vista	6.23	1973
11014850	Japacha Creek near Descanso	2.40	1965–67
11016000	Sweetwater River near Dehesa	112	1913–16
11021500	San Vicente Creek near Foster	66.0	1942
11022000	San Vicente Creek at San Vicente dam, at Foster	74.2	1937–41
11022350	Forester Creek at El Cajon	21.3	1983–93
11023200	San Clemente Canyon Creek at Miramar Naval Air Station	5.60	1973
11023250	Poway Creek near Poway	7.92	1978–87
11023310	Rattlesnake Creek at Poway	8.13	1978–89
11023315	Poway Creek Tributary at Oak Knoll Road, near Poway	.93	1972–75
11023318	Pomerado Creek at Glenoak Road, near Poway	2.43	1970–75
11023320	Pomerado Creek at Poway Road, near Poway	4.14	1971–75
11023325	Beeler Creek at Pomerado Road, near Poway	5.46	1978–89
11023330	Los Penasquitos Creek below Poway Creek, near Poway	31.2	1970–93
11023400	Carroll Creek near La Jolla	15.8	1985–86
11023450	Carmel Creek near Del Mar	1.11	1985–86
11023500	Santa Ysabel Creek near Santa Ysabel	12.5	1914
11024500	Black Canyon Creek near Mesa Grande	15.3	1914, 1923–24
11026000	Santa Ysabel Creek near San Pasqual	128	1957–80
11027000	Guejito Creek near San Pasqual	22.5	1947–82
11027500	Guejito Creek at San Pasqual	27.7	1915, 1917, 1947–56
11029000	San Dieguito River near San Pasqual	249	1956–65
11029500	San Dieguito River at Bernardo	269	1912–15
11030500	San Dieguito River near Del Mar	338	1984–89
11030730	Escondido Creek near Olivenhain	64.6	1973
11031000	San Luis Rey River near Warner Springs	33.6	1913–15
11031500	Agua Caliente Creek near Warner Springs	19.0	1961–87
11033000	West Fork San Luis Rey River near Warner Springs	25.5	1913–15, 1957–86
11035000	San Luis Rey River at Lake Henshaw, near Mesa Grande	206	1912–22
11037650	Pauma Valley Water Company diversion near Pauma Valley	—	1966–70, 1972–81
11037700	Pauma Creek near Pauma Valley	11.0	1965–81
11037701	Pauma Creek and Diversion near Pauma Valley	11.0	1965–81
11038500	San Luis Rey River near Pala	317	1909–11, 1913–15
11039100	San Luis Rey River Tributary near Pala	1.01	1966–73
11039600	Bubble-Up Creek near Pala	4.11	1991
11039800	San Luis Rey River at Couser Canyon Bridge, near Pala	364	1986–93
11040000	San Luis Rey River at Monserate Narrows, near Pala	373	1938–41, 1947–86
11040200	Keys Creek Tributary at Valley Center	7.65	1970–83, 1991
11040500	San Luis Rey River at Bonsall	456	1912–15
11040700	San Luis Rey River below Moosa Canyon, near Bonsall	499	1984–85
11041000	San Luis Rey River near Bonsall	513	1930–79
11042490	Wilson Creek above Vail Lake, near Radec	122	1990–94
11042520	Temecula Creek at Nigger Canyon, near Temecula	320	1923–48
11042600	Temecula Creek below Vail Dam	320	1978
11044500	Santa Margarita River near Fallbrook	644	1925–80
11044600	Santa Margarita River Tributary near Fallbrook	.52	1962–65
11044900	De Luz Creek near Fallbrook	47.5	1951–65, 1989–90, 2002–03
11045000	Santa Margarita River near De Luz Station	705	1925–26
11045050	Santa Margarita River at U.S. Marine Corps Diversion Dam, near Ysidora	710	1999–2001
11045370	O'Neill Lake Tributary near Fallbrook	.03	2001–03
11045600	O'Neill Lake Outlet Channel near Fallbrook	9.77	1998–2003
11045700	O'Neill Lake Spill Channel near Fallbrook	9.77	1998–2003
11046200	San Onofre Creek near San Onofre	34.6	1951–67

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

## DISCONTINUED GAGING STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record (Water Year)
11046310	San Mateo Creek near San Onofre	91.9	1951–52
11046350	Cristianitos Creek near San Clemente	29.0	1951–67
11046370	San Mateo Creek at San Onofre	132	1947–67, 1985
11046501	San Juan Creek near San Juan Capistrano plus canal	106	1955–71
11046550	San Juan Creek at San Juan Capistrano	117	1970–85
11047000	Arroyo Trabuco near San Juan Capistrano	35.7	1930–72, 1980–81
11047200	Oso Creek at Crown Valley Parkway, near Mission Viejo	14.0	1970–81
11047500	Aliso Creek at El Toro	7.92	1931–80
11047700	Aliso Creek at South Laguna	34.4	1983–87
11048000	Irvine Ranch Drainage Canal near Tustin	92.0	1931–40
11048555	San Diego Creek at Campus Drive, near Irvine	—	1978–79, 1983–85
11049600	Greenspot Pipeline near Mentone	—	1972–73
11051600	Santa Ana River spreading diversion near Mentone	213	1952–77
11054000	Mill Creek near Yucaipa (REVISED RECORDS IN WDR CA-92-1)	42.4	1920–38, 1948–86
11054600	Crafton near Mentone	—	1972–79
11056000	Santa Ana River near San Bernardino	306	1929–37, 1955–61
11056500	Little San Gorgonio River near Beaumont (REVISED RECORDS IN WDR CA-92-1)	1.74	1949–85
11057490	San Timoteo Creek at Loma Linda	125	1979–80
11058600	Waterman Canyon Creek near Arrowhead Springs	4.65	1912–14, 1920–85
11059000	Warm Creek Floodway at San Bernardino	75.1	1961–81
11059100	San Bernardino Water-Quality Control Plant at San Bernardino	—	1973–82
11060300	Lytle Creek at Channel, at San Bernardino	—	1929–30, 1932–57
11060500	Meeks and Daley Canal near Colton	—	1921–81
11062200	Fontana Union Water Co. Lytle Creek return flow channel near Fontana	—	1973–80
11062810	West San Bernardino County Water District Rialto Diversion near Fontana	—	1981
11063000	Cajon Creek near Keenbrook	40.6	1920–71, 1978–83
11064000	Lytle Creek (East Channel) at San Bernardino	—	1929–57
11065800	Warm Creek near Colton	198	1921–61
11065801	Warm Creek near Colton plus diversion	259	1920–61
11066050	Santa Ana River at Colton	740	1962–66
11066100	Lytle Creek West Channel at Colton	—	1929–45
11066440	Santa Ana River at Mission Boulevard, at Riverside	808	1971–82
11066478	Riverside Water-Quality Control Plant Weir No. 1	—	1973–81
11066479	Riverside Water-Quality Control Plant Weir No. 2	—	1973–81
11066480	Riverside Water-Quality Control Plant at Riverside Narrows, near Arlington	—	1966–81
11066500	Santa Ana River at Riverside Narrows, near Arlington	853	1929–73
11066550	Sheehan Diversion at Riverside Narrows, near Arlington	—	1964–65, 1967–68
11066950	Day Creek Diversion near Etiwanda	—	1966–69, 1971
11067000	Day Creek near Etiwanda	4.56	1929–72
11068000	Santa Ana River at Auburndale Bridge, near Corona	1,010	1961–68
11069300	South Fork San Jacinto River tributary near Valle Vista	2.20	1962–67
11069501	San Jacinto River near San Jacinto plus canals	141	1949–81, 1983–89
11070000	Bautista Creek near Hemet	39.6	1948–69
11070050	Bautista Creek at Valle Vista	48.5	1970–87
11070232	East Fork Pigeon Pass Creek at Heacock Street, near Sunnymead	.48	1970–75
11070240	Sunnymead Channel at Alessandro Boulevard, near Sunnymead	13.3	1970–75, 1990–93
11070256	Perris Valley Storm Drain at Nandino Avenue, near March Air Force Base	50.6	1970–75, 1990–93
11070262	Perris Valley Storm Drain Lateral "B" near March Air Force Base	10.6	1970–75, 1990–93
11070263	Unnamed creek tributary to Perris Reservoir near Moreno Valley	.46	1989–91
11070375	San Jacinto River at Railroad Canyon Weir, near Elsinore	562	1952–84
11070475	Salt Creek at Railroad Canyon Reservoir, near Elsinore	122	1970–78
11072000	Temescal Creek near Corona	164	1929–80
11072200	Temescal Creek at Corona	249	1968–74
11073000	San Antonio Creek near Claremont	16.5	1917–72

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

## DISCONTINUED GAGING STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record (Water Year)
11073200	San Antonio Creek below San Antonio Dam	26.9	1963–80
11073440	Chino Creek near Chino	107	1968–69
11073470	Cucamonga Creek near Upland	9.68	1929–75
11073500	Chino Creek near Prado	218	1929–40
11074500	Santa Ana River at county line, below Prado Dam	1,510	1919–42, 1945–60
11075610	Santa Ana River above spreading diversion, below Imperial Highway, near Anaheim	1,545	1998–2001
11075620	Santa Ana River spreading diversion, below Imperial Highway near Anaheim	1,493	1974–85, 1999–2001
11075730	Carbon Creek at Olinda	19.7	1931–38
11075740	Carbon Creek near Yorba Linda	20.1	1950–61
11077000	Santiago Creek near Villa Park	84.6	1921–63
11077001	Santiago Creek plus diversion near Villa Park	83.8	1921–31
11078100	Santa Ana River at Adams Avenue, near Costa Mesa	1,701	1975–77
11078110	Rubio Wash at Glendon Way	—	1973–75
11078120	Compton Creek at 120th Street	—	1974–75
11078130	Arcadia Wash at Grand Avenue	—	1974–75
11078140	Eaton Wash at Loftas Drive	—	1974–75
11078150	Limekiln Creek above Aliso Creek	—	1973–74
11078170	Puddingstone Creek below Puddingstone Dam	—	1974
11078190	Santa Fe Diversion Channel	—	1974
11078191	West Fork San Gabriel River below Cogswell Dam	—	1975
11080000	East Fork San Gabriel River at Camp Bonita	58.2	1928–32
11080500	East Fork San Gabriel River near Camp Bonita	84.6	1933–79
11081000	Bear Creek near Camp Rincon	28.2	1930–36
11081500	North Fork San Gabriel River at Camp Rincon	18.6	1930–36
11082000	West Fork San Gabriel River at Camp Rincon	104	1928–78
11083500	San Gabriel River near Azusa	214	1894, 1896–1959, 1961–66
11084000	Rogers Creek near Azusa	6.64	1918–62
11084500	Fish Creek near Duarte	6.36	1916–79
11085019	San Gabriel River below Valley Boulevard	—	1973–74
11086000	Dalton Creek near Glendora	7.24	1913–62
11086300	San Dimas Creek below San Dimas Dam	16.3	1957–78
11086400	San Dimas Creek near San Dimas	18.3	1917–56
11086500	Little Dalton Creek near Glendora	2.72	1939–68, 1970–71
11086990	San Jose Creek near El Monte	87.8	1965–78
11087100	Rio Hondo Flood Flow Channel at Whittier Narrows Dam	—	1966–70
11087195	San Jose Creek near Whittier	88.7	1929–64
11087500	San Gabriel River at Pico	447	1929–78
11088000	San Gabriel River at Spring Street, near Los Alamitos	472	1937–51, 1953–79
11089000	Brea Creek at Fullerton	23.6	1931–69
11090000	Fullerton Creek at Fullerton	7.50	1936–64
11090200	Fullerton Creek at Richman Avenue, at Fullerton	12.1	1960–77, 1979–81
11090500	Coyote Creek near Artesia	120	1930–63
11090700	Coyote Creek at Los Alamitos	150	1964–78
11093000	Pacoima Creek near San Fernando	28.3	1917–79
11093490	North Fork Mill Creek near La Canada	5.80	1966–73
11093500	Mill Creek near Colby Ranch	21.7	1931–34
11094000	Big Tujunga Creek below Mill Creek, near Colby Ranch (formerly Tujunga Creek)	64.9	1948–71
11094500	Big Tujunga Creek near Colby Ranch (formerly Tujunga Creek)	67.5	1931–50
11095000	Fox Creek near Colby Ranch	9.22	1931–37
11095500	Big Tujunga Creek near Sunland (formerly Tujunga Creek)	106	1917–77
11096000	Haines Creek near Tujunga	1.26	1917–34, 1936–61

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

## DISCONTINUED GAGING STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record (Water Year)
11096500	Little Tujunga Creek near San Fernando	21.1	1929–73
11097500	Los Angeles River at Los Angeles	514	1930–79
11098500	Los Angeles River near Downey	599	1928–78
11099500	Sawpit Creek near Monrovia	5.21	1916–61
11100000	Santa Anita Creek near Sierra Madre (REVISED RECORDS IN WDR CA-92-1)	9.71	1917–70
11100500	Little Santa Anita Creek near Sierra Madre	1.84	1916–62
11101000	Eaton Creek near Pasadena	6.47	1918–66
11101380	Alhambra Wash at Klingerman Street, near Montebello	15.2	1976–79
11101500	Rio Hondo near Montebello	116	1929–78
11102000	Mission Creek near Montebello	4.16	1930–77
11102500	Rio Hondo near Downey	143	1928–79
11103500	Ballona Creek near Culver City	89.5	1928–78
11105500	Malibu Creek at Crater Camp, near Calabasas	105	1982–88
11106000	Calleguas Creek at Camarillo	168	1929–31, 1955–58
11106400	Conejo Creek above Highway 101, near Camarillo	64.2	1973–83
11106500	Conejo Creek near Camarillo	69.8	1928–31
11107000	Honda Barranca near Somis	2.57	1955–63
11107500	Beardsley Wash near Somis	13.5	1954–58
11107860	Bouquet Creek near Saugus	51.6	1971–75, 2002–03
11107922	South Fork Santa Clara River at Saugus	43.4	1976–77
11108075	Castaic Creek above Fish Creek, near Castaic	37.0	1977–78, 1989–93
11108080	Fish Creek above Castaic Creek, near Castaic	27.2	1977–78, 1989–93
11108090	Elderberry Canyon Creek above Castaic Creek, near Castaic	2.50	1978, 1989–93
11108095	Necktie Canyon Creek above Castaic Creek, near Castaic	2.12	1977–78, 1989–93
11108130	Elizabeth Lake Canyon Creek above Castaic Lake, near Castaic	43.7	1977–78, 1989–93
11108135	Castaic Lagoon Parshall Flume near Castaic	138	1977–78, 1988–96
11108145	Castaic Creek near Saugus	184	1947–76
11108500	Santa Clara River at Los Angeles–Ventura County Line	625	1953–96
11109100	Piru Creek below Thorn Meadows, near Stauffer	22.5	1972–78
11109200	Middle Fork Lockwood Creek near Stauffer	5.50	1972–78
11109250	Lockwood Creek at gorge, near Stauffer	58.7	1972–81
11110000	Piru Creek near Piru	437	1912–13, 1928–56, 1969–74
11111500	Sespe Creek near Wheeler Springs	49.5	1948–97
11112500	Fillmore Irrigation Company Canal near Fillmore	—	1940–51, 1972–83
11113001	Sespe Creek and Fillmore Irrigation Company Canal	—	1927–85, 1990–93
11113900	Saticoy Diversion near Saticoy	—	1969–81, 1983–87
11114500	Matilija Creek above reservoir, near Matilija Hot Springs	50.7	1948–69
11115500	Matilija Creek at Matilija Hot Springs	54.6	1928–88
11116000	North Fork Matilija Creek at Matilija Hot Springs	15.6	1929–32, 1934–83
11116500	Ventura River near Ojai	70.7	1912–14, 1922–24, 1983–84
11116550	Ventura River near Meiners Oaks	76.4	1959–79, 1981–82, 1984–88
11117000	San Antonio Creek near Ojai	33.7	1928–32
11117600	Coyote Creek near Oak View	13.2	1959–88
11117800	Santa Ana Creek near Oak View	9.11	1959–88
11118000	Coyote Creek near Ventura	41.2	1928–32, 1934–58, 1970–82
11119660	San Ysidro Creek at Montecito	3.07	1980–83
11119700	Sycamore Creek at Santa Barbara	3.41	1971–72, 1980
11119760	Victoria Street drain at outlet, at Santa Barbara	0.62	1970–78
11119780	Arroyo Burro at Santa Barbara	6.65	1970–93
11119900	Atascadero Creek at Puente Road, near Goleta	3.86	1971–72

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

## DISCONTINUED GAGING STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Period of record (Water Year)
11120510	San Jose Creek at Goleta	9.42	1970–92, 1997–2000
11120520	San Pedro Creek at Goleta	3.21	1971–72
11120530	Tecolotito Creek near Goleta	4.42	1970–72, 1980–82, 1987–91
11120550	Gaviota Creek near Gaviota	18.8	1967–86
11120600	Jalama Creek near Lompoc	20.5	1966–82
11120700	Canada Honda Creek near Lompoc	3.09	1959–62
11120800	Canada Honda Creek near Point Arguello	8.47	1959–62
11124000	Santa Cruz Creek above Stuke Canyon	64.9	1947–52
11125000	Cachuma Creek near Santa Ynez	23.8	1951–62
11126500	Santa Agueda Creek near Santa Ynez	55.8	1941–71, 1977–78
11127000	San Lucas Creek near Santa Ynez	3.2	1953–54
11127500	Zanja de Cota Creek near Santa Ynez	13.8	1955–61
11128000	Santa Ynez River at Grand Avenue, near Santa Ynez	513	1955–65
11128400	Alisal Creek near Solvang	12.3	1955, 1957–72
11129000	Nojoqui Creek near Buellton	15.1	1953–54
11129500	Santa Ynez River at Buellton	611	1955–59
11130000	Zaca Creek at Buellton	39.4	1941–63
11130500	Santa Ynez River near Buellton	668	1952–74
11131000	Santa Ynez River at Santa Rosa Dam site, near Buellton	700	1955–64
11131500	Santa Ynez River at Coopers East Fork, near Lompoc	708	1955–76
11132000	Santa Ynez River below Santa Rita Creek, near Lompoc	733	1955–62
11134500	Santa Ynez River at 13th Street, near Lompoc	820	1955–75
11135000	Santa Ynez River at Pine Canyon, near Lompoc	884	1941–46, 1964–83
11135500	Santa Ynez River at barrier, near Surf	895	1947–65
11135800	San Antonio Creek at Los Alamos	34.9	1970–92, 1998–99, 2003–2004
11136000	San Antonio Creek at Harris	93.7	1941–55
11136050	San Antonio Creek above Barka slough, near Orcutt	114	1985–87
11136100	San Antonio Creek near Casmalia	135	1956–93, 1995–2003
11136150	San Antonio Creek Tributary near Casmalia	.28	1947–70
11136400	Wagon Road Creek near Stauffer	17.9	1972–78
11136480	Reyes Creek near Ventucopa	4.62	1972–78
11136500	Cuyama River near Ventucopa	89.9	1945–58
11136650	Aliso Canyon Creek near New Cuyama	16.1	1964–72
11137000	Cuyama River near Santa Maria	904	1930–62
11137400	Alamo Creek near Nipomo	83.3	1959–77
11137500	Alamo Creek near Santa Maria	86.6	1944–62
11137900	Huasna River near Arroyo Grande	10.3	1959–86
11138000	Huasna River near Santa Maria	117	1930–62
11138100	Cuyama River below Twitchell Dam	1,132	1959–83
11138500	Sisquoc River near Sisquoc	281	1943–99
11139000	La Brea Creek near Sisquoc	93.6	1944–73
11139350	Foxen Creek near Sisquoc	16.8	1966–73
11139500	Tepusquet Creek near Sisquoc	28.7	1944–87
11140585	Santa Maria River at Suey Crossing, near Santa Maria	—	1999
11140600	Bradley Ditch near Donovan Road, at Santa Maria	5.47	1970–92, 1998–99
11140800	Blosser Ditch near Donovan Road, at Santa Maria	—	1972–76
11141000	Santa Maria River at Guadalupe	1,741	1940–87

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

**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)
10260640	Lake Gregory at Crestline	2.66	1978–93
10287000	Mono Lake near Mono Lake	785	1912–90
11011000	Barrett Lake near Dulzura	245	1960–66, 1986–93
11013200	Rodriguez Reservoir at Rodriguez Dam, Baja California, Mexico	977	1937–90
11014550	Lower Otay Lake near Chula Vista	99.0	1945–59, 1972–93
11020600	El Capitan Lake near Lakeside	188	1936–66, 1972–93
11022100	San Vicente Reservoir near Lakeside	74.2	1947–61, 1973–98
11030020	Lake Hodges near Escondido	303	1945–68, 1972–93
11030700	Lake Wohlford near Escondido	7.96	1972–93
11117900	Lake Casitas near Casitas Springs	38.6	1986–87

**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 NWIS 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)
10254670	Alamo River at Drop No. 3, near Calipatria	—	C,T	1981–85
10254970	New River at International Boundary, at Calexico	—	C,T	1973–81
10256060	Whitewater River at White Water Cutoff, at White Water	59.1	WQ	1972–76, 1978–96
10261500	Mojave River at Lower Narrows, near Victorville	513	C,T	1962–81
10263675	Big Rock Creek Wash at Highway 138, near Llano	53.1	P	1989–92
10264502	Peach Tree Creek near Littlerock	.04	P	1989–94
10264508	Somerset Creek at Palmdale	.50	P	1989–94
10264510	Inn Creek at Palmdale	.03	P	1989–94
10264530	Pine Creek near Palmdale	1.78	P	1989–94
10264550	City Ranch Creek near Palmdale	.39	P	1989–94
10264555	Estates Creek near Quartz Hill	.11	P	1989–94
10264605	Joshua Creek near Mojave	3.83	P	1989–94
10264636	Sled Track Canal at Lancaster Boulevard, near Rogers Lake	—	P	1996–2000
10264646	South Drainage Bissell/Rosamond Hills near Edwards AFB	9.25	P	1996–2001
10264658	Mojave Creek at Forbes Avenue, at Edwards Air Force Base	168	P	1996–2001
10264675	Rogers Lake Tributary at Edwards Air Force Base	1.73	P	1989–2001
10265150	Hot Creek at flume, near Mammoth	68.3	C,T	1983–88
10277400	Owens River below Tinemaha Reservoir, near Big Pine	1,964	C,T	1975–81
11013500	Tijuana River near Nestor	1,695	T,S	1970–71, 1976, 1978
11022500	San Diego River near Santee	377	T,S	1970–78
11023000	San Diego River at Fashion Valley, at San Diego	429	T,S	1984
11030500	San Dieguito River near Del Mar	338	S	1984
11042000	San Luis Rey River at Oceanside	557	WQ,B,C, T,S	1969–93
11044300	Santa Margarita River at Fallbrook Public Utility Sump, near Fallbrook	620	WQ,C,T	1999–2003
11046000	Santa Margarita River at Ysidora	723	WQ,T,S	1969–78, 1980–83
11046500	San Juan Creek near San Juan Capistrano	106	T,S	1967–68, 1971, 1982
11046530	San Juan Creek at La Novia Street Bridge, at San Juan Capistrano	109	T,S	1986–93



## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

## DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS—CONTINUED

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Type of record	Period of record (Water Year)
11046550	San Juan Creek at San Juan Capistrano	117	T,S	1972–82, 1987
11047000	Arroyo Trabuco near San Juan Capistrano	35.7	T,S	1967, 1978
11047300	Arroyo Trabuco at San Juan Capistrano	54.1	T,S	1971–77, 1984–93
11048500	San Diego Creek at Culver Drive, near Irvine	41.8	T,S	1972–85
11048530	El Modena Irvine Channel near Irvine	—	T,S	1975–79
11048540	Peters Canyon Wash at Barranca Road, near Irvine	—	T,S	1975–79, 1983–85
11048550	San Diego Creek at Lane Road, near Irvine	—	T,S	1972–76
11048555	San Diego Creek at Campus Drive, near Irvine	—	T,S	1972–76, 1978–79, 1983–85
11051500	Santa Ana River near Mentone	210	WQ,C,T,S	1999–2001
11056200	Santa Ana River at Waterman Avenue, at San Bernardino	339	T,S	1977, 1979
11057000	San Timoteo Creek near Redlands	118	T,S	1977–78
11059100	San Bernardino Water-Quality Control Plant at San Bernardino	—	C	1973–80
11066480	Riverside Water-Quality Control Plant at Riverside Narrows, near Arlington	—	C	1970–82
11066500	Santa Ana River at Riverside Narrows, near Arlington	853	C,T	1968–69
11067890	Santa Ana River at Prado Park, near Corona	1,010	T,S	1976–80
11068000	Santa Ana River at Auburndale Bridge, near Corona	1,010	C,T	1968
11070240	Sunnymead Channel at Alessandro Boulevard near Sunnymead	13.3	P	1990–93
11070262	Perris Valley Storm Drain Lateral "B" near March Air Force Base	10.6	P	1991
11070263	Unnamed creek tributary to Perris Reservoir near Moreno Valley	.46	P	1990–91
11070270	Perris Valley Storm Drain at Nuevo Road, near Perris	93.3	P	1990–97
11073495	Cucamonga Creek near Mira Loma	75.8	WQ,C,T,S	1999–2000
11075600	Santa Ana River at Imperial Highway, near Anaheim	1,544	T,S	1973–77, 1979
11075610	Santa Ana River above spreading diversion, below Imperial Highway, near Anaheim	1,545	C,T,S	1999–2001
11075620	Santa Ana River spreading diversion, below Imperial Highway, near Anaheim	—	WQ,C,T	1974–85, 1996–2001
11075755	Santa Ana River at Ball Road, at Anaheim	1,587	T,S	1977–80
11075760	Santa Ana River near Katella Avenue, at Orange	1,593	T,S	1974–76
11078100	Santa Ana River at Adams Avenue, near Costa Mesa	1,701	T,S	1974–76
11102250	Mission Creek below Whittier Narrows Dam	—	C	1956–70
11103000	Los Angeles River at Long Beach	827	C,T	1979–84
11103010	Los Angeles River at Willow Street Bridge, at Long Beach	831	C,T	1974–75, 1981
11105850	Arroyo Simi near Simi	70.6	T,S	1970–71, 1974–78
11108500	Santa Clara River at Los Angeles–Ventura County Line	625	WQ,B,T,S	1969–88
11109550	Piru Creek above Frenchmans Flat	308	C	1972–80
11109600	Piru Creek above Lake Piru	372	WQ	1972–80
11109800	Piru Creek below Santa Felicia Dam	425	WQ,T	1969, 1974–80
11110000	Piru Creek near Piru	437	C,T	1970–71
11110500	Hopper Creek near Piru	23.6	T,S	1977–78
11113000	Sespe Creek near Fillmore	252	C,S	1967–78
11113500	Santa Paula Creek near Santa Paula	38.4	WQ,T	1969–80
11113900	Saticoy Diversion near Saticoy	—	C,T	1969–71, 1982–87
11113910	Santa Clara River at diversion, near Saticoy	—	C	1971
11114000	Santa Clara River at Montalvo	1,577	T,S	1969–85, 1989–93
11117500	San Antonio Creek at Casitas Springs	51.2	T,S	1977–78
11119745	Mission Creek at Rocky Nook Park, at Santa Barbara	6.60	T,S	1984–86
11120000	Atascadero Creek near Goleta	18.9	T,S	1982
11120500	San Jose Creek near Goleta	5.51	WQ	1978–91
11120510	San Jose Creek at Goleta	9.42	S	1982–85
11120530	Tecolotito Creek near Goleta	4.42	S	1982
11120600	Jalama Creek near Lompoc	20.5	T	1981–83
11120900	Canada Honda Creek at Pt. Arguello	—	T	1981–83
11125500	Lake Cachuma near Santa Ynez	417	WQ	1998

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

**DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS—CONTINUED**

Station No.	Station name	Drainage area (mi <sup>2</sup> )	Type of record	Period of record (Water Year)
11129800	Zaca Creek near Buellton	32.8	WQ	1997
11134800	Miguelito Creek at Lompoc	11.6	WQ	1980–86, 1988–97
11136100	San Antonio Creek near Casmalia	135	WQ,T	1978–2003
11140585	Santa Maria River at Suey Crossing, near Santa Maria	—	S	1999–2000
11141000	Santa Maria River at Guadalupe	1,741	T,S	1969–70

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

**WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003**  
**VOLUME 1—SOUTHERN GREAT BASIN FROM MEXICAN BORDER TO MONO LAKE BASIN,**  
**AND PACIFIC SLOPE BASINS FROM TIJUANA RIVER TO SANTA MARIA RIVER**

*By G.L. Pope, J. Agajanian, L.A. Caldwell, and G.L. Rockwell*

## **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 193 streamflow-gaging stations and 11 partial-record stations; (2) stage and content records for 22 lakes and reservoirs; (3) gage-height records for 2 stations; (4) precipitation records for 1 station; and (5) water-quality records for 59 streamflow-gaging stations and water-quality partial-record stations. Records included for stream stages are only a small fraction of those obtained during the water year.

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

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

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

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

## **COOPERATION**

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

Antelope Valley-East Kern Water Agency, Russell E. Fuller, General Manager.

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Borrego Water District, Tom Weber, General Manager.  
 California Department of Water Resources, Thomas M. Hannigan, Director.  
 Casitas Municipal Water District, John J. Johnson, General Manager.  
 Chino Basin Water Conservation District, Barrett Kehl, General Manager.  
 Coachella Valley Water District, Mr. Steve Robbins, General Manager-Chief Engineer.  
 Desert Water Agency, Dan M. Ainsworth, General Manager.  
 Eastern Municipal Water District, Anthony J. Pack, General Manager.  
 Goleta Water District, Kevin D. Walsh, General Manager and Chief Engineer.  
 Imperial County Department of Public Works, Timothy B. Jones, Director.  
 Imperial Irrigation District, Michael King, Manager, Water Department.  
 Lompoc, city of, James Beck, Utility Director.  
 Los Angeles County Department of Public Works, James A. Noyes, Director.  
 Mojave Water Agency, Kirby Brill, General Manager.  
 Mono County, Energy Management Department, Daniel L. Lyster, Director.  
 Montecito Water District, General Manager.  
 Oceanside, city of, Marla Doyle, City Engineer.  
 Orange County Public Facilities and Resources Department, Vicki L. Wilson, Director.  
 Orange County Water District, Virginia Grebbien, General Manager.  
 Padre Dam Municipal Water District, August A. Caires, General Manager.  
 Pechanga Indian Reservation, Mark A. Macarro, Tribal Chairman.  
 Riverside County Flood Control and Water Conservation District, Warren Williams, General Manager-Chief Engineer.  
 San Bernardino Environmental Public Works Agency-Flood Control District, Ken A. Miller, Director.  
 San Bernardino Valley Municipal Water District, Robert L. Reiter, General Manager-Chief Engineer.  
 San Diego, city of, Larry Gardner, Water Utilities Director.  
 San Diego County Flood Control District, Doug Isbell, Manager.  
 San Juan Basin Authority, Donald J. Martinson, Administrator.  
 Santa Barbara, city of, Department of Public Works, Anthony J. Nisich, Director.  
 Santa Barbara County Flood Control and Water Conservation District and Water Agency, Thomas D. Fayram, Deputy Director.  
 Santa Margarita River Watershed, James S. Jenks, Watermaster.  
 Santa Maria Valley Water Conservation District, Debi Askew, Secretary.  
 Santa Ynez River Water Conservation District, Bruce A. Wales, General Manager.  
 Sweetwater Authority, Mr. Dennis A. Bostad, General Manager.  
 United Water Conservation District, Ms. Dana L. Wisehart, General Manager.  
 Ventura County Public Works Agency, Ronald C. Coons, Director.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army; Bureau of Reclamation, U.S. Department of the Interior; Edwards Air Force Base, U.S. Air Force; and Camp Pendleton and Twentynine Palms Marine Corps Bases, U.S. Marine Corps.

The following organizations aided in collecting records: California Department of Water Resources, Southern California Edison Co., and United Water Conservation District.

## **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

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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 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.

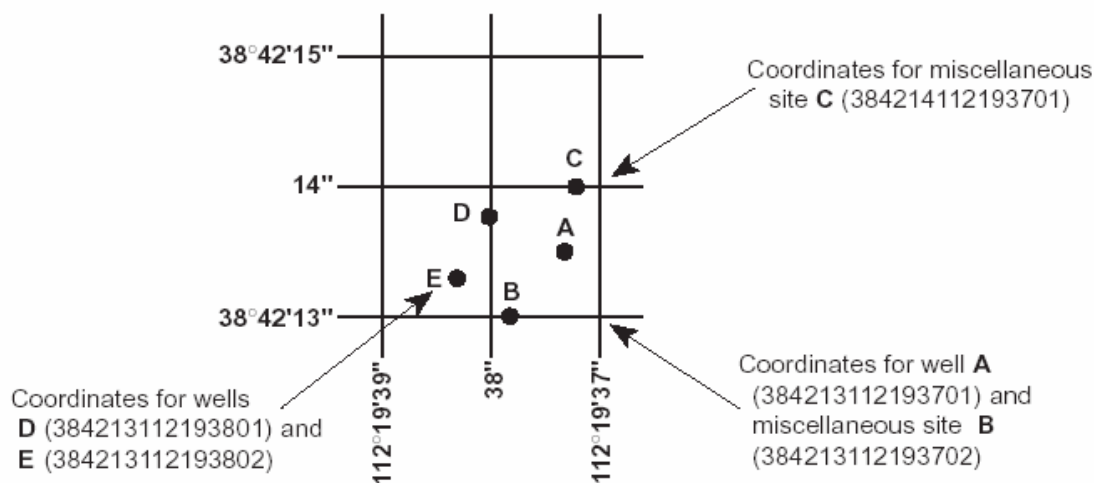


Figure 1. System for numbering wells and miscellaneous sites (latitude and longitude).

### 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

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of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment (NAWQA) Program; (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program may be accessed from <http://water.usgs.gov/nasqan/>.

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

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

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

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

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

## EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS

### Data Collection and Computation

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and volume of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that is either downloaded electronically in the field to a laptop computer or similar device or is transmitted using telemetry such as GOES satellite, land-line or cellular-phone modems, or by radio transmission. Measurements of discharge are made with a current meter or acoustic Doppler current profiler, using the general methods adopted by the USGS. These methods are described in standard textbooks, USGS Water-Supply

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Paper 2175, and the Techniques of Water-Resources Investigations of the United States Geological Survey (TWRIs), Book 3, Chapters A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

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

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

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

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

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

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

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

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

### Data Presentation

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

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### Station Manuscript

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

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

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

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

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

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

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

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

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

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

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

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

### Peak Discharge Greater than Base Discharge

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



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### Data Table of Daily Mean Values

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

### Statistics of Monthly Mean Data

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

### Summary Statistics

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

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

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

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

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

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

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

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

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

ANNUAL 7-DAY MINIMUM.—The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1–March 31). The date shown in the summary statistics table is the initial date of the 7-day period.

This value should not be confused with the 7-day 10-year low-flow statistic.

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

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

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

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

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

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

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

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

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

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

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

### **Identifying Estimated Daily Discharge**

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

### **Accuracy of Field Data and Computed Results**

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

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

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

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).

## 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.

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

### EXPLANATION OF WATER-QUALITY RECORDS

#### Collection and Examination of Data

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

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

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

#### Water Analysis

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

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

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

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

### SURFACE-WATER-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.

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

### Accuracy of the Records

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

Rating classifications for continuous water-quality records

[ $\leq$ , less than or equal to;  $\pm$ , plus or minus value shown;  $^{\circ}$ C, degree Celsius;  $>$ , greater than; %, percent; mg/L, milligram per liter; pH unit, standard pH unit]

Measured physical property	Rating			
	Excellent	Good	Fair	Poor
Water temperature	$\leq \pm 0.2$ $^{\circ}$ C	$> \pm 0.2$ to 0.5 $^{\circ}$ C	$> \pm 0.5$ to 0.8 $^{\circ}$ C	$> \pm 0.8$ $^{\circ}$ C
Specific conductance	$\leq \pm 3\%$	$> \pm 3$ to 10%	$> \pm 10$ to 15%	$> \pm 15\%$
Dissolved oxygen	$\leq \pm 0.3$ mg/L	$> \pm 0.3$ to 0.5 mg/L	$> \pm 0.5$ to 0.8 mg/L	$> \pm 0.8$ mg/L
pH	$\leq \pm 0.2$ unit	$> \pm 0.2$ to 0.5 unit	$> \pm 0.5$ to 0.8 unit	$> \pm 0.8$ unit
Turbidity	$\leq \pm 5\%$	$> \pm 5$ to 10%	$> \pm 10$ to 15%	$> \pm 15\%$

### Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

### On-Site Measurements and Sample Collection

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

### Water Temperature

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

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

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

### Sediment

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

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

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

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

### Laboratory Measurements

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

### Data Presentation

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

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

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

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

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

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

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

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

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

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

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

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

### Water-Quality Control Data

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

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

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

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

### Blank Samples

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

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

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

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

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

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

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

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

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

### Reference Samples

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

### Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. Many types of replicate samples are possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this district are:

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

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

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

### Spike Samples

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

## ACCESS TO USGS WATER DATA

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

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



# WATER RESOURCES DATA—CALIFORNIA, 2003

## DEFINITION OF TERMS

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

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

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

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

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

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

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

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

**Annual 7-day minimum** is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year

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

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

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

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

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

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

## WATER RESOURCES DATA—CALIFORNIA, 2003

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

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

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

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

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

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

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

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

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

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

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

**Bottom material** (See “[Bed material](#)”)

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

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

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

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

pi ( $\pi$ ) is the ratio of the circumference to the diameter of a circle;  $\pi = 3.14159\dots$

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

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

## WATER RESOURCES DATA—CALIFORNIA, 2003

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

**Cfs-day** (See “[Cubic foot per second-day](#)”)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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Vertical Datum of 1929,” and “North American Vertical Datum of 1988”)

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

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

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

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

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

**Dissolved solids concentration** in water is the quantity of dissolved material in a sample of water. It is determined either analytically by the “residue-on-evaporation” method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate.

Alternatively, alkalinity concentration (as mg/L  $\text{CaCO}_3$ ) can be converted to carbonate concentration by multiplying by 0.60.

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

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

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

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

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

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

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

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

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

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Enterococci include *Streptococcus feacalis*, *Streptococcus faecium*, *Streptococcus avium*, and their variants. (See also “[Bacteria](#)”)

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

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

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

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

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

Fecal coliform bacteria are present in the intestines or feces of warmblooded animals. They often are used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5 °C plus or minus 0.2 °C on M-FC medium (nutrient medium for bacterial

growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also “[Bacteria](#)”)

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

**Fire algae (*Pyrrhophyta*)** are free-swimming unicells characterized by a red pigment spot. (See also “[Phytoplankton](#)”)

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

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

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

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

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

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

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

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

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

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

**Hardness** of water is a physical-chemical characteristic that commonly is recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate ( $\text{CaCO}_3$ ).

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

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

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

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

**Horizontal datum** (See “[Datum](#)”)

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

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

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

**Instantaneous discharge** is the discharge at a particular instant of time. (See also “[Discharge](#)”)

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

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

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

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

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

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

$$I = I_0 e^{-\lambda L},$$

where  $I_0$  is the source light intensity,  $I$  is the light intensity at length  $L$  (in meters) from the source,  $\lambda$  is the light-attenuation coefficient, and  $e$  is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L} \log_e \frac{I}{I_0}.$$

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

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

**Low tide** is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. See NOAA Web site:

<http://www.co-ops.nos.noaa.gov/tideglos.html>

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

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

“Daily mean suspended-sediment concentration” and “Suspended-sediment concentration”)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

**Particle-size classification**, as used in this report, agrees with the recommendation made by the American

Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**Return period** (See “[Recurrence interval](#)”)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**Stage** (See “[Gage height](#)”)

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

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

**Substrate** is the physical surface upon which an organism lives.

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

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

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

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

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

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

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

**Suspended sediment** is the sediment maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid. (See also “[Sediment](#)”)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**Total organism count** is the number of organisms collected and enumerated in any particular sample. (See also “[Organism count/volume](#)”)

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

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

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

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

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

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

**Unconfined aquifer** is an aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure. (See “[Water-table aquifer](#)”)

**Vertical datum** (See “[Datum](#)”)

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

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

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

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

12 months. Thus, the year ending September 30, 2002, is called the “2002 water year.”

**Watershed** (See “[Drainage basin](#)”)

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

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

**Wet mass** is the mass of living matter plus contained water. (See also “[Biomass](#)” and “[Dry mass](#)”)

**Wet weight** refers to the weight of animal tissue or other substance including its contained water. (See also “[Dry weight](#)”)

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

**Zooplankton** is the animal part of the plankton.

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

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

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

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

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

#### Book 1. Collection of Water Data by Direct Measurement

##### Section D. Water Quality

- 1–D1. *Water temperature—Influential factors, field measurement, and data presentation*, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS–TWRI book 1, chap. D1. 1975. 65 p.
- 1–D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS–TWRI book 1, chap. D2. 1976. 24 p.

#### Book 2. Collection of Environmental Data

##### Section D. Surface Geophysical Methods

- 2–D1. *Application of surface geophysics to ground-water investigations*, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS–TWRI book 2, chap. D1. 1974. 116 p.
- 2–D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS–TWRI book 2, chap. D2. 1988. 86 p.

##### Section E. Subsurface Geophysical Methods

- 2–E1. *Application of borehole geophysics to water-resources investigations*, by W.S. Keys and L.M. MacCary: USGS–TWRI book 2, chap. E1. 1971. 126 p.
- 2–E2. *Borehole geophysics applied to ground-water investigations*, by W.S. Keys: USGS–TWRI book 2, chap. E2. 1990. 150 p.

##### Section F. Drilling and Sampling Methods

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



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### Book 3. Applications of Hydraulics

#### Section A. Surface-Water Techniques

- 3–A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS–TWRI book 3, chap. A1. 1967. 30 p.
- 3–A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS–TWRI book 3, chap. A2. 1967. 12 p.
- 3–A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS–TWRI book 3, chap. A3. 1968. 60 p.
- 3–A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS–TWRI book 3, chap. A4. 1967. 44 p.
- 3–A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS–TWRI book 3, chap. A5. 1967. 29 p.
- 3–A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS–TWRI book 3, chap. A6. 1968. 13 p.
- 3–A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A7. 1968. 28 p.
- 3–A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A8. 1969. 65 p.
- 3–A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS–TWRI book 3, chap. A9. 1989. 27 p.
- 3–A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS–TWRI book 3, chap. A10. 1984. 59 p.
- 3–A11. *Measurement of discharge by the moving-boat method*, by G.F. Smoot and C.E. Novak: USGS–TWRI book 3, chap. A11. 1969. 22 p.
- 3–A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS–TWRI book 3, chap. A12. 1986. 34 p.
- 3–A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS–TWRI book 3, chap. A13. 1983. 53 p.
- 3–A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS–TWRI book 3, chap. A14. 1983. 46 p.
- 3–A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS–TWRI book 3, chap. A15. 1984. 48 p.
- 3–A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS–TWRI book 3, chap. A16. 1985. 52 p.
- 3–A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS–TWRI book 3, chap. A17. 1985. 38 p.
- 3–A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS–TWRI book 3, chap. A18. 1989. 52 p.
- 3–A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS–TWRI book 3, chap. A19. 1990. 31 p.
- 3–A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS–TWRI book 3, chap. A20. 1993. 38 p.
- 3–A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS–TWRI book 3, chap. A21. 1995. 56 p.

#### Section B. Ground-Water Techniques

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

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

- 3–B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G.D. Bennett: USGS–TWRI book 3, chap. B2. 1976. 172 p.
- 3–B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS–TWRI book 3, chap. B3. 1980. 106 p.
- 3–B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS–TWRI book 3, chap. B4. 1990. 232 p.
- 3–B4. *Supplement 1. Regression modeling of ground-water flow—Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R.L. Cooley: USGS–TWRI book 3, chap. B4. 1993. 8 p.
- 3–B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS–TWRI book 3, chap. B5. 1987. 15 p.
- 3–B6. *The principle of superposition and its application in ground-water hydraulics*, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS–TWRI book 3, chap. B6. 1987. 28 p.
- 3–B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E.J. Wexler: USGS–TWRI book 3, chap. B7. 1992. 190 p.
- 3–B8. *System and boundary conceptualization in ground-water flow simulation*, by T.E. Reilly: USGS–TWRI book 3, chap. B8. 2001. 29 p.

### Section C. Sedimentation and Erosion Techniques

- 3–C1. *Fluvial sediment concepts*, by H.P. Guy: USGS–TWRI book 3, chap. C1. 1970. 55 p.
- 3–C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS–TWRI book 3, chap. C2. 1999. 89 p.
- 3–C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS–TWRI book 3, chap. C3. 1972. 66 p.

## Book 4. Hydrologic Analysis and Interpretation

### Section A. Statistical Analysis

- 4–A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS–TWRI book 4, chap. A1. 1968. 39 p.
- 4–A2. *Frequency curves*, by H.C. Riggs: USGS–TWRI book 4, chap. A2. 1968. 15 p.
- 4–A3. *Statistical methods in water resources*, by D.R. Helsel and R.M. Hirsch: USGS–TWRI book 4, chap. A3. 1991. Available only online at <http://water.usgs.gov/pubs/twri/twri4a3/>. (Accessed August 30, 2002.)

### Section B. Surface Water

- 4–B1. *Low-flow investigations*, by H.C. Riggs: USGS–TWRI book 4, chap. B1. 1972. 18 p.
- 4–B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS–TWRI book 4, chap. B2. 1973. 20 p.
- 4–B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS–TWRI book 4, chap. B3. 1973. 15 p.

### Section D. Interrelated Phases of the Hydrologic Cycle

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

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

### Book 5. Laboratory Analysis

#### Section A. Water Analysis

- 5–A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman, editors: USGS–TWRI book 5, chap. A1. 1989. 545 p.
- 5–A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS–TWRI book 5, chap. A2. 1971. 31 p.
- 5–A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS–TWRI book 5, chap. A3. 1987. 80 p.
- 5–A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greeson, editors: USGS–TWRI book 5, chap. A4. 1989. 363 p.
- 5–A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS–TWRI book 5, chap. A5. 1977. 95 p.
- 5–A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L.C. Friedman and D.E. Erdmann: USGS–TWRI book 5, chap. A6. 1982. 181 p.

#### Section C. Sediment Analysis

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

### Book 6. Modeling Techniques

#### Section A. Ground Water

- 6–A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS–TWRI book 6, chap. A1. 1988. 586 p.
- 6–A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S.A. Leake and D.E. Prudic: USGS–TWRI book 6, chap. A2. 1991. 68 p.
- 6–A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L.J. Torak: USGS–TWRI book 6, chap. A3. 1993. 136 p.
- 6–A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R.L. Cooley: USGS–TWRI book 6, chap. A4. 1992. 108 p.
- 6–A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L.J. Torak: USGS–TWRI book 6, chap. A5. 1993. 243 p.
- 6–A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler: USGS–TWRI book 6, chap. A6. 1996. 125 p.
- 6–A7. *User's guide to SEAWAT: A computer program for simulation of three-dimensional variable-density ground-water flow*, by Weixing Guo and Christian D. Langevin: USGS–TWRI book 6, chap. A7. 2002. 77 p.

### Book 7. Automated Data Processing and Computations

#### Section C. Computer Programs

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

## WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

- 7–C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS–TWRI book 7, chap. C2. 1978. 90 p.
- 7–C3. *A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS–TWRI book 7, chap. C3. 1981. 110 p.

### Book 8. Instrumentation

#### Section A. Instruments for Measurement of Water Level

- 8–A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS–TWRI book 8, chap. A1. 1968. 23 p.
- 8–A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS–TWRI book 8, chap. A2. 1983. 57 p.

#### Section B. Instruments for Measurement of Discharge

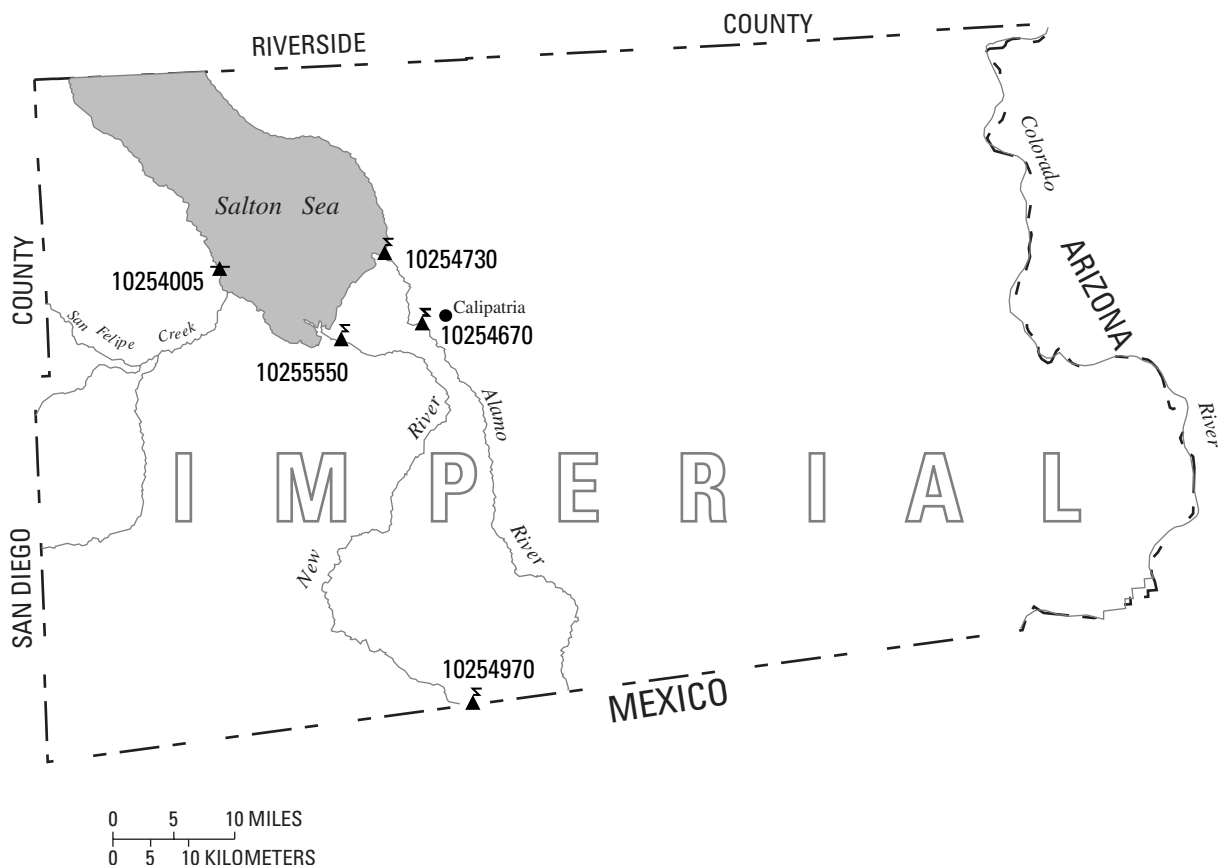
- 8–B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS–TWRI book 8, chap. B2. 1968. 15 p.

### Book 9. Handbooks for Water-Resources Investigations

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

- 9–A1. *National field manual for the collection of water-quality data: Preparations for water sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A1. 1998. 47 p.
- 9–A2. *National field manual for the collection of water-quality data: Selection of equipment for water sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A2. 1998. 94 p.
- 9–A3. *National field manual for the collection of water-quality data: Cleaning of equipment for water sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A3. 1998. 75 p.
- 9–A4. *National field manual for the collection of water-quality data: Collection of water samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A4. 1999. 156 p.
- 9–A5. *National field manual for the collection of water-quality data: Processing of water samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999. 149 p.
- 9–A6. *National field manual for the collection of water-quality data: Field measurements*, edited by F.D. Wilde and D.B. Radtke: USGS–TWRI book 9, chap. A6. 1998. Variously paginated.
- 9–A7. *National field manual for the collection of water-quality data: Biological indicators*, edited by D.N. Myers and F.D. Wilde: USGS–TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.
- 9–A8. *National field manual for the collection of water-quality data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 p.
- 9–A9. *National field manual for the collection of water-quality data: Safety in field activities*, by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 p.

# WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003



## EXPLANATION

- ▲ Gaging Station (Telephone and Modem or Data-Collection Platform)
- ★ Reservoir Site and Elevations



Figure 2. Location of discharge stations in Imperial County.

# WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

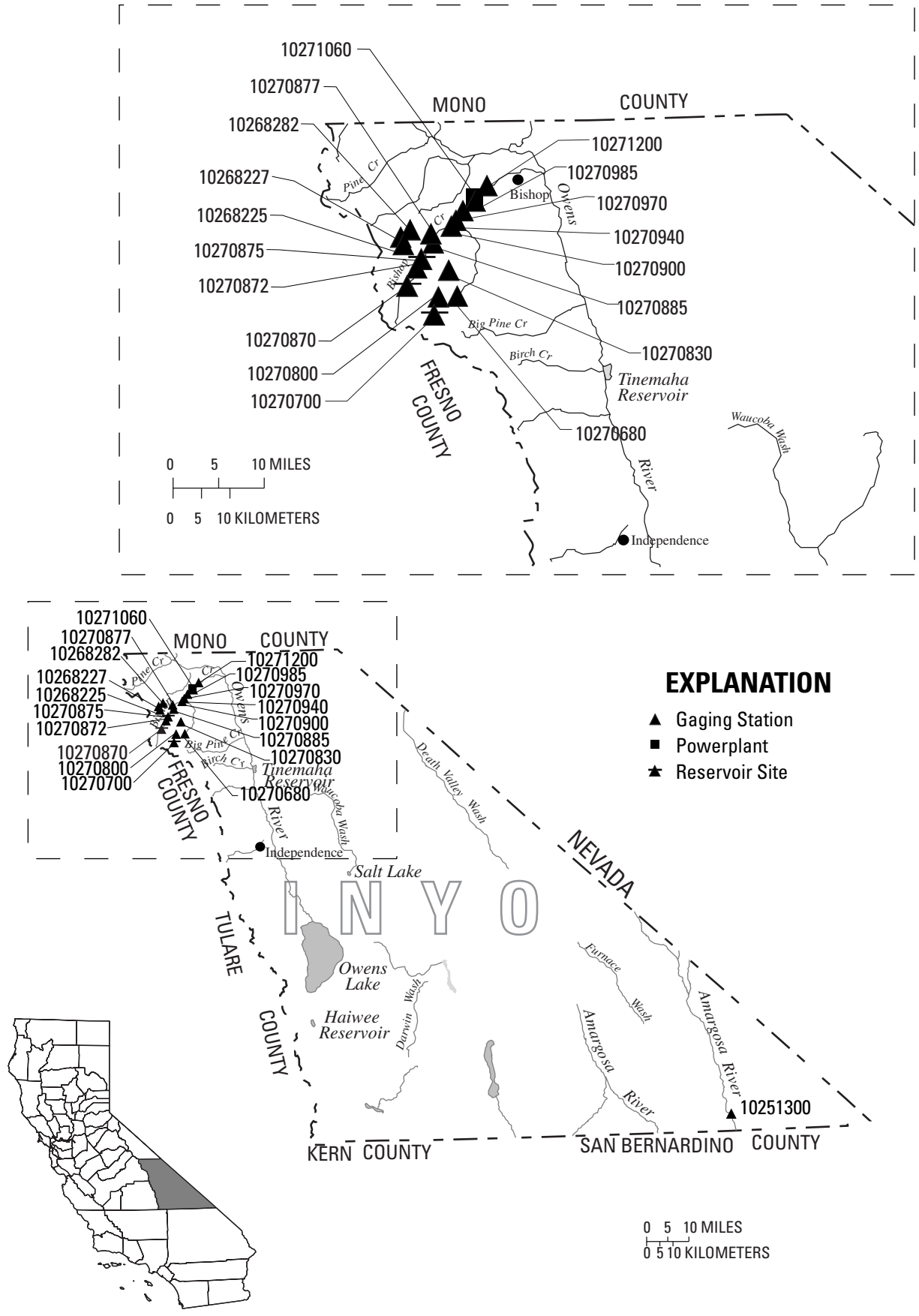
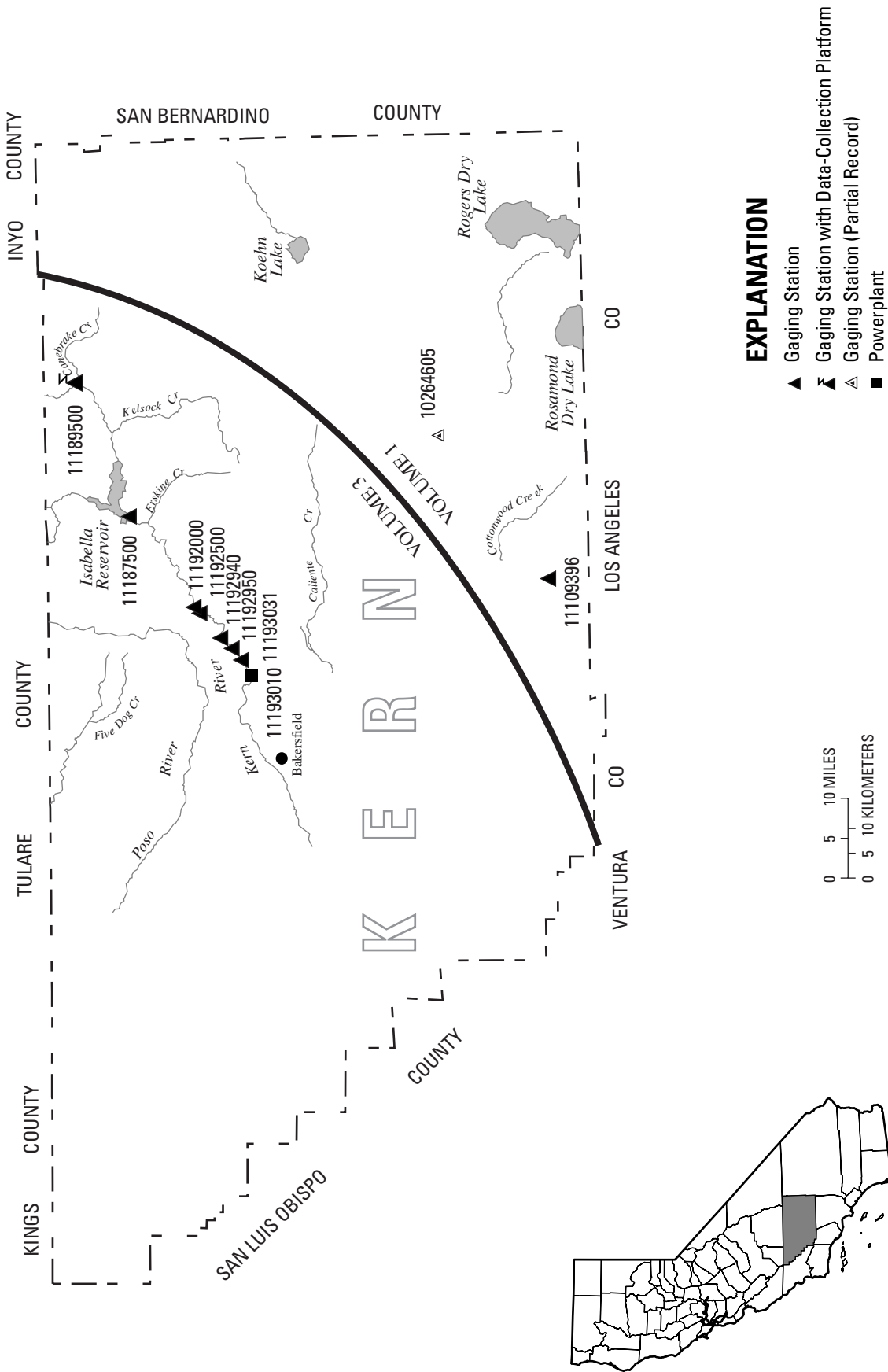


Figure 3. Location of discharge stations in Inyo County.



**Figure 4.** Location of discharge stations in Kern County. (NOTE: Records for stations 11187500 through 11193031 published in volume 3.)

# WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

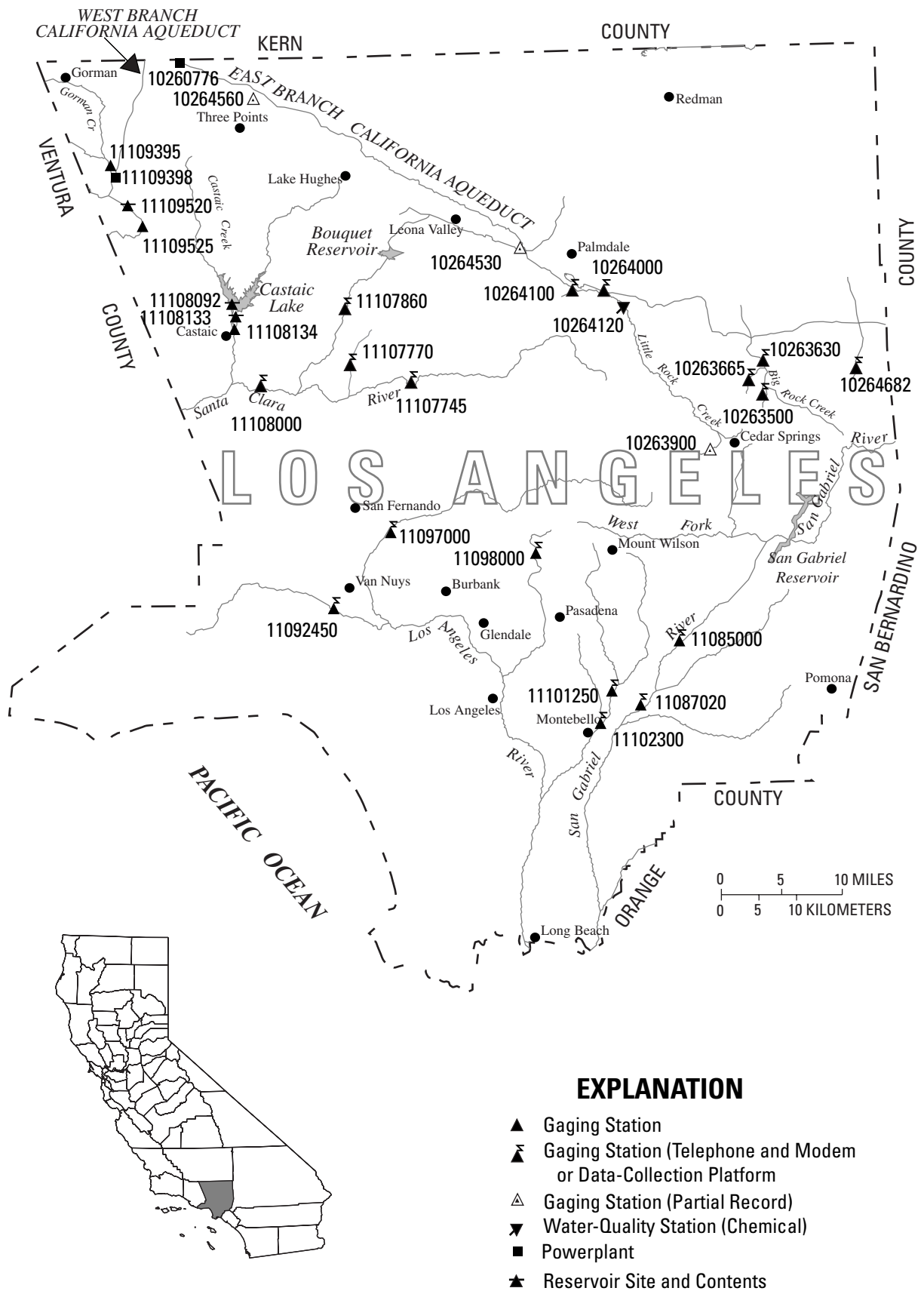
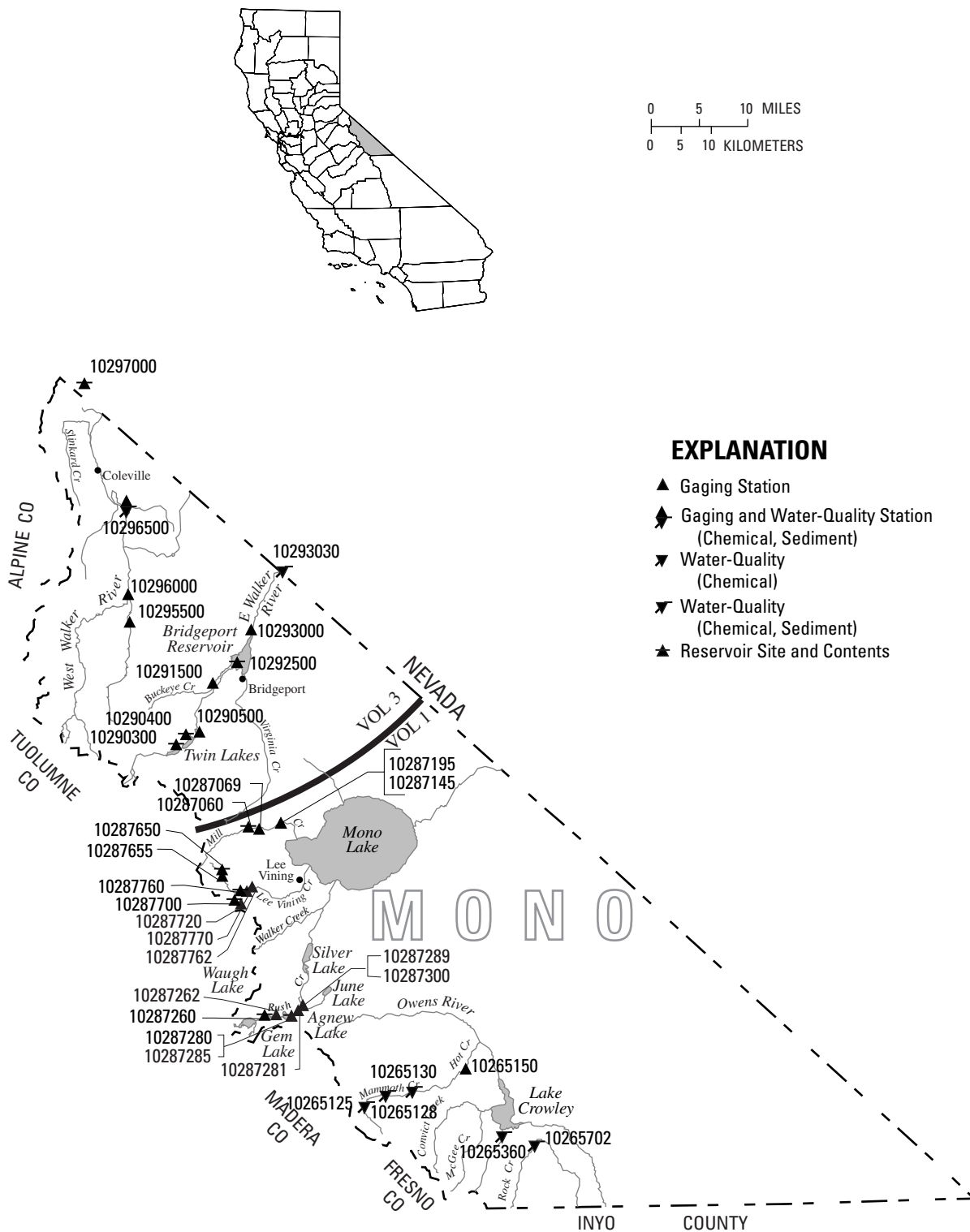


Figure 5. Location of discharge and water-quality stations in Los Angeles County.

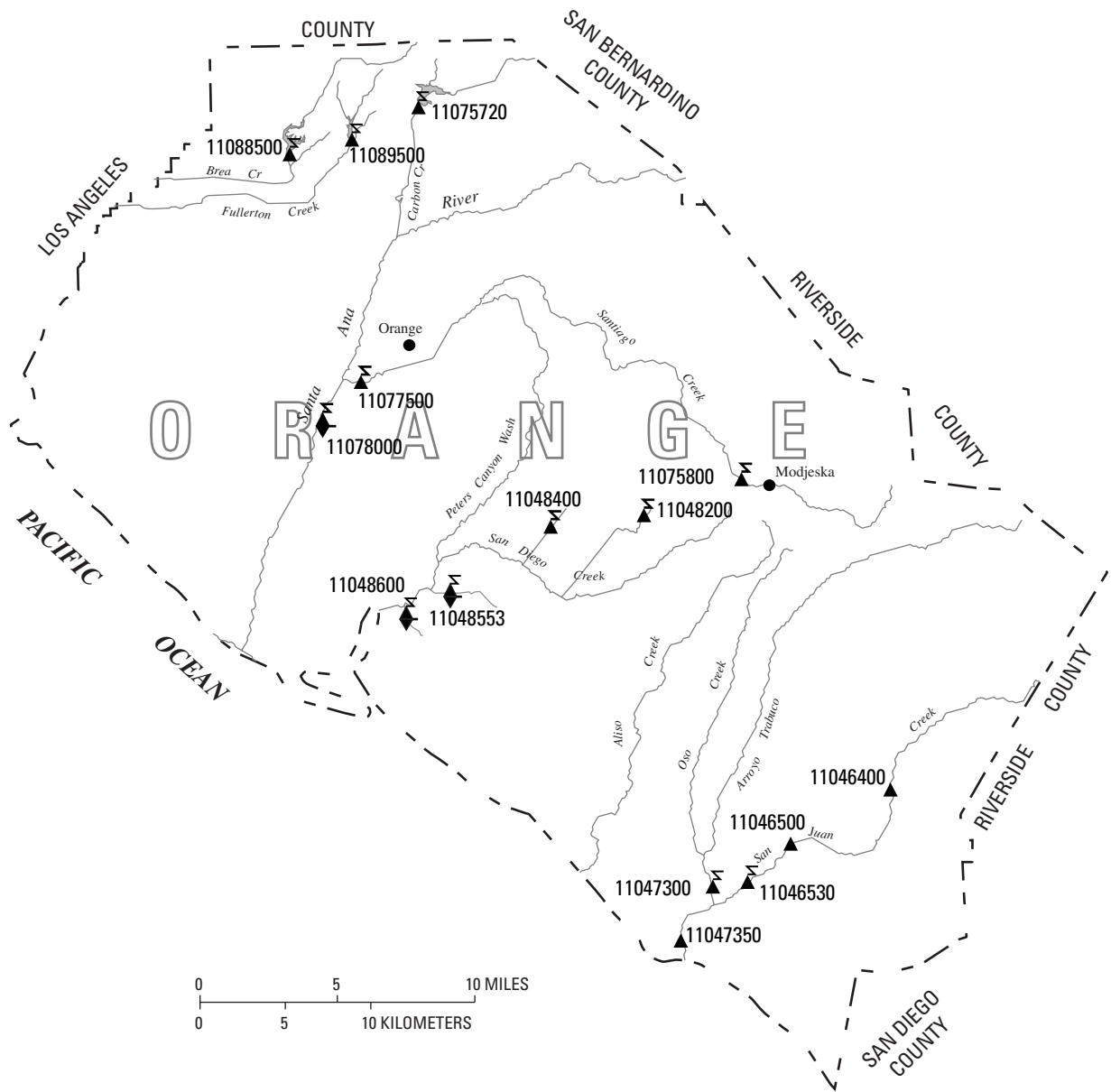


# WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003



**Figure 6.** Location of discharge and water-quality stations in Mono County.  
 (NOTE: Records for stations 10290300 through 10297000 published in volume 3.)

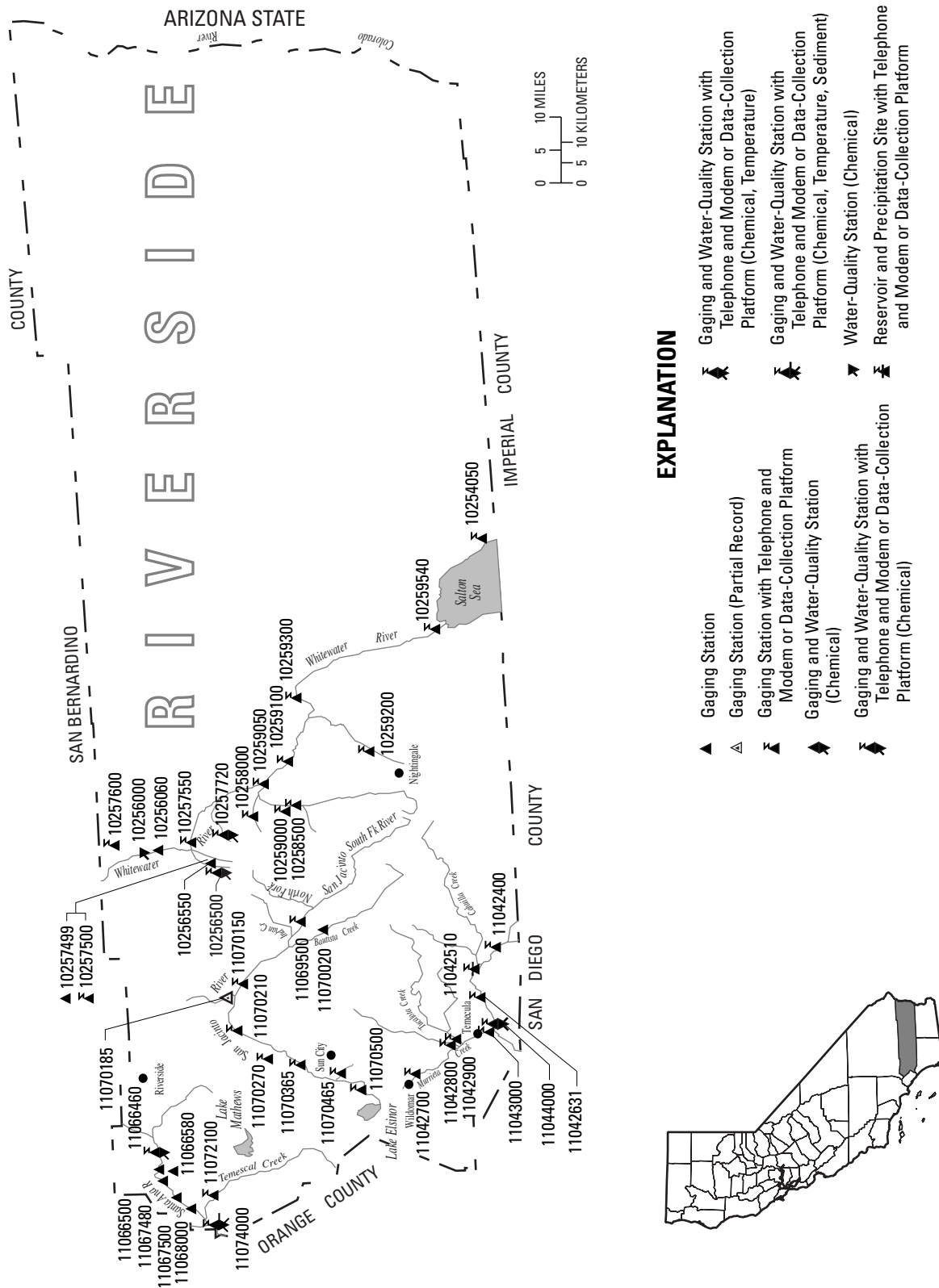
# WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003



### EXPLANATION

- ▲ Gaging Station
- ▲ Gaging Station with Telephone and Modem or Data-Collection Platform
- ◆ Gaging and Water-Quality Station with Telephone and Modem or Data-Collection Platform (Sediment)
- ▼ Water-Quality Station (Chemical)

Figure 7. Location of discharge and water-quality stations in Orange County.



# WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

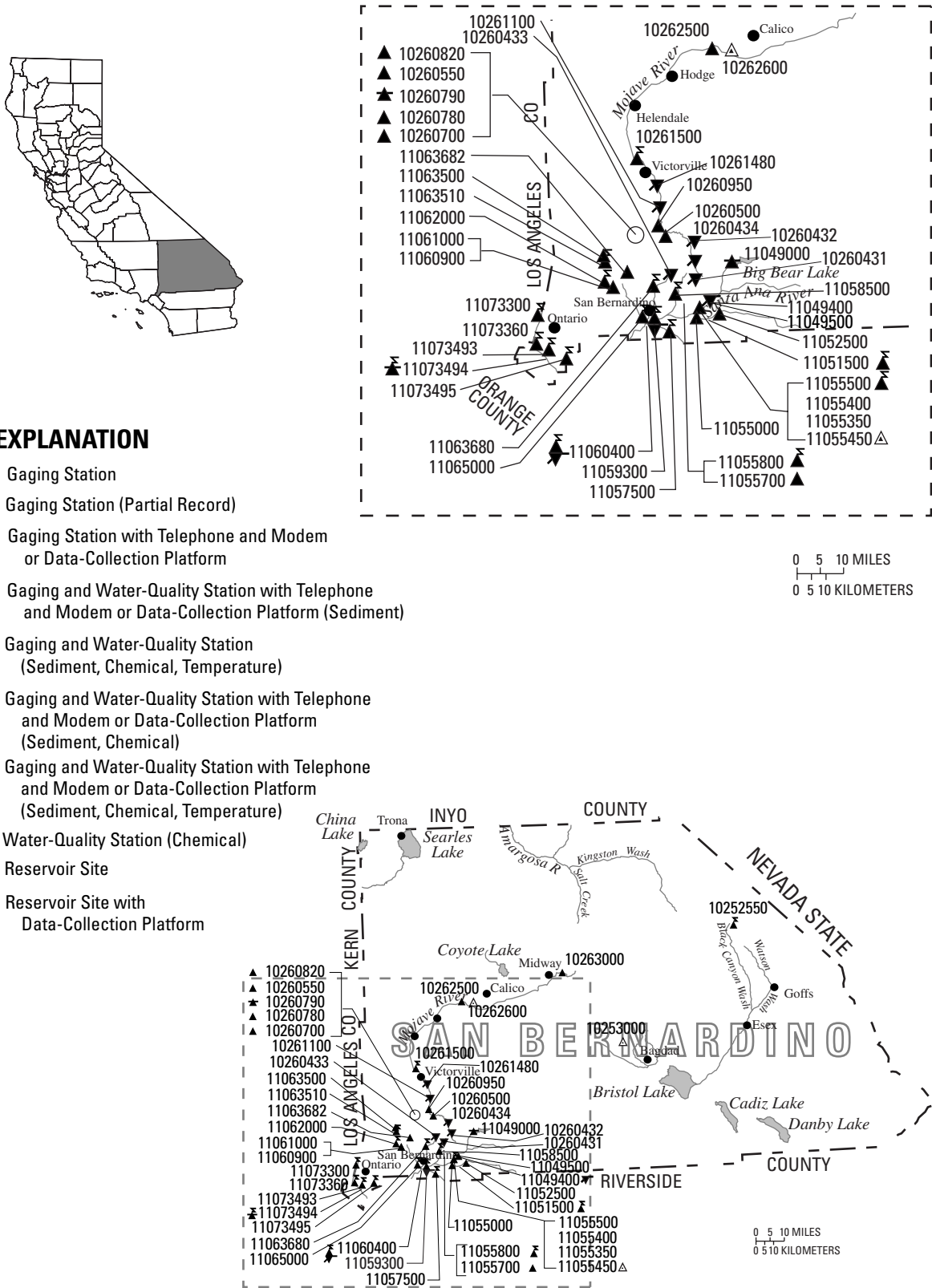
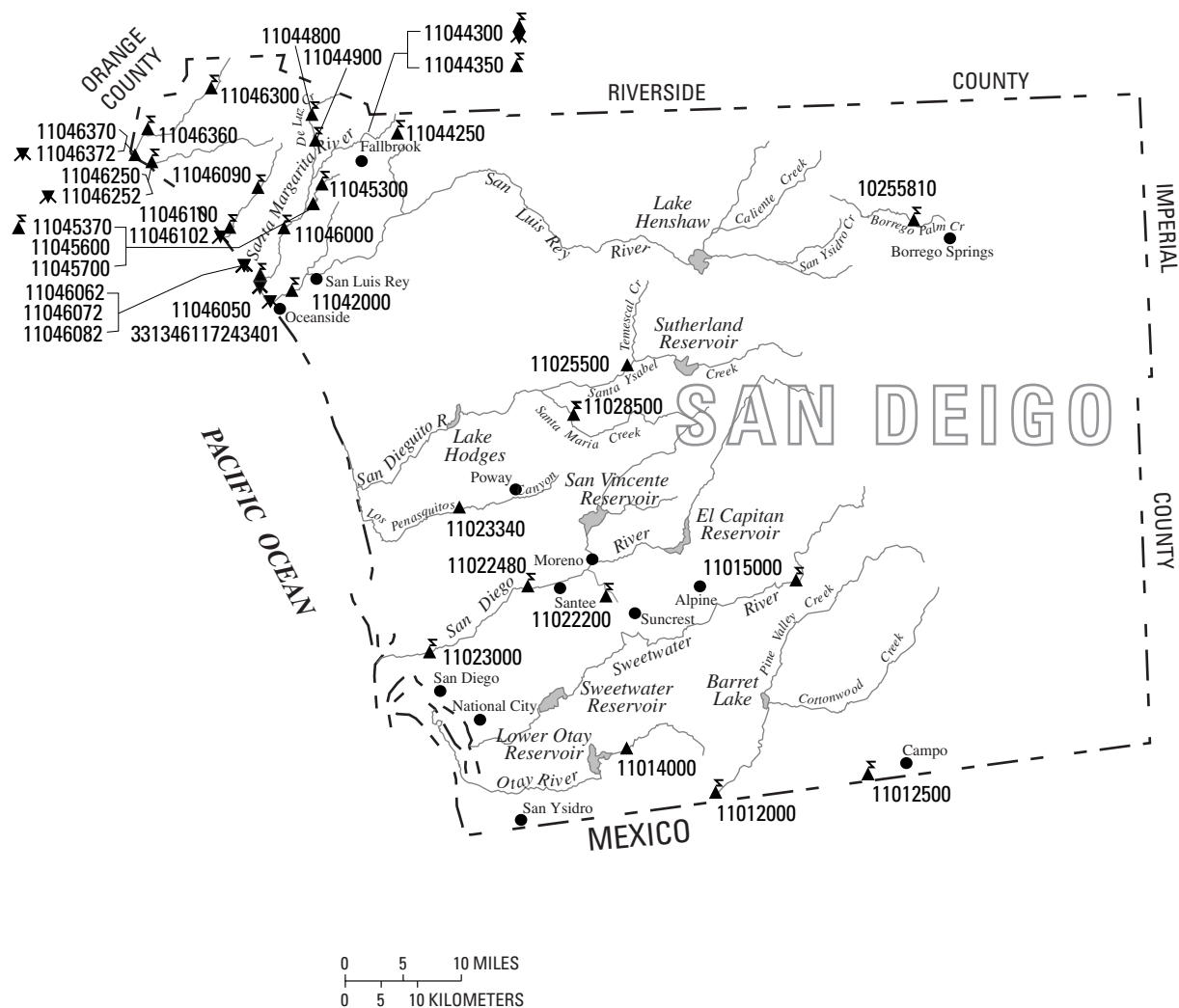


Figure 9. Location of discharge and water-quality stations in San Bernardino County.

# WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

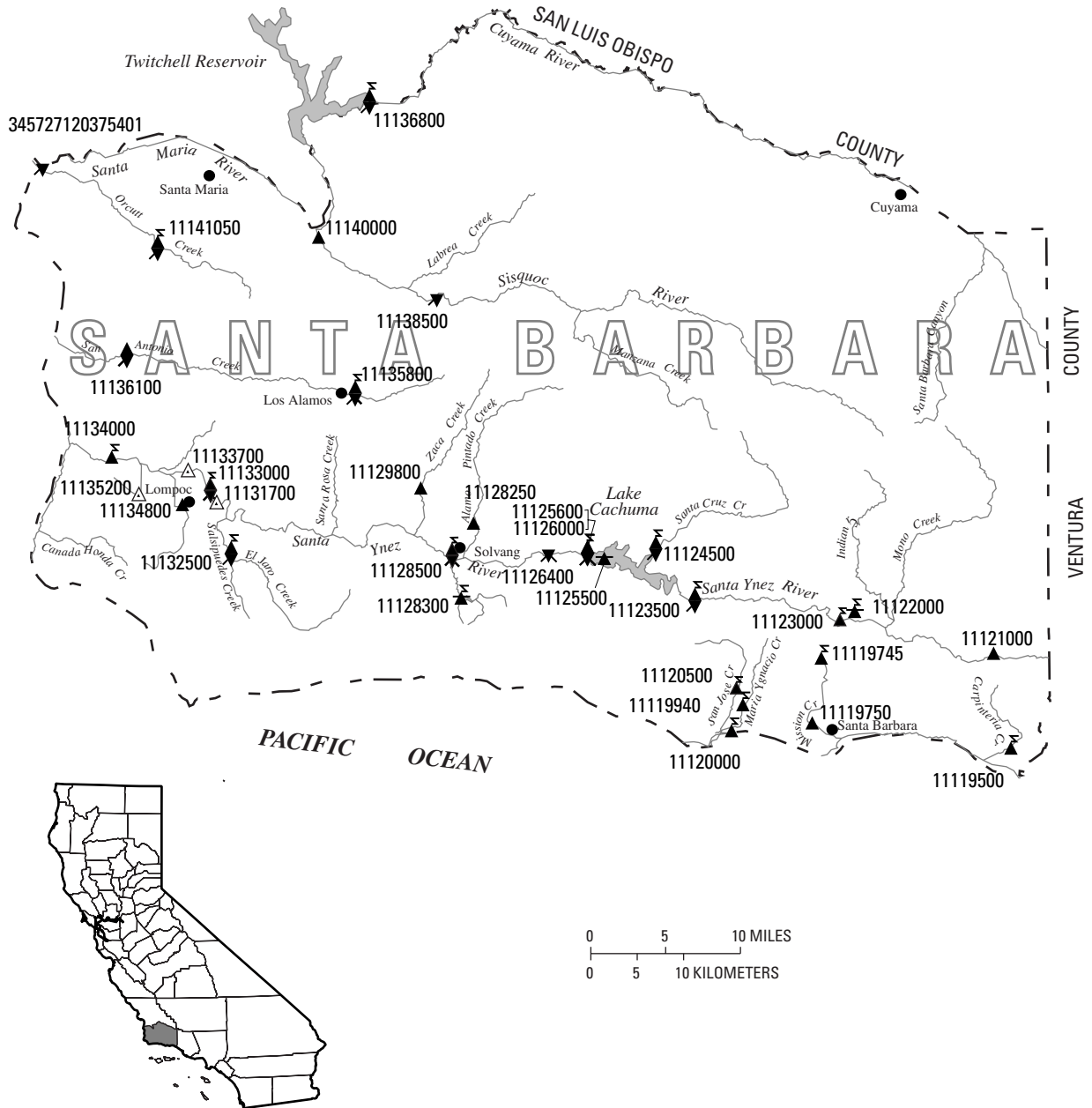


## EXPLANATION

- ▲ Gaging Station
- ▲☎ Gaging Station with Telephone and Modem or Data-Collection Platform
- ▲♣ Gaging and Water-Quality Station (Chemical, Temperature)
- ▲☎♣ Gaging and Water-Quality Station with Telephone and Modem or Data-Collection Platform (Chemical)
- ▲☎♣♣ Gaging and Water-Quality Station with Telephone and Modem or Data-Collection Platform (Chemical, Temperature)
- ✖ Water-Quality Station (Chemical, Temperature)

Figure 10. Location of discharge and water-quality stations in San Diego County.

# WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003



## EXPLANATION

- |  |   |
|--|---|
| ▲ Gaging Station   | ◆ Gaging and Water-Quality Station (Chemical, Temperature)  |
| ▲ Gaging Station with Telephone and Modem or Data-Collection Platform                              | ◆ Gaging and Water-Quality Station with Telephone and Modem or Data-Collection Platform (Chemical, Temperature) |
| ▲ Gaging Station (Partial Record)  | ★ Reservoir Site and Contents   |
| ◆ Gaging and Water-Quality Station (Sediment)  | ★ Reservoir Site and Contents with Telephone and Modem or Data-Collection Platform                              |
| ◆ Gaging and Water-Quality Station (Chemical)  | ★ Reservoir Site and Contents and Water-Quality Station (Chemical)  |
| ◆ Gaging and Water-Quality Station with Telephone and Modem or Data-Collection Platform (Chemical) | ✖ Water-Quality Station (Chemical, Temperature)   |
|  | ▼ Water-Quality Station (Chemical)  |

Figure 11. Location of discharge and water-quality stations in Santa Barbara County.

# WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

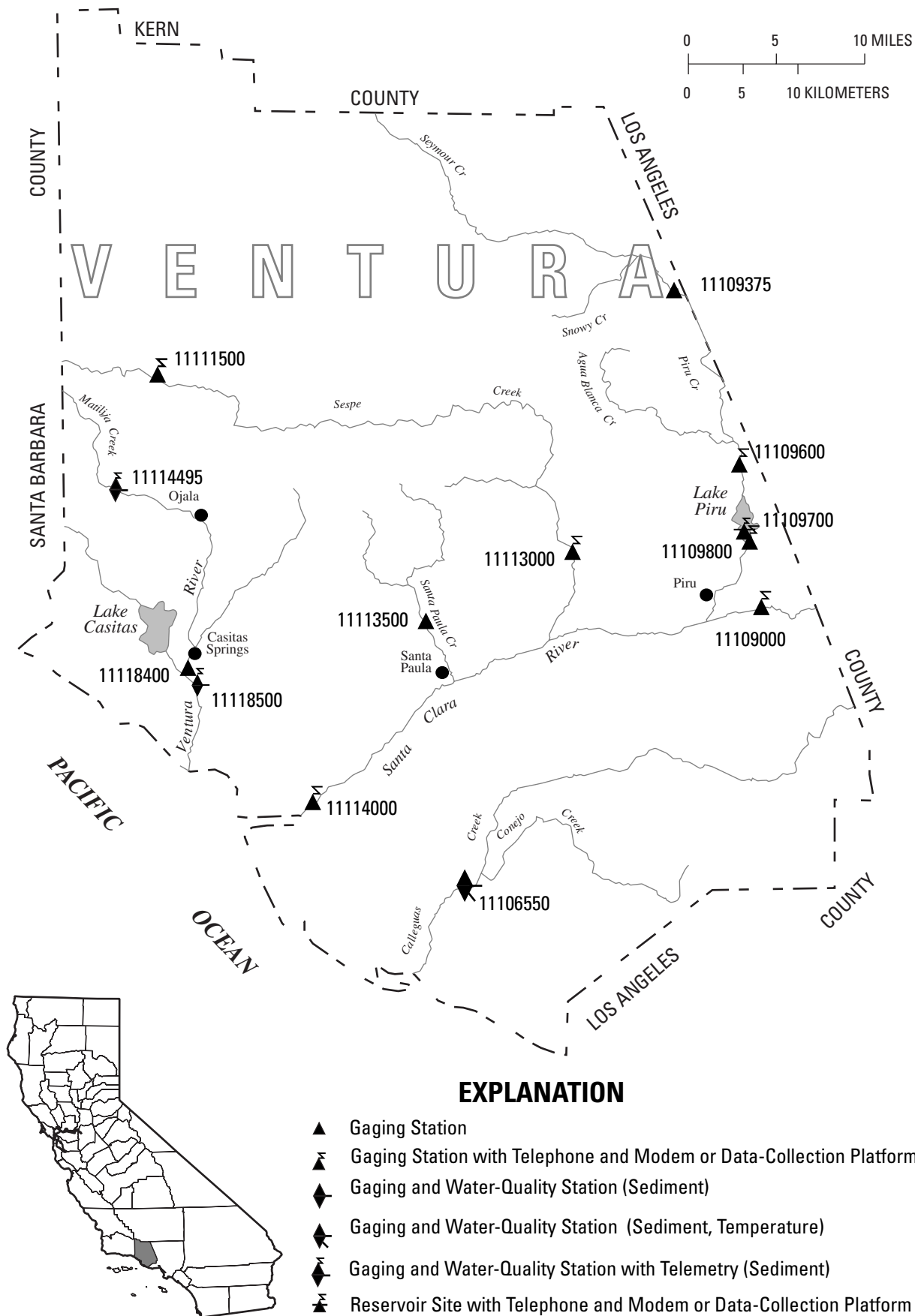


Figure 12. Location of discharge and water-quality stations in Ventura County.

# WATER RESOURCES DATA—CALIFORNIA, WATER YEAR 2003

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

### Remark Codes

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

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

### Dissolved Trace-Element Concentrations

NOTE: Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter ( $\mu\text{g/L}$ ) 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.



## 10251300 AMARGOSA RIVER AT TECOPA, CA

LOCATION.—Lat 35° 50' 53", long 116° 13' 43", in NW 1/4 NW 1/4 SE 1/4 sec.9, T.20 N., R.07 E., Inyo County, Hydrologic Unit 18090202, on right bank, 20 ft upstream from Old Spanish Trail Road, and 0.2 mi west of Tecopa.

DRAINAGE AREA.—3,090 mi<sup>2</sup>, approximately, much of which is noncontributing.

PERIOD OF RECORD.—October 1961 to August 1983, October 1991 to September 1995, 1998 miscellaneous discharge, January 1999 to current year.

GAGE.—Water-stage recorder and culvert control. Elevation of gage is 1,310 ft above NGVD of 1929, from topographic map. Prior to Oct. 16, 1991, at datum 16.52 ft higher.

REMARKS.—Records fair. City of Tecopa pumps water for municipal use upstream. These data are reviewed and provided by the Nevada District Office, U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,600 ft<sup>3</sup>/s, Aug. 19, 1983, determined from culvert computations and flow over road, gage height, 16.00 ft, datum then in use; no flow some days some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 15 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)
Feb 14	0000	169	5.56	Apr 16	0130	188	5.64
Mar 17	1315	214	*5.75	Aug 20	0545	*615	unknown

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.46	0.22	0.77	1.5	3.2	5.0	0.53	0.21	0.07	0.10	0.15	4.3
2	0.43	0.18	0.71	1.1	3.0	5.9	0.38	0.23	0.07	0.10	0.14	2.4
3	0.44	0.19	0.73	1.4	1.0	3.4	0.37	0.35	0.07	0.10	0.14	2.6
4	0.41	0.19	0.73	1.4	1.0	2.7	0.38	0.29	0.07	0.10	0.13	1.5
5	0.38	0.18	0.77	1.6	1.9	2.0	0.39	0.22	0.08	0.10	0.13	0.72
6	0.37	0.19	0.87	2.4	0.76	1.4	0.40	0.19	0.08	0.10	0.13	0.60
7	0.35	0.19	0.97	0.90	1.1	1.3	0.44	0.17	0.09	0.10	0.13	0.29
8	0.32	0.20	0.82	1.2	1.1	0.95	0.40	0.14	0.09	0.10	0.13	0.30
9	0.31	0.22	0.80	2.0	0.99	0.70	0.43	0.11	0.09	0.10	0.13	0.43
10	0.28	0.22	0.88	2.3	1.2	0.56	0.43	0.11	0.09	0.10	0.13	0.44
11	0.26	0.22	0.90	2.4	2.2	0.53	0.39	0.11	0.09	0.09	0.13	0.49
12	0.25	0.21	0.88	2.3	18	0.53	0.36	0.11	0.09	0.09	0.13	0.45
13	0.23	0.22	0.91	2.3	110	0.46	0.35	0.10	0.09	0.09	0.14	0.58
14	0.22	0.23	0.99	2.3	129	0.38	4.2	0.09	0.09	0.09	0.15	0.51
15	0.22	0.20	0.79	2.3	82	2.6	108	0.09	0.09	0.09	0.16	0.60
16	0.19	0.21	0.84	1.9	46	4.0	137	0.09	0.10	0.10	0.16	0.45
17	0.19	0.22	1.0	1.8	28	91	98	0.08	0.10	0.10	0.16	0.48
18	0.19	0.22	e0.90	2.0	14	47	62	0.08	0.10	0.10	0.15	0.48
19	0.18	0.22	e0.80	2.0	5.9	20	42	0.07	0.10	0.11	0.16	0.66
20	0.17	0.27	0.79	2.1	7.5	8.8	17	0.06	0.10	0.11	e490	0.62
21	0.19	0.23	1.8	2.2	7.6	5.5	6.7	0.06	0.10	0.11	4.8	0.81
22	0.17	0.24	2.0	2.1	2.1	e4.0	1.6	0.06	0.10	0.11	2.0	0.62
23	0.17	0.24	2.0	2.2	1.6	e3.0	1.0	0.06	0.10	0.11	5.0	0.46
24	0.17	0.24	1.3	2.3	1.3	e2.0	0.65	0.05	0.10	0.11	5.3	0.75
25	0.17	0.27	1.3	2.5	5.0	e1.0	0.37	0.05	0.10	0.12	7.6	0.36
26	0.19	0.28	1.4	1.8	12	0.93	0.34	0.05	0.10	0.12	9.7	0.37
27	0.22	0.25	1.7	2.1	5.8	0.86	0.31	0.06	0.10	0.12	7.4	0.36
28	0.24	0.29	1.8	2.7	4.5	0.65	0.25	0.05	0.10	0.12	7.3	0.32
29	0.22	0.34	2.1	3.3	---	0.47	0.22	0.05	0.10	0.12	5.5	0.33
30	0.23	0.49	1.8	3.4	---	0.50	0.19	0.06	0.10	0.12	4.6	0.31
31	0.22	---	1.6	3.4	---	0.56	---	0.07	---	0.13	5.3	---
TOTAL	8.04	7.07	35.65	65.20	497.75	218.68	485.08	3.52	2.75	3.26	557.18	23.59
MEAN	0.26	0.24	1.15	2.10	17.8	7.05	16.2	0.11	0.092	0.11	18.0	0.79
MAX	0.46	0.49	2.1	3.4	129	91	137	0.35	0.10	0.13	490	4.3
MIN	0.17	0.18	0.71	0.90	0.76	0.38	0.19	0.05	0.07	0.09	0.13	0.29
AC-FT	16	14	71	129	987	434	962	7.0	5.5	6.5	1110	47

e Estimated.

## UPPER AMARGOSA

## 10251300 AMARGOSA RIVER AT TECOPA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.45	0.87	4.00	6.34	11.8	6.39	1.86	0.45	0.14	0.56	6.27	4.05
MAX	39.1	11.4	65.3	56.2	95.6	54.2	16.2	3.19	2.55	3.52	103	93.1
(WY)	1977	1966	1966	1995	1993	1983	2003	1977	1969	1965	1983	1976
MIN	0.000	0.005	0.39	0.70	0.69	0.36	0.074	0.018	0.000	0.000	0.000	0.000
(WY)	1972	1993	1994	1994	1979	1994	1994	1993	1966	1963	1962	1964

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1962 - 2003	
ANNUAL TOTAL	239.85		1907.77			
ANNUAL MEAN	0.66		5.23		3.71	
HIGHEST ANNUAL MEAN					14.9	
LOWEST ANNUAL MEAN					0.22	
HIGHEST DAILY MEAN	2.1	Mar 1	490	Aug 20	1500	Feb 26 1969
LOWEST DAILY MEAN	0.06	Jun 8	0.05	May 24	0.00	Jul 23 1962
ANNUAL SEVEN-DAY MINIMUM	0.06	Jun 13	0.05	May 23	0.00	Aug 1 1962
MAXIMUM PEAK FLOW					10600	Aug 19 1983
MAXIMUM PEAK STAGE					16.00	Aug 19 1983
ANNUAL RUNOFF (AC-FT)	476		3780		2680	
10 PERCENT EXCEEDS	1.8		4.9		2.4	
50 PERCENT EXCEEDS	0.33		0.37		0.24	
90 PERCENT EXCEEDS	0.09		0.09		0.00	

## 10252550 CARUTHERS CREEK NEAR IVANPAH, CA

LOCATION.—Lat 35° 14'42", long 115° 17'53", in NW 1/4 NE 1/4 sec.6, T.13 N., R.16 E., San Bernardino County, Hydrologic Unit 15030102, on left bank, 6.6 mi south of Ivanpah.

DRAINAGE AREA.—0.84 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1963 to September 1981, May 1982 to current year.

REVISED RECORDS.—WDR CA-82-1: 1979(M); WDR CA-96-1: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 5,640 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 814 ft<sup>3</sup>/s, Aug. 12, 1979, gage height, 5.75 ft, from rating curve extended above 2.5 ft<sup>3</sup>/s, on basis of slope-conveyance studies, maximum gage height, 9.75 ft, July 15, 1996; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 10 ft<sup>3</sup>/s, from rating curve extended above 2.5 ft<sup>3</sup>/s, on basis of slope-conveyance studies, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Sept. 5	0900	6.9	1.23

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.04	0.00	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.03	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.02	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.02	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
6	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
7	0.00	0.00	0.02	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.01	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	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.09	0.00	0.06	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.05	0.03	0.23	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.04	0.61	0.10	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.03	0.27	0.05	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.03	0.16	0.06	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.02	0.10	0.06	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.02	0.08	0.04	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.02	0.07	0.04	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.02	0.06	0.04	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.02	0.06	0.03	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.01	0.05	0.03	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.03	0.05	0.03	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.19	0.05	0.03	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.12	0.05	0.02	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.06	0.04	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.04	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.01	0.00	0.00	---	0.04	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.03	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.01	0.17	0.00	1.09	2.03	0.84	0.00	0.00	0.00	0.00	0.30
MEAN	0.000	0.000	0.005	0.000	0.039	0.065	0.028	0.000	0.000	0.000	0.000	0.010
MAX	0.00	0.01	0.04	0.00	0.25	0.61	0.23	0.00	0.00	0.00	0.00	0.25
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	0.02	0.3	0.00	2.2	4.0	1.7	0.00	0.00	0.00	0.00	0.6

## BRISTOL LAKE BASIN

## 10252550 CARUTHERS CREEK NEAR IVANPAH, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.076	0.028	0.11	0.17	0.19	0.30	0.072	0.001	0.001	0.13	0.23	0.030
MAX	2.81	0.67	1.27	2.22	1.44	2.23	0.95	0.010	0.054	2.45	2.70	0.34
(WY)	1977	1966	1966	1993	1980	1992	1965	1983	1972	1984	1979	1976
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1965	1964	1964	1964	1964	1967	1964	1965	1964	1964	1964	1964

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1964 - 2003	
ANNUAL TOTAL	0.40		4.44			
ANNUAL MEAN	0.001		0.012		0.11	
HIGHEST ANNUAL MEAN					0.36 1993	
LOWEST ANNUAL MEAN					0.001 2002	
HIGHEST DAILY MEAN	0.19	Jul 18	0.61	Mar 16	80	Aug 12 1979
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1963
MAXIMUM PEAK FLOW			6.9	Sep 5	814	Aug 12 1979
MAXIMUM PEAK STAGE			1.23	Sep 5	9.75	Jul 15 1996
ANNUAL RUNOFF (AC-FT)	0.8		8.8		80	
10 PERCENT EXCEEDS	0.00		0.04		0.06	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

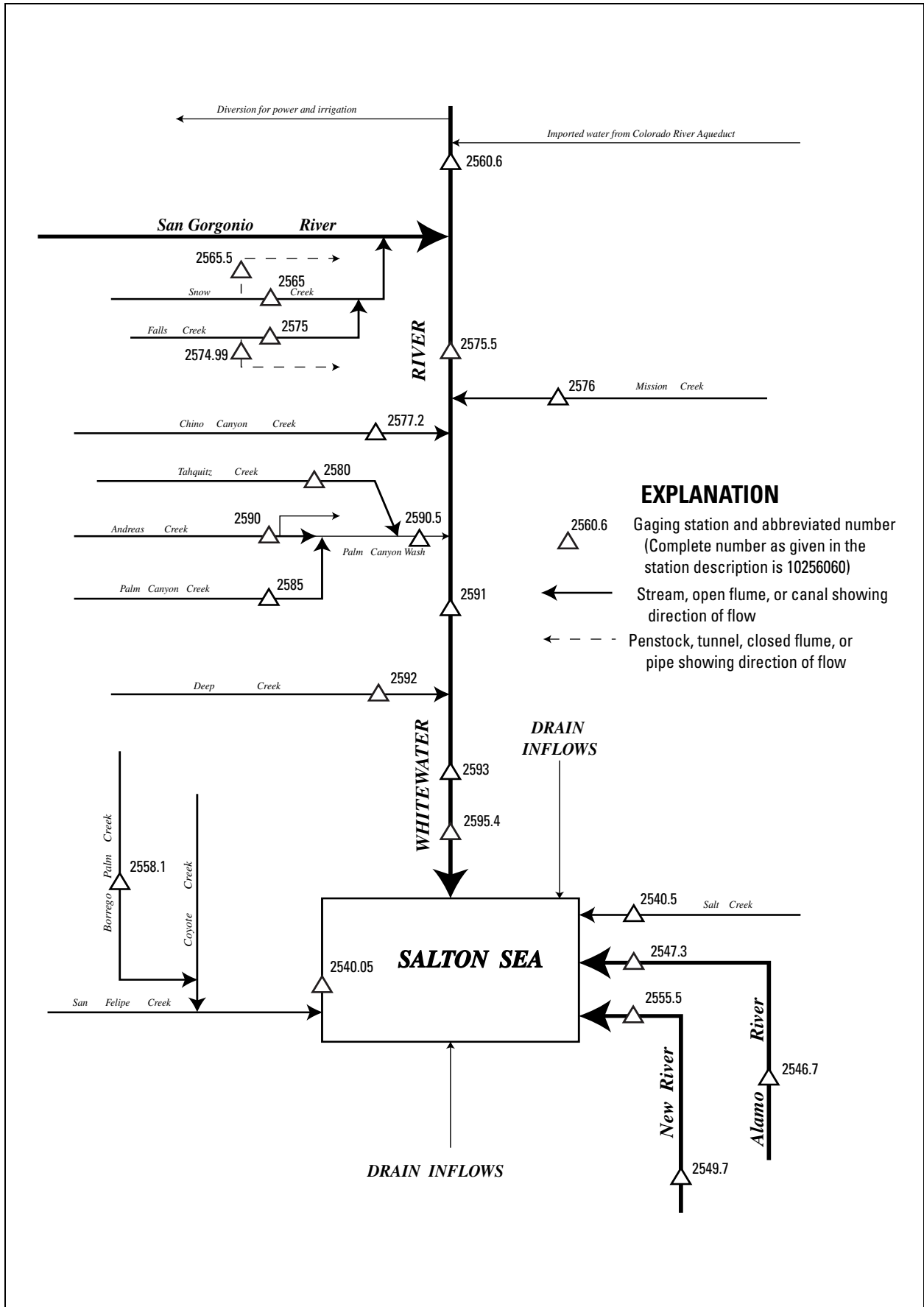


Figure 13. Diversions and storage in Salton Sea Basin.



FLOW FROM MEXICO AT INTERNATIONAL BOUNDARY

The following table lists the monthly and annual flows, in acre-feet, of the Alamo River and the New River (station 10254970) at the United States–Mexico International Boundary. Data for the Alamo River provided by the Imperial Irrigation District and is not reviewed by the U.S. Geological Survey.

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Alamo River . . . . .	8	24	22	23	35	39	35	32	12	0	0	0
New River . . . . .	7,780	8,130	9,860	9,340	11,410	12,540	11,250	10,100	7,490	7,790	8,130	6,940
CAL YR 2002:	Alamo River		324 acre-ft			WTR YR 2003:		230 acre-ft				
CAL YR 2002:	New River		118,500 acre-ft			WTR YR 2003:		111,000 acre-ft				

## 10254050 SALT CREEK NEAR MECCA, CA

LOCATION.—Lat 33° 26' 49", long 115° 50' 33", in SE 1/4 SW 1/4 sec.28, T.8 S., R.11 E., [Riverside County](#), Hydrologic Unit 18100200, on pier of Southern Pacific railroad bridge, 0.3 mi upstream from mouth, and 16 mi southeast of Mecca.

DRAINAGE AREA.—269 mi<sup>2</sup>.

PERIOD OF RECORD.—January 1961 to current year (since October 1990, low-flow records only).

GAGE.—Water-stage recorder. Elevation of gage is 230 ft below NGVD of 1929, from topographic map. Prior to Dec. 21, 1984, at same site, at datum 2.50 ft lower.

REMARKS.—Records fair above 1 ft<sup>3</sup>/s and poor below. No regulation or diversion upstream from station. No discharge records computed above 20 ft<sup>3</sup>/s since October 1990. See schematic diagram of [Salton Sea Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge (January 1961 to September 1990), 9,900 ft<sup>3</sup>/s, Sept. 24, 1976, gage height, 16.8 ft, present datum, from floodmarks, from rating curve extended above 20 ft<sup>3</sup>/s, on basis of contracted-opening measurement of peak flow; maximum gage height, 19.4 ft, present datum, Mar. 2, 1983 (backwater from Salton Sea and channel vegetation); no flow for many days most years.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.48	1.7	2.1	2.7	0.88	0.37	0.00	0.00	0.00	0.00
2	0.00	0.00	0.85	1.7	2.1	2.4	0.95	0.30	0.00	0.00	0.00	0.00
3	0.00	0.00	0.86	1.7	2.0	2.4	0.92	0.28	0.00	0.00	0.00	0.00
4	0.00	0.00	0.86	1.7	1.8	2.2	0.90	0.29	0.00	0.00	0.00	0.00
5	0.00	0.00	0.89	1.7	1.7	2.1	0.90	0.27	0.00	0.00	0.00	0.00
6	0.00	0.00	0.93	1.9	1.8	2.1	0.94	0.26	0.00	0.00	0.00	0.00
7	0.00	0.00	0.96	1.9	1.8	2.0	0.92	0.22	0.00	0.00	0.00	0.00
8	0.00	0.00	0.95	1.8	1.8	1.9	0.94	0.21	0.00	0.00	0.00	0.00
9	0.00	0.00	0.99	1.7	1.9	1.9	0.96	0.19	0.00	0.00	0.00	0.00
10	0.00	0.00	1.0	1.9	1.9	1.9	0.96	0.15	0.00	0.00	0.00	0.00
11	0.00	0.00	1.1	2.0	2.0	1.8	0.91	0.11	0.00	0.00	0.00	0.00
12	0.00	0.00	1.1	2.0	2.2	1.8	0.86	0.08	0.00	0.00	0.00	0.00
13	0.00	0.00	1.0	2.0	3.9	1.8	0.82	0.05	0.00	0.00	0.00	0.00
14	0.00	0.00	1.0	2.0	5.8	1.8	0.83	0.03	0.00	0.00	0.00	0.00
15	0.00	0.00	1.1	2.1	4.5	1.8	0.81	0.14	0.00	0.00	0.00	0.00
16	0.00	0.00	1.3	2.1	3.4	---	0.82	0.14	0.00	0.00	0.00	0.00
17	0.00	0.00	1.4	2.0	3.0	6.1	0.82	0.10	0.00	0.00	0.00	0.00
18	0.00	0.00	1.3	2.0	2.8	4.1	0.84	0.05	0.00	0.00	0.00	0.00
19	0.00	0.00	1.2	2.1	2.7	2.7	0.80	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	1.1	2.1	2.5	2.1	0.72	0.00	0.00	0.00	---	0.00
21	0.00	0.00	1.3	2.1	2.3	1.7	0.66	0.00	0.00	0.00	e0.20	0.00
22	0.00	0.00	1.6	2.1	2.3	1.6	0.63	0.00	0.00	0.00	e0.02	0.00
23	0.00	0.00	1.7	2.2	2.1	1.6	0.65	0.00	0.00	0.00	e0.00	0.00
24	0.00	0.00	1.5	2.2	2.1	1.6	0.64	0.00	0.00	0.00	---	0.00
25	0.00	0.00	1.4	2.3	2.7	1.6	0.63	0.00	0.00	0.00	e0.20	0.00
26	0.00	0.00	1.5	2.2	3.3	1.5	0.68	0.00	0.00	0.00	e0.02	0.00
27	0.00	0.00	1.5	2.1	4.0	1.4	0.67	0.00	0.00	0.00	e0.00	0.00
28	0.00	0.00	1.6	2.0	3.1	1.2	0.60	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	1.7	2.0	---	0.96	0.53	0.00	0.00	0.00	0.00	0.00
30	0.00	0.11	1.7	2.1	---	0.76	0.44	0.00	0.00	0.00	0.00	0.00
31	0.00	---	1.7	2.1	---	0.75	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.11	37.57	61.5	73.6	---	23.63	3.24	0.00	0.00	---	0.00
MEAN	0.000	0.004	1.21	1.98	2.63	---	0.79	0.10	0.000	0.000	---	0.000
MAX	0.00	0.11	1.7	2.3	5.8	---	0.96	0.37	0.00	0.00	---	0.00
MIN	0.00	0.00	0.48	1.7	1.7	---	0.44	0.00	0.00	0.00	---	0.00
AC-FT	0.00	0.2	75	122	146	---	47	6.4	0.00	0.00	---	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1990, BY WATER YEAR (WY)

	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		
MEAN	5.61	7.45	8.05	9.86	11.6	13.5	5.56	3.86	2.85	3.40	5.05	7.02																			
MAX	12.6	22.1	14.8	18.8	45.5	137	11.9	12.7	7.50	21.0	55.6	76.5																			
(WY)	1964	1981	1966	1977	1980	1983	1980	1980	1975	1986	1983	1976																			
MIN	1.55	1.05	1.59	4.13	4.26	3.79	2.37	1.49	.86	.41	.70	.59																			
(WY)	1990	1979	1979	1990	1990	1990	1986	1986	1989	1989	1989	1978																			

## SUMMARY STATISTICS

## WATER YEARS 1962 - 1990

ANNUAL MEAN	6.97
HIGHEST ANNUAL MEAN	23.7
LOWEST ANNUAL MEAN	2.57
HIGHEST DAILY MEAN	2830
LOWEST DAILY MEAN	.06
ANNUAL SEVEN-DAY MINIMUM	.07
MAXIMUM PEAK FLOW	9900
MAXIMUM PEAK STAGE	16.80
ANNUAL RUNOFF (AC-FT)	5050
10 PERCENT EXCEEDS	10
50 PERCENT EXCEEDS	4.6
90 PERCENT EXCEEDS	1.3

e Estimated.



## 10254670 ALAMO RIVER AT DROP NO. 3, NEAR CALIPATRIA, CA

LOCATION.—Lat 33° 06' 16", long 115° 32' 39", on line between secs.19 and 20, T.12 S., R.14 E., [Imperial County](#), Hydrologic Unit 18100200, on right bank, 2.2 mi southwest of Calipatria.

PERIOD OF RECORD.—October 1979 to September 2003 (discontinued). Records prior to October 1979 in files of the Imperial Irrigation District.

CHEMICAL DATA: Water years 1969–70, 1975–77, 1979–94.

BIOLOGICAL DATA: Water years 1979–81.

SPECIFIC CONDUCTANCE: Water years 1969–70, 1975–77, 1979–84.

WATER TEMPERATURE: Water years 1969–70, 1975–77, 1979–84.

SEDIMENT DATA: Water years 1979–94.

REVISED RECORDS.—WDR CA-95-1: 1993(M).

GAGE.—Water-stage recorder and broad-crested weir. Elevation of gage is 185 ft below NGVD of 1929, from topographic map.

REMARKS.—Records excellent below 950 ft<sup>3</sup>/s and good above. Flow is mainly return from irrigated areas. See schematic diagram of [Salton Sea Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,980 ft<sup>3</sup>/s, Mar. 27, 1992, gage height, 6.56 ft, from rating curve extended above 1,000 ft<sup>3</sup>/s, maximum gage height, 7.20 ft, Jan. 17, 1993 (affected by backwater); minimum daily, 259 ft<sup>3</sup>/s, Jan. 2, 1985.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	819	701	584	515	636	388	886	839	752	676	777	563
2	833	706	567	438	616	391	918	866	792	691	676	595
3	861	677	574	480	564	354	890	900	717	696	674	640
4	839	642	570	517	532	454	886	889	705	719	642	642
5	832	638	547	540	571	566	880	847	682	684	611	691
6	839	673	537	494	605	608	881	856	721	698	627	686
7	796	724	566	486	589	687	883	846	715	736	640	677
8	835	732	546	526	634	719	901	832	758	705	689	610
9	848	731	525	524	618	741	889	820	764	726	729	610
10	858	685	534	580	607	759	901	828	767	697	773	619
11	873	614	510	607	607	788	904	825	763	718	674	647
12	881	623	543	621	592	741	910	743	744	735	670	677
13	874	648	560	559	829	783	904	736	773	749	682	659
14	854	698	546	559	675	764	904	821	829	803	688	676
15	876	719	521	575	525	767	868	868	825	780	664	737
16	896	699	594	576	404	859	887	879	689	779	694	735
17	867	732	594	585	356	774	919	883	664	758	715	677
18	872	689	588	596	357	646	920	860	691	756	676	694
19	852	654	557	600	357	631	887	810	744	750	609	713
20	821	662	621	576	389	656	862	762	724	758	609	750
21	752	694	640	593	381	698	836	769	729	750	608	693
22	759	698	649	599	461	755	818	819	744	763	644	702
23	795	672	616	631	500	781	848	843	718	782	638	703
24	796	692	562	622	503	806	846	774	674	712	894	668
25	750	647	441	565	597	813	897	776	759	667	849	694
26	699	650	366	553	712	839	912	823	695	711	654	726
27	705	724	486	498	475	887	899	772	668	704	669	755
28	674	696	566	572	397	846	894	811	709	674	744	757
29	676	593	533	621	---	850	871	752	710	713	711	782
30	657	590	546	636	---	839	866	783	687	737	592	780
31	687	---	576	597	---	867	---	777	---	748	590	---
TOTAL	24976	20303	17165	17441	15089	22057	26567	25409	21912	22575	21112	20558
MEAN	806	677	554	563	539	712	886	820	730	728	681	685
MAX	896	732	649	636	829	887	920	900	829	803	894	782
MIN	657	590	366	438	356	354	818	736	664	667	590	563
AC-FT	49540	40270	34050	34590	29930	43750	52700	50400	43460	44780	41880	40780

## 10254670 ALAMO RIVER AT DROP NO. 3, NEAR CALIPATRIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	782	669	555	534	603	810	947	847	713	712	709	730
MAX	895	809	666	640	718	947	1208	1000	888	888	846	847
(WY)	1992	1991	1991	1993	1991	1995	1994	1994	1994	1994	1994	1994
MIN	655	569	379	392	445	635	812	706	515	556	593	632
(WY)	1982	1982	1986	1995	1980	2001	1986	1982	1982	1982	1982	1986

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1980 - 2003	
ANNUAL TOTAL	274892		255164			
ANNUAL MEAN	753		699		718	
HIGHEST ANNUAL MEAN					833 1994	
LOWEST ANNUAL MEAN					628 1982	
HIGHEST DAILY MEAN	970	Apr 26	920	Apr 18	4670	Mar 27 1992
LOWEST DAILY MEAN	366	Dec 26	354	Mar 3	259	Jan 2 1985
ANNUAL SEVEN-DAY MINIMUM	500	Dec 24	386	Feb 16	277	Dec 31 1984
MAXIMUM PEAK FLOW			1310	Aug 24	5980	Mar 27 1992
MAXIMUM PEAK STAGE			3.03	Aug 24	7.20	Jan 17 1993
ANNUAL RUNOFF (AC-FT)	545200		506100		520100	
10 PERCENT EXCEEDS	893		868		916	
50 PERCENT EXCEEDS	780		699		711	
90 PERCENT EXCEEDS	578		542		521	

## 10254730 ALAMO RIVER NEAR NILAND, CA

LOCATION.—Lat 33° 11'56", long 115° 35'46", in SW 1/4 NW 1/4 sec.23, T.11 S., R.13 E., Imperial County, Hydrologic Unit 18100200, on left bank, 1.0 mi upstream from mouth, and 4.5 mi southwest of Niland.

PERIOD OF RECORD.—January 1943 to September 1960 (monthly discharge only, published in WSP 1743), October 1960 to current year.

GAGE.—Acoustic-velocity meter and water-stage recorder. Elevation of gage is 220 ft below NGVD of 1929, from topographic map. Prior to Oct. 1, 1986, at site 0.4 mi downstream at different datum.

REMARKS.—Records good except for estimated daily discharges, which are fair. Discharge mainly represents seepage and return flow from irrigated areas. See schematic diagram of Salton Sea Basin.

COOPERATION.—Discharge record provided by Imperial Irrigation District for the following dates: May 31 and June 1.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 4,500 ft<sup>3</sup>/s, Aug. 17, 1977, estimated, by Imperial Irrigation District; minimum daily, 288 ft<sup>3</sup>/s, Jan. 2, 1966, Dec. 15, 1984.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	988	809	642	594	709	442	1070	1030	923	816	927	668
2	1000	823	616	503	716	449	1130	1050	e967	825	830	684
3	1030	793	618	526	644	421	1100	1100	e953	844	827	784
4	1020	725	621	583	610	528	1080	1080	932	884	805	771
5	986	707	616	583	629	656	1110	990	895	839	756	830
6	991	754	614	578	687	723	1080	1020	909	852	775	881
7	934	825	634	551	664	821	1090	1010	922	890	800	835
8	955	836	618	593	686	858	1090	e1000	942	861	855	748
9	1020	856	588	592	697	896	1100	1000	995	876	885	721
10	1020	790	600	642	668	896	1130	999	995	875	968	762
11	1080	691	590	684	678	948	1130	959	995	882	862	781
12	1100	674	607	709	662	905	1150	864	995	886	835	808
13	1090	720	617	631	915	920	1150	854	973	917	865	791
14	1010	796	606	624	779	921	1130	949	985	971	867	820
15	1010	823	586	636	590	888	1080	1040	998	954	867	863
16	1060	801	639	631	452	1000	1070	1090	890	888	869	894
17	1060	836	676	645	396	933	1140	1110	835	938	863	839
18	1020	791	681	662	401	764	1170	1050	893	929	841	823
19	1000	738	636	669	397	743	1120	988	924	921	740	849
20	940	745	696	626	440	775	1020	930	903	929	e737	911
21	853	786	753	635	429	833	964	955	913	e914	e768	875
22	854	795	755	663	490	872	968	1030	962	e927	788	863
23	915	767	744	709	536	929	1040	1050	944	e946	770	886
24	960	790	644	697	554	958	1030	1010	873	e876	934	838
25	870	758	504	618	661	942	1090	992	932	e831	1120	865
26	824	752	411	607	836	1010	1150	1020	870	918	843	911
27	795	799	512	548	563	1050	1120	1010	823	888	826	950
28	766	799	606	610	456	1000	1090	1010	879	834	879	956
29	770	675	593	693	---	1020	1050	981	880	855	924	962
30	755	646	587	714	---	1020	1080	976	844	890	771	916
31	769	---	645	668	---	1070	---	999	---	897	716	---
TOTAL	29445	23100	19255	19424	16945	26191	32722	31146	27744	27553	26113	25085
MEAN	950	770	621	627	605	845	1091	1005	925	889	842	836
MAX	1100	856	755	714	915	1070	1170	1110	998	971	1120	962
MIN	755	646	411	503	396	421	964	854	823	816	716	668
AC-FT	58400	45820	38190	38530	33610	51950	64900	61780	55030	54650	51800	49760

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 2003, BY WATER YEAR (WY)

	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	
MEAN	943	764	645	641	752	967	1091	973	838	842	849	900																			
MAX	1159	851	792	834	970	1144	1272	1182	992	1027	1278	1271																			
(WY)	1964	1991	1973	1972	1964	1963	1980	1975	2001	1963	1977	1962																			
MIN	742	616	416	396	495	734	797	684	646	636	656	667																			
(WY)	1986	1966	1986	1978	1993	1987	1965	1964	1964	1985	1986	1992																			

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1961 - 2003	
ANNUAL TOTAL	325679		304723			
ANNUAL MEAN	892		835		851	
HIGHEST ANNUAL MEAN					991	
LOWEST ANNUAL MEAN					680	
HIGHEST DAILY MEAN	1190		Apr 26		1170	
LOWEST DAILY MEAN	411		Dec 26		396	
ANNUAL SEVEN-DAY MINIMUM	551		Dec 24		429	
ANNUAL RUNOFF (AC-FT)	646000		604400		616200	
10 PERCENT EXCEEDS	1080		1050		1100	
50 PERCENT EXCEEDS	936		855		847	
90 PERCENT EXCEEDS	641		606		613	

e Estimated.

## 10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CA

LOCATION.—Lat 32° 39' 57", long 115° 30' 08", in SW 1/4 SE 1/4 sec.14, T.17 S., R.14 E., Imperial County, Hydrologic Unit 18100200, on left bank, 200 ft downstream from bridge on Second Street, and 0.2 mi downstream from International Boundary in Calexico.

PERIOD OF RECORD.—October 1979 to current year. October 1945 to September 1979, in files of Imperial Irrigation District.

CHEMICAL DATA: Water years 1969–71, 1973–85.

BIOLOGICAL DATA: Water years 1973–81.

SPECIFIC CONDUCTANCE: Water years 1973–81.

WATER TEMPERATURE: Water years 1974–81.

SEDIMENT DATA: Water years 1975–85.

GAGE.—Water-stage recorder. Elevation of gage is 35 ft below NGVD of 1929, from topographic map.

REMARKS.—Records fair except for discharges below 150 ft<sup>3</sup>/s and estimated daily discharges, which are poor. Discharge represents seepage and return flow from irrigated areas. See schematic diagram of [Salton Sea Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 833 ft<sup>3</sup>/s, Dec. 9, 1982, Sept. 25, 1997, gage height, 14.73 ft; minimum daily, 50 ft<sup>3</sup>/s, estimated, Oct. 29, 2001.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	137	109	152	165	147	251	169	211	120	139	133	135
2	130	124	153	174	141	243	171	205	117	141	130	132
3	126	128	153	190	141	235	170	201	118	144	124	128
4	133	133	166	195	145	227	172	195	120	143	129	122
5	130	135	182	192	147	221	167	191	118	143	133	115
6	133	140	185	183	146	214	166	195	118	141	124	115
7	139	141	184	173	141	212	166	191	121	144	120	116
8	146	142	166	166	135	210	169	183	115	143	119	116
9	146	141	153	153	138	212	176	176	112	134	125	112
10	151	138	148	145	149	211	180	179	111	128	126	109
11	144	137	143	141	155	213	180	180	113	128	123	111
12	131	139	140	141	175	214	180	178	115	127	123	111
13	124	144	144	141	280	213	180	179	119	123	125	115
14	118	142	146	135	229	207	182	184	121	126	120	115
15	119	140	151	129	244	208	188	175	117	129	124	118
16	128	139	158	127	264	198	191	175	117	128	133	121
17	137	132	158	133	273	182	189	171	120	134	136	120
18	132	130	151	148	267	181	180	163	123	121	136	121
19	129	131	157	155	256	191	174	161	141	116	136	125
20	124	133	158	148	246	197	179	159	147	116	131	124
21	122	132	157	143	237	196	189	156	141	117	126	121
22	126	131	161	140	229	194	193	144	138	127	129	122
23	120	132	167	135	217	191	198	134	136	132	129	119
24	119	132	168	136	213	196	221	136	134	134	181	111
25	118	137	163	137	292	199	230	131	139	131	146	109
26	118	140	165	137	243	201	217	129	136	121	139	107
27	111	146	171	143	249	194	216	126	133	114	141	107
28	108	147	169	148	252	188	222	125	138	118	141	107
29	108	151	170	153	---	179	230	117	139	125	142	110
30	106	154	168	154	---	173	229	120	139	130	136	107
31	108	---	165	150	---	169	---	123	---	133	137	---
TOTAL	3921	4100	4972	4710	5751	6320	5674	5093	3776	4030	4097	3501
MEAN	126	137	160	152	205	204	189	164	126	130	132	117
MAX	151	154	185	195	292	251	230	211	147	144	181	135
MIN	106	109	140	127	135	169	166	117	111	114	119	107
AC-FT	7780	8130	9860	9340	11410	12540	11250	10100	7490	7990	8130	6940

## 10254970 NEW RIVER AT INTERNATIONAL BOUNDARY, AT CALEXICO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	214	208	247	251	260	276	278	253	213	220	248	229
MAX	370	334	374	366	375	395	452	389	321	394	441	399
(WY)	1984	1985	1987	1987	1987	1986	1986	1984	1984	1984	1984	1983
MIN	126	108	112	152	179	190	188	164	126	130	132	117
(WY)	1997	1997	1997	2003	1991	1995	1996	2003	2003	2003	2003	2003

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1980 - 2003	
ANNUAL TOTAL	59758		55945			
ANNUAL MEAN	164		153		241	
HIGHEST ANNUAL MEAN					362	
LOWEST ANNUAL MEAN					153	
HIGHEST DAILY MEAN	243	Mar 20	292	Feb 25	735	Dec 9 1982
LOWEST DAILY MEAN	100	Jul 23	106	Oct 30	e50	Oct 29 2001
ANNUAL SEVEN-DAY MINIMUM	110	Oct 26	108	Sep 24	99	Nov 23 1996
MAXIMUM PEAK FLOW			491	Feb 25	833	Dec 9 1982
MAXIMUM PEAK STAGE			12.66	Feb 25	14.73	Dec 9 1982
ANNUAL RUNOFF (AC-FT)	118500		111000		174800	
10 PERCENT EXCEEDS	210		210		356	
50 PERCENT EXCEEDS	153		141		224	
90 PERCENT EXCEEDS	128		118		152	

e Estimated.

## 10255550 NEW RIVER NEAR WESTMORLAND, CA

LOCATION.—Lat 33° 06' 17", long 115° 39' 49", in SW 1/4 SW 1/4 sec.19, T.12 S., R.13 E., Imperial County, Hydrologic Unit 18100200, on right bank, 3.5 mi upstream from mouth, and 5.2 mi northwest of Westmorland.

PERIOD OF RECORD.—January 1943 to current year. (Monthly discharge only, January 1943 to September 1960 published in WSP 1734; daily discharge available in files of the U.S. Geological Survey.)

GAGE.—Water-stage recorder. Elevation of gage is 220 ft below NGVD of 1929, from topographic map.

REMARKS.—Records good. Discharge mainly represents seepage and return flow from irrigated areas. See schematic diagram of Salton Sea Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 3,000 ft<sup>3</sup>/s, Aug. 17, 18, 1977, estimated, by Imperial Irrigation District; minimum daily, 150 ft<sup>3</sup>/s, Mar. 7, 1945.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	578	535	459	451	540	527	783	723	621	545	559	577
2	550	547	434	429	519	524	780	747	594	554	556	539
3	577	536	436	457	468	520	726	709	598	579	574	505
4	575	529	438	535	497	582	742	691	594	556	554	491
5	573	521	460	565	530	610	717	688	597	524	560	464
6	577	516	485	536	546	628	715	644	581	510	539	514
7	586	520	511	521	568	631	720	647	601	518	529	491
8	606	510	484	528	555	632	704	672	623	531	544	481
9	605	498	460	516	540	663	707	704	572	524	575	469
10	638	477	461	501	506	679	718	701	551	509	565	478
11	665	481	442	518	514	674	774	658	571	523	527	445
12	652	476	451	542	512	643	767	651	590	542	502	449
13	629	506	466	503	542	637	711	653	592	575	497	486
14	626	526	499	528	557	660	752	670	588	590	484	494
15	621	519	499	518	571	700	758	686	564	592	512	515
16	585	489	472	505	509	720	738	704	568	576	561	509
17	556	498	470	518	476	659	786	665	538	599	573	546
18	553	499	469	552	497	635	741	639	545	564	554	548
19	572	511	457	557	554	601	736	641	560	606	527	537
20	614	476	463	533	556	581	736	637	557	572	530	532
21	574	485	496	531	529	632	714	684	560	532	539	504
22	557	507	517	525	559	636	673	684	564	550	543	528
23	541	545	551	532	559	649	702	690	537	548	543	536
24	570	508	553	490	549	675	741	658	533	551	616	509
25	531	480	482	483	586	677	770	652	523	556	572	568
26	551	467	448	508	627	703	765	619	534	556	543	588
27	552	456	458	473	612	692	757	593	543	574	536	566
28	533	450	489	493	556	702	739	596	545	538	558	498
29	515	422	483	524	---	706	717	649	545	538	545	490
30	513	450	487	531	---	693	704	651	529	517	526	503
31	514	---	491	523	---	743	---	640	---	543	545	---
TOTAL	17889	14940	14771	15926	15134	20014	22093	20646	17018	17092	16888	15360
MEAN	577	498	476	514	540	646	736	666	567	551	545	512
MAX	665	547	553	565	627	743	786	747	623	606	616	588
MIN	513	422	434	429	468	520	673	593	523	509	484	445
AC-FT	35480	29630	29300	31590	30020	39700	43820	40950	33760	33900	33500	30470

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2003, BY WATER YEAR (WY)

MEAN	640	562	546	561	597	680	731	666	593	597	613	616
MAX	837	760	707	795	789	829	953	853	763	808	913	807
(WY)	1953	1954	1963	1944	1944	1998	1993	1953	1953	1979	1977	1963
MIN	471	408	386	387	458	516	541	485	436	442	460	486
(WY)	1978	1965	1968	1978	1965	1965	1965	1964	1964	1964	1964	1970

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1943 - 2003	
ANNUAL TOTAL	218644		207771			
ANNUAL MEAN	599		569		616	
HIGHEST ANNUAL MEAN					741	
LOWEST ANNUAL MEAN					484	
HIGHEST DAILY MEAN	787		Apr 18		e3000	
LOWEST DAILY MEAN	422		Nov 29		150	
ANNUAL SEVEN-DAY MINIMUM	441		Nov 28		284	
ANNUAL RUNOFF (AC-FT)	433700		412100		446600	
10 PERCENT EXCEEDS	729		703		761	
50 PERCENT EXCEEDS	587		550		605	
90 PERCENT EXCEEDS	485		479		483	

e Estimated.

## 10255810 BORREGO PALM CREEK NEAR BORREGO SPRINGS, CA

LOCATION.—Lat 33° 16'44", long 116° 25'45", in Anza-Borrego Desert State Park, [San Diego County](#), Hydrologic Unit 18100200, on left bank, 3.3 mi northwest of Borrego Springs.

DRAINAGE AREA.—21.8 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1950 to September 1993, October 1994 to current year. Prior to October 1960, published as "Palm Canyon Creek near Borrego Springs." Monthly discharge only for October to November 1950, published in WSP 1734.

REVISED RECORDS.—WSP 2128: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 1,200 ft above NGVD of 1929, from topographic map.

REMARKS.—Records poor. No regulation or diversion upstream from station. See schematic diagram of [Salton Sea Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,990 ft<sup>3</sup>/s, Aug. 20, 2003, gage height, 10.17 ft, from floodmarks, on basis of slope-area measurement of peak flow, maximum gage height, 10.65 ft, from high-water mark, Aug. 1, 2003; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 15 ft<sup>3</sup>/s, or maximum, from rating curve extended above 72 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 7.50, 9.80, and 10.17 ft:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 1	unknown	e2,100	10.65	Aug. 27	1330	1,240	6.31
Aug. 20	1630	2,990	10.17				

e Estimated.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.32	0.51	0.36	2.4	0.49	0.33	0.06	0.00	e35	e0.40
2	0.00	0.00	0.31	0.51	0.37	1.8	0.53	0.30	0.04	0.00	e1.0	0.35
3	0.00	0.00	0.29	0.50	0.36	1.5	0.56	0.32	0.04	0.00	e8.0	0.38
4	0.00	0.02	0.28	0.47	0.37	1.2	0.55	0.43	0.04	0.00	e0.50	e0.40
5	0.00	0.05	0.28	0.47	0.36	1.0	0.60	0.34	0.04	0.00	0.35	e0.35
6	0.00	0.06	0.28	0.49	0.36	0.85	0.55	0.32	0.04	0.00	0.29	e0.30
7	0.00	0.07	0.28	0.49	0.36	0.83	0.50	0.34	0.04	0.00	0.26	e0.30
8	0.00	0.08	0.28	0.64	0.37	0.67	0.47	0.40	0.04	0.00	0.23	e0.25
9	0.00	0.09	0.28	0.58	0.37	0.55	0.45	0.36	0.04	0.00	0.20	e0.25
10	0.00	0.20	0.28	0.51	0.39	0.47	0.44	0.30	0.04	0.00	0.17	e0.20
11	0.00	0.16	0.30	0.50	0.44	0.41	0.43	0.26	0.04	0.00	0.15	e0.20
12	0.00	0.15	0.30	0.47	0.67	0.38	0.46	0.23	0.04	0.00	0.14	e0.25
13	0.00	0.15	0.30	0.47	1.1	0.36	0.49	0.21	0.03	0.00	0.13	e0.25
14	0.00	0.16	0.31	0.45	1.2	0.36	0.54	0.20	0.03	0.00	0.12	e0.30
15	0.00	0.16	0.34	0.42	0.77	0.69	2.3	0.21	0.03	0.00	0.13	e0.30
16	0.00	0.16	0.59	0.44	0.65	4.6	0.83	0.19	0.03	0.00	0.14	e0.35
17	0.00	0.16	8.0	0.42	0.58	3.7	0.56	0.16	0.02	0.00	0.13	e0.40
18	0.00	0.17	4.0	0.40	0.55	2.5	0.52	0.16	0.02	0.00	0.12	0.46
19	0.00	0.17	1.7	0.40	0.62	1.6	0.45	0.15	0.02	0.00	0.14	0.38
20	0.00	0.17	2.2	0.48	1.0	1.1	0.40	0.12	0.01	0.00	e50	0.37
21	0.00	0.18	1.9	0.49	0.77	1.1	0.40	0.12	0.02	0.00	e3.0	e0.40
22	0.00	0.18	1.4	0.42	0.68	1.2	0.51	0.11	0.02	0.00	e1.0	e0.45
23	0.00	0.18	1.0	0.41	0.68	1.0	0.52	0.10	0.01	0.00	e0.75	e0.45
24	0.00	0.19	0.86	0.41	0.69	0.79	0.40	0.09	0.01	0.00	e0.50	0.27
25	0.00	0.19	0.76	0.40	2.2	0.79	0.37	0.09	0.00	0.00	e0.60	0.29
26	0.00	0.20	0.68	0.40	1.8	0.79	0.35	0.08	0.00	0.00	e0.50	0.33
27	0.00	0.21	0.61	0.40	3.2	0.86	0.34	0.08	0.00	0.00	e15	e0.35
28	0.00	0.24	0.58	0.40	3.3	0.73	0.33	0.07	0.00	0.00	e1.0	0.40
29	0.00	0.25	0.58	0.39	---	0.79	0.33	0.07	0.00	0.00	0.91	0.38
30	0.00	0.29	0.57	0.37	---	0.73	0.34	0.06	0.00	0.00	0.77	e0.35
31	0.00	---	0.54	0.36	---	0.54	---	0.06	---	0.00	0.47	---
TOTAL	0.00	4.29	30.40	14.07	24.57	36.29	16.01	6.26	0.75	0.00	121.70	10.11
MEAN	0.000	0.14	0.98	0.45	0.88	1.17	0.53	0.20	0.025	0.000	3.93	0.34
MAX	0.00	0.29	8.0	0.64	3.3	4.6	2.3	0.43	0.06	0.00	50	0.46
MIN	0.00	0.00	0.28	0.36	0.36	0.36	0.33	0.06	0.00	0.00	0.12	0.20
AC-FT	0.00	8.5	60	28	49	72	32	12	1.5	0.00	241	20

e Estimated.

## SALTON SEA BASIN

## 10255810 BORREGO PALM CREEK NEAR BORREGO SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.16	0.32	0.78	1.64	2.77	2.94	1.60	0.67	0.22	0.18	0.51	0.15
MAX	2.83	2.97	5.29	27.4	32.5	29.3	11.2	7.55	3.96	4.46	10.6	3.27
(WY)	1984	1984	1984	1993	1980	1983	1980	1980	1980	1979	1979	1983
MIN	0.000	0.000	0.000	0.000	0.030	0.073	0.007	0.000	0.000	0.000	0.000	0.000
(WY)	1951	1951	1963	1972	1972	1972	1972	1961	1954	1952	1951	1951

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1951 - 2003
ANNUAL TOTAL	71.55	264.45	
ANNUAL MEAN	0.20	0.72	0.99
HIGHEST ANNUAL MEAN			7.61 1980
LOWEST ANNUAL MEAN			0.009 1972
HIGHEST DAILY MEAN	8.0 Dec 17	50 Aug 20	277 Aug 16 1979
LOWEST DAILY MEAN	0.00 May 28	0.00 Oct 1	0.00 Oct 1 1950
ANNUAL SEVEN-DAY MINIMUM	0.00 May 28	0.00 Oct 1	0.00 Oct 1 1950
MAXIMUM PEAK FLOW		2990 Aug 20	2990 Aug 20 2003
MAXIMUM PEAK STAGE		10.65 Aug 1	10.65 Aug 1 2003
ANNUAL RUNOFF (AC-FT)	142	525	714
10 PERCENT EXCEEDS	0.38	0.95	2.0
50 PERCENT EXCEEDS	0.08	0.31	0.10
90 PERCENT EXCEEDS	0.00	0.00	0.00



10256000 WHITEWATER RIVER AT WHITE WATER, CA

LOCATION.—Lat 33° 56' 48", long 116° 38' 24", in NW 1/4 NE 1/4 sec.2, T.3 S., R.3 E., [Riverside County](#), Hydrologic Unit 18100200, 1.5 mi north of White Water, and 3.5 mi upstream from San Geronio River.

DRAINAGE AREA.—57.5 mi<sup>2</sup>.

PERIOD OF RECORD.—Water years 1967–1981, 1997 to current year.

CHEMICAL DATA: Water years 1967–1981, 1997 to current year.

SEDIMENT DATA: Water year 1972.

REMARKS.—Chemical-quality records for water years 1975–1981 were furnished by California Department of Water Resources. Water discharge records were collected during water years 1949–1981.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hard-ness, wat flt field, mg/L as CaCO3 (00904)	Calcium water, fltrd, mg/L (00915)	
NOV 04...	1515	1.9	8.3	399	18.0	180	9	52.4	
Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Bromide water, fltrd, mg/L (71870)
NOV 04...	13.0	4.28	.5	15.0	15	176	209	2	.02
Date	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 sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue evap. at 180degC, wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)
NOV 04...	2.86	.98	16.4	33.7	246	.33	243	<.10	<.04
Date	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Organic carbon, water, unfltrd mg/L (00680)	Arsenic water, fltrd, ug/L (01000)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)
NOV 04...	.41	<.008	<.02	e.02	.5	e1	13	<10	<2.0

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

## 10256060 WHITEWATER RIVER AT WHITE WATER CUTOFF, AT WHITE WATER, CA

LOCATION.—Lat 33° 55' 31", long 116° 38' 07", in NE 1/4 SE 1/4 sec.11, T.3 S., R.3 E., [Riverside County](#), Hydrologic Unit 18100200, on center pier of White Water Cutoff (old Highway 99) bridge, 0.1 mi east of White Water, 0.75 mi downstream from Metropolitan Water District's Colorado River Aqueduct turnout, and 2.0 mi upstream from San Geronio River.

DRAINAGE AREA.—59.1 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1985 to September 1987 and October 1988 to September 1990. Discharge measurements for the period October 1984 to September 1985 available in files of the U.S. Geological Survey. Discharge measurements only, October 1987 to September 1988, October 1990 to current year. Station discontinued as continuous-record site effective Sept. 30, 1993.

CHEMICAL DATA: Water years 1972–76, 1978–96.

GAGE.—None. Datum of station is 1,360 ft above NGVD of 1929, from topographic map.

REMARKS.—Indeterminate stage-discharge relationship. At times, imported water is released to the Whitewater River from the Colorado River Aqueduct at a point 0.75 mi upstream. Water is diverted out of the basin 16.5 mi upstream to powerplants in the San Geronio River Basin and then to an area north of Banning for irrigation. See schematic diagram of [Salton Sea Basin](#).

EXTREMES FOR PERIOD OF RECORD (1986–87 and 1989–90).—Maximum discharge, 2,020 ft<sup>3</sup>/s, Feb. 15, 1986, gage height, 11.97 ft, from rating curve extended above 900 ft<sup>3</sup>/s; no flow for many days in some years.

## DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Discharge (ft <sup>3</sup> /s)
Oct. 2	1220	86
Nov. 4	1555	122
Dec. 12	1050	169
Jan. 7	1210	4.1
Feb. 4	1335	2.3
Mar. 5	1300	4.8
Apr. 1	1525	2.4
Apr. 29	1605	2.0
May 29	0955	1.8
July 2	0940	1.4
Aug. 6	0955	1.7
Aug. 27	1330	1.2

## 10256500 SNOW CREEK NEAR WHITE WATER, CA

LOCATION.—Lat 33° 52' 14", long 116° 40' 49", in NW 1/4 NW 1/4 sec.33, T.3 S., R.3 E., Riverside County, Hydrologic Unit 18100200, on left bank, at upstream side of Desert Water Agency Diversion Dam, 0.1 mi downstream from East Fork, and 4.4 mi southwest of White Water.

DRAINAGE AREA.—10.9 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—July to December 1921, May 1922 to February 1927, December 1927 to September 1931, October 1959 to current year. Yearly discharges for 1929–31, published in WSP 1314. Discharge records for Snow Creek Diversion (station 10256550) since October 1978, and those for creek only October 1978 through September 1988 available in files of the U.S. Geological Survey.

REVISED RECORDS.—WDR CA-89-1: Drainage area. WDR CA-90-1: 1980 Combined discharge. WDR CA-93-1: 1991. WDR CA-96-1: 1969(M), 1976(M).

GAGE.—Water-stage recorder, crest-stage gage, and broad-crested weir on creek, nonrecording flow meter on diversion. Elevation of gage is 2,000 ft above NGVD of 1929, from topographic map. Prior to October 1931, at various sites within 500 ft of present site at different datums. October 1959 to Oct. 6, 1970, at site 40 ft upstream at present datum. Oct. 6, 1970, to Oct. 25, 1978, at site 290 ft upstream from diversion at present datum. Gage moved to present site 10 ft downstream from diversion Oct. 25, 1978.

REMARKS.—Records fair except for discharges above 50 ft<sup>3</sup>/s and estimated daily discharges, which are poor. No regulation upstream from station. Diversion (station 10256550) 10 ft upstream, generally taking most of the base flow. For combined record of creek and diversion, see station 10256501. Published record prior to 1989 represents entire flow from basin (combined creek plus diversion prior to March 1927 and October 1978 to September 1988; creek only, upstream from diversion, December 1927 to September 1931, and October 1959 to September 1978). Both creek only and combined flow published beginning October 1989. Statistics for station 10256501 (combined flow) reflect equivalent total flow from basin. See schematic diagram of Salton Sea Basin.

COOPERATION.—Records for diversion provided by Desert Water Agency.

EXTREMES FOR PERIOD OF RECORD (Combined creek and diversion).—Maximum discharge, 9,900 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 13.8 ft, from floodmarks, site and datum then in use, from rating curve extended above 55 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum daily, 2.1 ft<sup>3</sup>/s, June 23–27, Sept. 5–11, 1961.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended above 29.9 ft<sup>3</sup>/s, on basis of broad-crested weir computations:

Date	Time	Creek only		Combined creek and diversion	
		Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Discharge (ft <sup>3</sup> /s)	
Nov. 9	2115	181	4.31	181	
Feb. 12	1700	214	4.50	214	
Mar. 15	1945	372	5.23	372	

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.56	0.44	3.3	1.0	0.00	2.8	1.9	0.82	0.88	0.35	2.9	0.38
2	0.57	0.42	3.3	0.73	0.00	2.5	1.9	0.76	0.67	0.33	2.8	0.36
3	0.46	0.38	3.2	0.41	0.00	2.2	1.7	2.3	0.49	0.28	2.6	0.36
4	0.25	0.47	1.4	0.44	0.00	2.0	1.7	3.2	0.33	0.28	1.1	1.5
5	0.22	0.29	0.30	0.52	0.00	1.9	1.7	2.4	0.27	0.27	0.15	2.7
6	0.20	0.30	0.28	0.46	0.08	1.5	1.6	1.9	0.24	0.28	0.14	1.4
7	0.17	1.2	0.28	0.45	0.19	1.1	1.4	1.6	0.11	0.30	0.13	0.41
8	0.17	3.1	0.30	3.4	0.18	1.1	1.3	1.4	0.02	0.31	0.14	0.35
9	0.17	60	0.29	4.9	0.17	1.0	1.2	0.99	0.00	0.27	0.14	0.42
10	0.19	31	0.28	5.0	0.15	0.99	1.1	0.87	2.6	0.21	0.12	0.48
11	0.23	9.3	0.28	4.7	23	1.0	1.1	0.74	4.3	0.21	0.10	0.48
12	0.23	6.3	0.29	4.4	89	1.1	1.1	0.67	4.1	0.19	0.07	0.46
13	0.21	3.9	0.28	2.2	57	0.98	1.2	0.83	e3.9	0.14	0.07	0.46
14	0.20	1.5	0.30	0.78	32	0.77	8.4	1.1	3.8	0.08	0.14	0.45
15	0.24	0.92	0.60	0.53	17	89	15	1.3	3.7	0.09	0.27	0.45
16	0.31	0.78	7.1	0.24	12	88	10	1.2	3.6	0.11	0.33	0.41
17	1.1	0.69	22	0.17	9.5	42	8.6	1.4	3.5	0.20	0.24	0.37
18	1.8	0.61	8.6	0.14	e8.2	27	4.9	1.7	3.5	0.25	0.18	0.42
19	1.1	0.55	6.1	0.11	7.4	19	2.7	1.5	3.5	0.24	0.29	0.43
20	1.1	0.52	6.6	2.6	7.3	15	2.4	1.3	e3.5	0.22	1.5	0.41
21	1.1	0.50	5.6	2.0	4.5	13	2.2	1.3	3.5	0.24	2.8	0.37
22	1.1	0.46	5.1	0.15	2.3	11	2.3	1.4	3.5	0.29	1.7	0.33
23	1.1	0.44	4.7	0.09	2.1	10	2.2	1.7	3.4	0.27	0.33	0.42
24	0.87	0.46	4.3	0.10	3.4	9.4	1.8	1.8	1.4	0.26	1.1	0.48
25	0.40	0.45	4.1	0.13	9.5	e9.0	1.3	1.7	0.42	0.30	2.6	0.48
26	0.42	0.48	2.3	0.15	8.7	e8.5	1.2	1.6	0.78	0.28	e2.6	0.40
27	0.45	0.45	1.0	0.15	8.4	7.8	1.1	1.4	0.52	0.25	e2.6	0.35
28	0.39	0.36	1.0	0.13	5.0	5.7	1.1	1.3	0.46	0.33	e2.7	0.36
29	0.38	1.8	1.1	0.10	---	2.5	1.0	1.4	0.42	0.47	1.3	0.37
30	0.43	3.3	1.0	0.06	---	2.2	0.90	1.5	0.36	2.1	0.40	0.62
31	0.43	---	0.93	0.02	---	2.0	---	1.1	---	2.8	0.39	---
TOTAL	16.55	131.37	96.21	36.26	307.07	382.04	86.00	44.18	57.77	12.20	31.93	16.88
MEAN	0.53	4.38	3.10	1.17	11.0	12.3	2.87	1.43	1.93	0.39	1.03	0.56
MAX	1.8	60	22	5.0	89	89	15	3.2	4.3	2.8	2.9	2.7
MIN	0.17	0.29	0.28	0.02	0.00	0.77	0.90	0.67	0.00	0.08	0.07	0.33
AC-FT	33	261	191	72	609	758	171	88	115	24	63	33

e Estimated.

## SALTON SEA BASIN

## 10256500 SNOW CREEK NEAR WHITE WATER, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.01	3.33	5.10	12.8	20.0	15.4	10.1	10.1	5.95	3.33	2.70	2.08
MAX	6.55	13.3	24.0	131	173	71.5	28.6	40.8	31.7	14.4	18.0	7.55
(WY)	1993	1984	1984	1993	1980	1995	1983	1983	1983	1983	1983	1983
MIN	0.008	0.30	0.000	0.85	0.92	0.52	0.84	0.29	0.14	0.000	0.001	0.17
(WY)	1985	1982	1982	1999	2002	1999	2002	1984	1984	1981	1981	1981

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1979 - 2003	
ANNUAL TOTAL	472.14		1218.46			
ANNUAL MEAN	1.29		3.34		7.68	
HIGHEST ANNUAL MEAN					28.4	1980
LOWEST ANNUAL MEAN					1.01	2002
HIGHEST DAILY MEAN	60	Nov 9	89	Feb 12	909	Jan 7 1993
LOWEST DAILY MEAN	0.05	Apr 10	0.00	Feb 1	0.00	Nov 8 1978
ANNUAL SEVEN-DAY MINIMUM	0.09	Apr 4	0.01	Jan 30	0.00	Oct 5 1979
MAXIMUM PEAK FLOW			372	Mar 15	1910	Jan 7 1993
MAXIMUM PEAK STAGE			5.23	Mar 15	7.35	Jan 7 1993
ANNUAL RUNOFF (AC-FT)	936		2420		5560	
10 PERCENT EXCEEDS	3.4		6.8		17	
50 PERCENT EXCEEDS	0.49		0.90		2.7	
90 PERCENT EXCEEDS	0.21		0.16		0.19	

## 10256501 SNOW CREEK NEAR WHITE WATER, CA—Continued

## SNOW CREEK AND SNOW CREEK DIVERSION NEAR WHITE WATER, CA

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	2.8	3.3	3.9	3.8	6.5	6.3	5.5	5.8	e3.8	2.9	3.0
2	2.6	2.7	3.3	3.7	3.7	6.1	6.3	5.4	5.6	e3.7	2.8	3.0
3	2.6	2.7	3.2	3.6	3.7	5.8	6.1	7.0	5.4	e3.7	2.6	3.0
4	2.6	2.7	3.2	3.6	3.7	5.6	5.8	7.7	5.2	e3.7	2.9	3.0
5	2.6	2.6	3.3	3.7	3.7	5.5	5.5	6.9	5.2	e3.7	3.1	2.7
6	2.6	2.6	3.3	3.7	3.8	5.2	5.4	6.4	5.0	e3.7	3.1	2.9
7	2.6	2.6	3.3	3.8	3.9	4.8	5.5	6.1	4.9	e3.7	3.0	3.0
8	2.6	3.1	3.3	4.7	3.9	4.8	5.3	6.1	4.7	e3.7	3.1	3.0
9	2.6	60	3.3	4.9	3.8	4.7	5.3	6.1	4.7	e3.7	3.1	3.0
10	2.6	31	3.3	5.0	3.8	4.7	5.2	6.0	4.4	e3.6	3.1	3.1
11	2.6	9.3	3.3	4.7	24	4.7	5.3	5.9	4.3	e3.6	3.0	3.1
12	2.6	6.3	3.2	4.4	89	4.8	5.3	5.9	4.1	e3.6	3.0	3.1
13	2.6	4.9	3.2	4.3	57	4.7	5.4	6.0	e3.9	e3.5	3.0	3.1
14	2.6	3.9	3.1	4.2	32	4.6	10	6.3	3.8	3.5	3.0	3.0
15	2.6	3.3	3.4	3.9	17	91	15	6.5	3.7	3.5	3.2	3.0
16	2.7	3.2	8.8	4.0	12	88	10	6.2	3.6	3.5	3.2	3.0
17	2.7	3.3	22	3.9	9.5	42	8.6	6.4	3.5	3.6	3.1	3.0
18	e2.9	3.3	8.6	3.9	e8.2	27	7.6	6.7	3.5	3.4	3.1	3.0
19	e2.8	3.2	6.1	4.0	7.4	19	6.9	6.6	3.5	3.3	3.2	3.0
20	e2.8	3.2	6.6	4.1	7.3	15	6.7	6.3	e3.5	3.3	3.2	3.0
21	e2.8	3.2	5.6	4.1	6.3	13	6.7	6.4	3.5	3.2	2.8	3.0
22	e2.8	3.3	5.1	3.9	5.9	11	6.5	6.4	3.5	3.3	2.8	2.8
23	e2.8	3.2	4.7	3.9	5.7	10	6.4	6.6	3.4	3.4	2.9	2.9
24	e2.9	3.4	4.3	3.9	5.7	9.4	6.2	6.7	e3.5	3.4	2.8	3.0
25	2.7	3.4	4.1	3.9	9.5	e9.0	6.2	6.6	e3.6	3.3	2.6	3.0
26	2.7	3.4	3.9	4.0	8.7	e8.5	5.9	6.5	e3.8	3.3	e2.6	2.9
27	2.8	3.4	3.6	4.0	8.4	7.8	5.9	6.3	3.9	3.2	e2.6	2.9
28	2.7	3.3	3.7	3.9	7.4	7.3	5.9	6.2	3.9	3.3	e2.7	2.9
29	2.7	3.2	3.8	3.9	---	6.9	5.8	6.3	3.8	3.4	2.9	2.9
30	2.7	3.3	3.7	3.9	---	6.6	5.7	6.4	3.8	3.0	3.0	3.1
31	2.7	---	3.8	3.8	---	6.4	---	6.0	---	2.8	3.0	---
TOTAL	83.2	189.8	147.4	125.2	358.8	450.4	198.7	196.4	125.0	107.4	91.4	89.4
MEAN	2.68	6.33	4.75	4.04	12.8	14.5	6.62	6.34	4.17	3.46	2.95	2.98
MAX	2.9	60	22	5.0	89	91	15	7.7	5.8	3.8	3.2	3.1
MIN	2.6	2.6	3.1	3.6	3.7	4.6	5.2	5.4	3.4	2.8	2.6	2.7
AC-FT	165	376	292	248	712	893	394	390	248	213	181	177

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2003, BY WATER YEAR (WY)

MEAN	4.68	7.15	10.0	14.2	15.9	13.9	12.2	12.4	8.98	6.10	5.20	5.19
MAX	10.7	82.5	76.7	178	173	72.0	36.7	45.7	37.6	20.2	20.7	32.5
(WY)	1984	1966	1967	1969	1980	1995	1969	1983	1983	1983	1983	1976
MIN	2.68	2.75	3.11	3.30	3.40	3.39	3.16	2.55	2.35	2.31	2.35	2.40
(WY)	2003	1963	1963	1961	1961	1961	1961	1961	1961	1961	1960	1961

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1921 - 2003

ANNUAL TOTAL	1324.9	2163.1		
ANNUAL MEAN	3.63	5.93	9.75	
HIGHEST ANNUAL MEAN			33.0	1969
LOWEST ANNUAL MEAN			2.96	1961
HIGHEST DAILY MEAN	60	Nov 9	91	Mar 15
LOWEST DAILY MEAN	2.4	Sep 18	2.6	Oct 1
ANNUAL SEVEN-DAY MINIMUM	2.4	Sep 20	2.6	Oct 1
MAXIMUM PEAK FLOW			372	Mar 15
MAXIMUM PEAK STAGE			9900	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	2630	4290	13.80	Jan 25 1969
10 PERCENT EXCEEDS	4.1	7.5	16	
50 PERCENT EXCEEDS	3.2	3.7	5.5	
90 PERCENT EXCEEDS	2.7	2.8	3.1	

e Estimated.

## 10256500 SNOW CREEK NEAR WHITE WATER, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1972–76, 1978 to current year.

CHEMICAL DATA: Water years 1972–76, 1978 to current year.

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

Date	Time	Instan- taneous dis- charge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat un- f, uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)
NOV 04...	1310	2.6	8.0	115	12.5	34	12.1	.893	1.74
Date	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicar- bonate, wat flt titr., field, mg/L (00453)	Bromide water, fltrd, mg/L (71870)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)
NOV 04...	.8	10.1	38	56	68	<.02	1.02	<.17	18.5
Date	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)
NOV 04...	1.4	79	.11	79	e.07	<.04	<.06	<.008	<.02
Date	Phos- phorus, water, fltrd, mg/L (00666)	Organic carbon, water, unfltrd mg/L (00680)	Arsenic water, fltrd, ug/L (01000)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)			
NOV 04...	e.03	.5	<2	e6.9	e7	<2.0			

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

e Estimated.

## 10257500 FALLS CREEK NEAR WHITE WATER, CA

LOCATION.—Lat 33° 52' 10", long 116° 40' 15", in SW 1/4 NE 1/4 sec.33, T.3 S., R.3 E., [Riverside County](#), Hydrologic Unit 18100200, on right bank, at upstream side of Desert Water Agency Diversion Dam, 0.75 mi upstream from confluence with Snow Creek, and 4.4 mi southwest of White Water.

DRAINAGE AREA.—4.14 mi<sup>2</sup>.

PERIOD OF RECORD.—September 1922 to January 1927, January 1928 to July 1931, and October 1994 to current year. Previous gage destroyed by flood of Aug. 29, 1931. Monthly and yearly discharges for 1922–31, published in WSP 1314. Discharge records for Falls Creek Diversion (station 10257499) since October 1994 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder, broad-crested weir, and crest-stage gage on creek, totalizing flow meter on diversion. Auxiliary gage 0.25 mi downstream with crest-stage gage and culvert control. Elevation of gage is 1,940 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good except for estimated daily discharges, which are poor. No regulation upstream from station. Diversion (station 10257499) immediately upstream takes a varying portion of the base flow. For combined record of creek and diversion, see [station 10257501](#). Published record prior to 1995 represents entire flow from basin. Records for the period 1922–1931 (prior to construction of diversion) are equivalent to those for station 10257501. Both creek only and combined flow published beginning October 1994. Statistics for station 10257501 (combined flow) reflect equivalent total flow from basin. See schematic diagram of [Salton Sea Basin](#).

COOPERATION.—Records for diversion provided by Desert Water Agency.

EXTREMES FOR PERIOD OF RECORD (Combined creek and diversion).—Maximum discharge, 154 ft<sup>3</sup>/s, Jan. 10, 1995, gage height, 6.14 ft (creek gage; no diversion at peak), from rating curve extended above 6.5 ft<sup>3</sup>/s on basis of critical depth computations; maximum gage height, 6.24 ft, Feb. 14, 1998; minimum daily, 0.10 ft<sup>3</sup>/s, Sept. 11, 1997.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft<sup>3</sup>/s, or maximum, from rating curve extended as noted above:

Date	Time	Creek only		Combined creek and diversion
		Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
Mar. 15	2030	75	5.55	75

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.11	0.19	0.30	0.35	0.35	0.98	0.85	0.07	0.08	0.25	0.24	0.25
2	0.12	0.19	0.30	0.35	0.35	0.92	0.81	0.06	0.06	0.24	0.28	0.24
3	0.12	0.20	0.29	0.35	0.35	0.86	0.77	0.27	0.06	0.23	0.27	0.23
4	0.12	0.19	0.29	0.35	0.35	0.81	0.38	0.52	0.06	0.23	0.26	0.54
5	0.12	0.18	0.29	0.35	0.35	0.77	0.13	0.25	0.05	0.23	0.25	0.78
6	0.12	0.18	0.30	0.34	0.34	0.74	0.13	0.22	0.05	0.22	0.23	0.42
7	0.12	0.26	0.30	0.35	0.33	0.73	0.11	0.18	0.03	0.22	0.22	0.32
8	0.12	0.34	0.30	0.83	0.33	0.71	0.09	0.14	0.00	0.22	0.21	0.29
9	0.12	0.29	0.29	1.0	0.31	0.69	0.08	0.12	e0.40	0.22	0.19	0.29
10	0.11	0.70	0.30	0.68	0.30	0.67	0.06	0.11	e0.50	0.22	0.19	0.28
11	0.12	0.53	0.30	0.57	5.0	0.65	0.06	0.09	0.43	0.22	0.18	0.28
12	0.12	0.36	0.29	0.53	16	0.68	0.06	0.06	0.41	0.22	0.17	0.27
13	0.12	0.32	0.28	0.53	9.3	0.69	0.08	0.07	0.39	0.21	0.16	0.27
14	0.11	0.30	0.30	0.53	6.0	0.68	1.1	0.08	0.36	0.20	0.16	0.26
15	0.11	0.30	0.40	0.48	3.2	16	2.3	0.11	0.35	0.20	0.16	0.26
16	0.12	0.30	1.0	0.46	2.2	16	1.5	0.09	0.32	0.19	0.16	0.26
17	0.12	0.32	3.4	0.42	1.6	6.8	1.2	0.10	0.32	0.20	0.16	0.25
18	0.12	0.34	1.2	0.40	1.4	4.1	0.63	0.13	0.31	0.19	0.16	0.25
19	0.12	0.30	0.82	0.40	1.1	2.8	0.29	0.12	0.31	0.19	0.17	0.25
20	0.13	0.34	1.0	0.42	1.1	2.2	0.22	0.08	0.32	0.19	0.79	0.24
21	0.13	0.35	0.68	0.62	0.94	1.9	0.18	0.07	0.35	0.20	0.95	0.23
22	0.14	0.32	0.57	0.56	0.83	1.6	0.19	0.08	0.36	0.20	0.44	0.23
23	0.14	0.32	0.52	0.51	0.77	1.5	0.17	0.10	0.35	0.20	0.31	0.23
24	0.14	0.31	0.46	0.46	0.74	e1.4	0.14	0.14	0.34	0.20	0.28	0.23
25	0.14	0.30	0.45	0.43	1.6	e1.3	0.11	0.11	0.32	0.21	0.27	0.23
26	0.16	0.30	0.40	0.40	1.2	e1.2	0.10	0.11	0.30	0.21	e0.28	0.23
27	0.17	0.30	0.40	0.40	1.1	e1.1	0.09	0.09	0.28	0.20	e0.28	0.22
28	0.17	0.30	0.40	0.40	1.0	e1.0	0.08	0.07	0.27	0.20	e0.27	0.22
29	0.19	0.30	0.38	0.40	---	1.0	0.08	0.11	0.25	0.22	e0.26	0.22
30	0.20	0.30	0.37	0.39	---	0.96	0.08	0.17	0.25	0.22	0.26	0.21
31	0.20	---	0.36	0.37	---	0.90	---	0.13	---	0.23	0.25	---
TOTAL	4.15	9.23	16.94	14.63	58.44	72.34	12.07	4.05	7.88	6.58	8.46	8.48
MEAN	0.13	0.31	0.55	0.47	2.09	2.33	0.40	0.13	0.26	0.21	0.27	0.28
MAX	0.20	0.70	3.4	1.0	16	16	2.3	0.52	0.50	0.25	0.95	0.78
MIN	0.11	0.18	0.28	0.34	0.30	0.65	0.06	0.06	0.00	0.19	0.16	0.21
AC-FT	8.2	18	34	29	116	143	24	8.0	16	13	17	17

e Estimated.

## SALTON SEA BASIN

## 10257500 FALLS CREEK NEAR WHITE WATER, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.93	1.16	1.46	1.54	1.98	1.76	1.67	1.49	1.14	0.82	0.75	0.84
MAX	2.52	2.81	5.68	4.58	8.08	8.75	7.90	4.25	3.33	2.37	2.67	2.23
(WY)	1923	1923	1927	1995	1998	1995	1926	1926	1998	1926	1926	1926
MIN	0.13	0.31	0.48	0.31	0.36	0.15	0.15	0.13	0.13	0.11	0.11	0.12
(WY)	2003	2003	2002	1999	2002	1997	1997	1997	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1923 - 2003	
ANNUAL TOTAL	92.95		223.25			
ANNUAL MEAN	0.25		0.61		1.26	
HIGHEST ANNUAL MEAN					2.77	
LOWEST ANNUAL MEAN					0.26	
HIGHEST DAILY MEAN	3.4	Dec 17	16	Feb 12	50	Mar 5 1995
LOWEST DAILY MEAN	0.11	Jun 26	0.00	Jun 8	0.00	Apr 16 1997
ANNUAL SEVEN-DAY MINIMUM	0.11	Jul 16	0.04	Jun 2	0.00	Apr 13 1997
MAXIMUM PEAK FLOW			75	Mar 15	154	Jan 10 1995
MAXIMUM PEAK STAGE			5.80	Feb 12	6.24	Feb 14 1998
ANNUAL RUNOFF (AC-FT)	184		443		912	
10 PERCENT EXCEEDS	0.40		1.0		2.5	
50 PERCENT EXCEEDS	0.21		0.28		0.81	
90 PERCENT EXCEEDS	0.11		0.11		0.17	



## 10257501 FALLS CREEK NEAR WHITE WATER, CA—Continued

## FALLS CREEK AND FALLS CREEK DIVERSION NEAR WHITE WATER, CA

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.11	0.19	0.30	0.35	0.35	0.98	0.85	0.76	0.78	0.25	0.24	0.25
2	0.12	0.19	0.30	0.35	0.35	0.92	0.81	0.75	0.75	0.24	0.28	0.24
3	0.12	0.20	0.29	0.35	0.35	0.86	0.77	0.94	0.76	0.23	0.27	0.23
4	0.12	0.19	0.29	0.35	0.35	0.81	0.82	1.2	0.75	0.23	0.26	0.54
5	0.12	0.18	0.29	0.35	0.35	0.77	0.83	0.92	0.75	0.23	0.25	0.78
6	0.12	0.18	0.30	0.34	0.34	0.74	0.83	0.85	0.74	0.22	0.23	0.42
7	0.12	0.26	0.30	0.35	0.33	0.73	0.81	0.86	0.73	0.22	0.22	0.32
8	0.12	0.34	0.30	0.83	0.33	0.71	0.79	0.84	0.69	0.22	0.21	0.29
9	0.12	0.29	0.29	1.0	0.31	0.69	0.78	0.81	e0.61	0.22	0.19	0.29
10	0.11	0.70	0.30	0.68	0.30	0.67	0.72	0.80	e0.50	0.22	0.19	0.28
11	0.12	0.53	0.30	0.57	5.0	0.65	0.75	0.78	0.43	0.22	0.18	0.28
12	0.12	0.36	0.29	0.53	16	0.68	0.76	0.75	0.41	0.22	0.17	0.27
13	0.12	0.32	0.28	0.53	9.3	0.69	0.78	0.75	0.39	0.21	0.16	0.27
14	0.11	0.30	0.30	0.53	6.0	0.68	1.4	0.75	0.36	0.20	0.16	0.26
15	0.11	0.30	0.40	0.48	3.2	16	2.3	0.79	0.35	0.20	0.16	0.26
16	0.12	0.30	1.0	0.46	2.2	16	1.5	0.79	0.32	0.19	0.16	0.26
17	0.12	0.32	3.4	0.42	1.6	6.8	1.2	0.79	0.32	0.20	0.16	0.25
18	0.12	0.34	1.2	0.40	1.4	4.1	1.0	0.83	0.31	0.19	0.16	0.25
19	0.12	0.30	0.82	0.40	1.1	2.8	0.95	0.79	0.31	0.19	0.17	0.25
20	0.13	0.34	1.0	0.42	1.1	2.2	0.89	0.77	0.32	0.19	0.79	0.24
21	0.13	0.35	0.68	0.62	0.94	1.9	e0.86	0.75	0.35	0.20	0.95	0.23
22	0.14	0.32	0.57	0.56	0.83	1.6	0.88	0.75	0.36	0.20	0.44	0.23
23	0.14	0.32	0.52	0.51	0.77	1.5	0.87	0.79	0.35	0.20	0.31	0.23
24	e0.14	0.31	0.46	0.46	0.74	e1.4	0.83	0.83	0.34	0.20	0.28	0.23
25	0.14	0.30	0.45	0.43	1.6	e1.3	0.77	0.80	0.32	0.21	0.27	0.23
26	0.16	0.30	0.40	0.40	1.2	e1.2	0.79	0.80	0.30	0.21	e0.28	0.23
27	0.17	0.30	0.40	0.40	1.1	e1.1	0.77	0.79	0.28	0.20	e0.28	0.22
28	0.17	0.30	0.40	0.40	1.0	e1.0	0.77	0.73	0.27	0.20	e0.27	0.22
29	0.19	0.30	0.38	0.40	---	1.0	0.76	0.77	0.25	0.22	e0.26	0.22
30	0.20	0.30	0.37	0.39	---	0.96	0.78	0.85	0.25	0.22	0.26	0.21
31	0.20	---	0.36	0.37	---	0.90	---	0.83	---	0.23	0.25	---
TOTAL	4.15	9.23	16.94	14.63	58.44	72.34	27.62	25.21	13.65	6.58	8.46	8.48
MEAN	0.13	0.31	0.55	0.47	2.09	2.33	0.92	0.81	0.46	0.21	0.27	0.28
MAX	0.20	0.70	3.4	1.0	16	16	2.3	1.2	0.78	0.25	0.95	0.78
MIN	0.11	0.18	0.28	0.34	0.30	0.65	0.72	0.73	0.25	0.19	0.16	0.21
AC-FT	8.2	18	34	29	116	143	55	50	27	13	17	17

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

MEAN	0.59	0.86	0.88	1.32	2.32	2.06	1.21	1.38	0.99	0.73	0.58	0.66
MAX	1.40	1.64	1.71	4.58	8.08	8.75	2.92	4.05	3.33	2.32	1.76	1.52
(WY)	1996	1997	1997	1995	1998	1995	1995	1998	1998	1995	1995	1995
MIN	0.13	0.31	0.48	0.43	0.36	0.34	0.29	0.17	0.13	0.11	0.11	0.12
(WY)	2003	2003	2002	2002	2002	1997	2002	2002	2002	2002	2002	2002

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1995 - 2003

ANNUAL TOTAL	92.95	265.73		
ANNUAL MEAN	0.25	0.73	1.12	
HIGHEST ANNUAL MEAN			2.99	1995
LOWEST ANNUAL MEAN			0.26	2002
HIGHEST DAILY MEAN	3.4	Dec 17	16	Feb 12
LOWEST DAILY MEAN	0.11	Jun 26	0.11	Oct 1
ANNUAL SEVEN-DAY MINIMUM	0.11	Jul 16	0.12	Oct 9
MAXIMUM PEAK FLOW			75	Mar 15
ANNUAL RUNOFF (AC-FT)	184		527	
10 PERCENT EXCEEDS	0.40		1.0	2.4
50 PERCENT EXCEEDS	0.21		0.35	0.64
90 PERCENT EXCEEDS	0.11		0.18	0.19

e Estimated.

## 10257550 WHITEWATER RIVER AT WINDY POINT, NEAR WHITE WATER, CA

LOCATION.—Lat 33° 53' 56", long 116° 37' 13", in SW 1/4 NE 1/4 sec.24, T.3 S., R.3 E., [Riverside County](#), Hydrologic Unit 18100200, on right bank, 200 ft north of Highway 111, 2.0 mi southeast of White Water, and 3.8 mi east of the junction of Highway 111 and Interstate 10.

DRAINAGE AREA.—264 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1984 to September 1987, October 1989 to current year. Discharge measurements only, October 1987 to September 1989. Discharge measurements for the period July 1982 to September 1984 available in files of the U.S. Geological Survey.

REVISED RECORDS.—WDR CA-88-1: Drainage area.

GAGE.—Water-stage recorder and concrete control; auxiliary water-stage recorder on overflow channel since Jan. 23, 1992. Elevation of gage is 1,040 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair before Feb. 12, poor afterwards. Imported water is released to the Whitewater River from the Colorado River Aqueduct at a point 2.75 mi upstream for ground-water recharge in the upper Coachella Valley. Water is diverted out of the basin 18.5 mi upstream to the San Geronio River Basin and to an area north of Banning for irrigation and domestic use. See schematic diagram of [Salton Sea Basin](#).

COOPERATION.—Records of Colorado River Aqueduct releases provided by Metropolitan Water District.

EXTREMES FOR PERIOD OF RECORD.—Maximum computed discharge, 2,530 ft<sup>3</sup>/s, Jan. 10, 1995, gage height, 8.32 ft, main channel, from rating curve extended above 400 ft<sup>3</sup>/s, on basis of critical-depth computation (flow in overflow channel at peak); maximum probably exceeded during flood of Jan. 16, 1993, but discharge is unknown; no flow for many days in most years.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	389	0.36	0.00	2.5	0.00	0.00	0.00	0.00	0.00	0.99
2	26	0.00	388	0.44	0.00	2.3	0.00	0.00	0.00	0.00	0.00	0.45
3	33	0.00	383	0.51	0.00	1.8	0.00	0.53	0.00	0.00	0.00	0.11
4	0.00	70	386	0.41	0.44	0.46	0.00	3.5	0.00	0.00	0.00	0.00
5	0.00	160	304	0.25	85	0.45	0.00	0.00	0.00	0.00	0.00	2.9
6	0.00	173	130	0.34	244	0.74	0.00	0.00	0.00	0.00	0.00	1.5
7	0.00	160	133	0.66	117	24	0.00	0.00	0.00	0.00	0.00	1.2
8	0.00	184	136	0.93	4.2	8.1	0.00	0.00	0.00	0.00	0.00	0.92
9	0.00	330	138	1.9	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.66
10	0.00	300	139	1.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18
11	0.00	245	140	1.6	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	229	141	1.1	111	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	203	141	0.99	44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	329	142	1.2	18	0.00	9.6	0.00	0.00	0.00	0.00	0.00
15	0.00	488	141	1.3	9.6	79	9.5	0.00	0.00	0.00	0.00	0.00
16	0.00	496	174	1.4	7.1	74	3.4	0.00	0.00	0.00	0.00	0.00
17	0.00	494	178	0.62	6.7	22	2.0	0.00	0.00	0.00	0.00	0.00
18	0.00	489	158	0.92	4.6	12	1.2	0.00	0.00	0.00	0.00	0.00
19	0.00	491	158	0.10	3.5	6.0	0.58	0.00	0.00	0.00	0.00	0.00
20	0.00	494	162	0.55	4.9	4.6	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	431	159	0.77	2.4	2.6	0.00	0.00	0.00	0.00	0.37	0.00
22	0.00	389	158	0.79	2.1	1.7	0.51	0.00	0.00	0.00	0.00	0.00
23	0.00	384	157	0.54	0.91	0.31	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	384	157	0.67	0.00	0.70	0.00	0.00	0.00	0.00	0.14	0.00
25	0.00	386	157	0.45	13	1.2	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	388	157	0.34	7.1	0.00	0.00	0.00	0.00	0.00	0.07	0.00
27	0.00	389	158	0.16	9.1	0.00	0.00	0.00	0.00	0.00	0.73	0.00
28	0.00	388	157	0.03	5.7	0.00	0.00	0.00	0.00	0.00	6.9	0.00
29	0.00	368	154	0.43	---	0.00	0.00	0.00	0.00	0.00	4.2	0.00
30	0.00	391	99	0.39	---	0.00	0.00	0.00	0.00	0.00	3.8	0.00
31	0.00	---	0.04	0.00	---	0.00	---	0.00	---	0.00	1.9	---
TOTAL	59.00	9233.00	5574.04	21.75	718.35	244.47	26.79	4.03	0.00	0.00	18.11	8.91
MEAN	1.90	308	180	0.70	25.7	7.89	0.89	0.13	0.000	0.000	0.58	0.30
MAX	33	496	389	1.9	244	79	9.6	3.5	0.00	0.00	6.9	2.9
MIN	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	117	18310	11060	43	1420	485	53	8.0	0.00	0.00	36	18
a	326	21770	16060	0	844	118	0	0	0	0	0	0

a Discharge, in acre-feet, of imported water released to river 2.75 mi upstream.

## 10257550 WHITEWATER RIVER AT WINDY POINT, NEAR WHITE WATER, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	122	132	94.8	90.1	109	126	120	101	118	78.1	82.7	98.9
MAX	596	499	477	598	595	464	316	390	516	417	378	463
(WY)	1987	1987	1987	1987	1987	2000	1986	1998	1998	1986	1986	1986
MIN	0.025	0.000	0.000	0.000	0.35	0.33	0.001	0.000	0.000	0.000	0.000	0.000
(WY)	1992	1992	1990	1992	2001	2001	2002	1987	1987	1989	1987	1991

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1985 - 2003	
ANNUAL TOTAL	15029.02		15908.45			
ANNUAL MEAN	41.2		43.6		111	
HIGHEST ANNUAL MEAN					308	
LOWEST ANNUAL MEAN					1.09	
HIGHEST DAILY MEAN	496	Nov 16	496	Nov 16	2600	Jan 7 1993
LOWEST DAILY MEAN	0.00	Apr 2	0.00	Oct 1	0.00	Mar 4 1985
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 2	0.00	Oct 4	0.00	Feb 16 1986
MAXIMUM PEAK FLOW			593	Nov 9	2530	Jan 10 1995
MAXIMUM PEAK STAGE			5.43	Nov 9	8.32	Jan 10 1995
ANNUAL RUNOFF (AC-FT)	29810		31550		80600	
10 PERCENT EXCEEDS	158		158		340	
50 PERCENT EXCEEDS	0.00		0.00		9.2	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 10257600 MISSION CREEK NEAR DESERT HOT SPRINGS, CA

LOCATION.—Lat 34° 00' 40", long 116° 37' 38", in NE 1/4 SW 1/4 sec.12, T.2 S., R.3 E., [Riverside County](#), Hydrologic Unit 18100200, on right bank, in Mission Creek Indian Reservation, 0.6 mi downstream from West Fork, and 6.8 mi northwest of Desert Hot Springs.

DRAINAGE AREA.—35.7 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1967 to current year.

GAGE.—Water-stage recorder, crest-stage gage, and concrete scour limiter since November 1988. Elevation of gage is 2,400 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair. Slight regulation of low flow by two small dams with a combined capacity of about 3 acre-ft, 2 mi upstream from station. See schematic diagram of [Salton Sea Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,750 ft<sup>3</sup>/s, Aug. 17, 1983, gage height, 3.33 ft, on basis of slope-conveyance study of peak flow, maximum gage height, 6.40 ft, Jan. 25, 1969; maximum gage height since November 1988, 5.80 ft, from crest-stage gage, Jan. 16, 1993, discharge not determined; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft<sup>3</sup>/s, or maximum, from rating curve extended above 36 ft<sup>3</sup>/s, on basis of critical depth computations:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1915	2.3	1.67

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	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	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	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	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	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	0.13	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.15	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	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	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	0.15	0.00	0.02	0.13	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.005	0.000	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.15	0.00	0.02	0.13	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	0.3	0.00	0.04	0.3	0.00	0.00	0.00	0.00	0.00	0.00

## 10257600 MISSION CREEK NEAR DESERT HOT SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.78	0.99	1.06	3.13	7.74	6.10	4.95	4.03	2.58	1.73	1.32	0.86
MAX	3.83	4.54	4.51	29.2	174	49.6	31.6	25.8	16.4	10.1	5.42	4.74
(WY)	1970	1984	1979	1980	1980	1980	1993	1993	1993	1980	1983	1993
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1968	1969	1969	1968	1968	1989	1968	1968	1968	1972	1968	1968

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1968 - 2003
ANNUAL TOTAL	0.15	0.30	
ANNUAL MEAN	0.000	0.001	2.91
HIGHEST ANNUAL MEAN			28.3 1980
LOWEST ANNUAL MEAN			0.000 2002
HIGHEST DAILY MEAN	0.15 Dec 16	0.15 Dec 16	540 Feb 18 1980
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1967
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1967
MAXIMUM PEAK FLOW		2.3 Dec 16	1750 Aug 17 1983
MAXIMUM PEAK STAGE		1.67 Dec 16	6.40 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	0.3	0.6	2110
10 PERCENT EXCEEDS	0.00	0.00	5.4
50 PERCENT EXCEEDS	0.00	0.00	0.34
90 PERCENT EXCEEDS	0.00	0.00	0.00

## 10257720 CHINO CANYON CREEK BELOW TRAMWAY, NEAR PALM SPRINGS, CA

LOCATION.—Lat 33° 50' 39", long 116° 36' 16", in NW 1/4 NE 1/4 sec.7, T.4 S., R.4 E., [Riverside County](#), Hydrologic Unit 18100200, on left bank, 0.5 mi downstream from tram building, 3.5 mi west of Highway 111 on road leading to Palm Springs aerial tramway, and 5.5 mi west of Palm Springs.

DRAINAGE AREA.—4.71 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1986 to current year.

REVISED RECORDS.—WDR CA-89-1: 1987(M).

GAGE.—Water-stage recorder and crest-stage gage. Concrete control with low-water v-notch weir since June 25, 1996. Elevation of gage is 2,100 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good except for estimated daily discharges, which are poor. Two small diversions 2 mi upstream, one for city of Palm Springs and one for Palm Springs aerial tramway. October 1974 to July 1985, data published as "Chino Canyon Creek near Palm Springs" (station 10257710), with station located 0.45 mi upstream from present location. Previous gage destroyed by debris flow on July 19, 1985. Data for these sites are roughly equivalent. See schematic diagram of [Salton Sea Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 153 ft<sup>3</sup>/s, Jan. 7, 1993, gage height, 10.18 ft, from rating curve extended above 35 ft<sup>3</sup>/s, on basis of critical depth computations; maximum gage height, 10.32 ft, Feb. 14, 1998; no flow for many days in some years.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.05	0.08	0.07	0.06	0.06	0.29	0.45	e0.34	0.13	0.06	0.04	0.10
2	0.05	0.10	0.07	0.06	0.06	0.29	0.46	0.33	0.12	0.06	0.01	0.09
3	0.05	0.11	0.09	0.05	0.08	0.30	0.47	0.35	0.13	0.04	0.03	0.08
4	0.05	0.10	0.09	0.04	0.08	0.29	0.48	0.33	0.13	0.04	0.04	0.13
5	0.04	0.09	0.09	0.04	0.08	0.28	0.50	0.31	0.13	0.04	0.06	0.13
6	0.04	0.13	0.11	0.05	0.09	0.28	0.49	0.31	0.13	0.04	0.05	0.08
7	0.04	0.13	0.10	0.06	0.09	0.27	0.45	0.32	0.12	0.04	0.05	0.08
8	0.05	0.10	0.09	0.19	0.09	0.26	0.43	0.33	0.12	0.04	0.04	0.10
9	0.05	0.07	0.09	0.09	0.09	0.25	0.41	0.34	0.12	0.04	0.03	0.12
10	0.05	0.07	0.09	0.07	0.08	0.24	0.39	0.33	0.15	0.03	0.03	0.10
11	0.05	0.07	0.10	0.07	0.27	0.24	0.38	0.31	0.14	0.04	0.03	0.08
12	0.04	0.09	0.09	0.07	0.85	0.24	0.39	0.29	0.14	0.04	0.03	0.08
13	0.03	0.11	0.08	0.08	0.68	0.23	0.40	0.29	0.13	0.03	0.04	0.08
14	0.03	0.10	0.08	0.12	0.44	0.23	0.51	0.28	0.12	0.02	0.05	0.08
15	0.05	0.08	0.07	0.11	0.36	1.0	0.44	e0.29	0.11	0.02	0.01	0.07
16	0.05	0.10	0.18	0.10	0.31	1.4	0.39	e0.26	0.12	0.02	0.02	0.08
17	0.07	0.10	0.16	0.09	0.28	0.81	0.38	e0.24	0.12	0.01	0.02	0.09
18	0.05	0.10	0.10	0.08	0.28	0.69	0.39	e0.22	0.11	0.01	0.02	0.08
19	0.05	0.09	0.09	0.08	0.26	0.65	0.38	e0.20	0.11	0.01	0.08	0.08
20	0.04	0.09	0.12	0.09	0.27	0.61	0.36	e0.18	0.13	0.02	0.68	0.08
21	0.06	0.08	0.09	0.06	0.29	0.58	0.35	e0.16	0.13	0.02	0.40	0.06
22	0.07	0.08	0.07	0.08	0.27	0.57	0.36	0.15	0.12	0.03	0.23	0.07
23	0.07	0.08	0.08	0.07	0.27	0.56	0.33	0.15	0.11	0.02	0.15	0.11
24	0.07	0.08	0.08	0.07	0.26	0.55	0.31	0.16	0.11	0.03	0.15	0.08
25	0.07	0.09	0.07	0.07	0.56	0.54	0.31	0.16	0.09	0.03	0.13	0.06
26	0.08	0.11	0.08	0.07	0.38	0.50	0.33	0.16	0.09	0.04	0.26	0.07
27	0.09	0.10	0.07	0.07	0.32	0.48	0.32	0.13	0.07	0.03	0.20	0.07
28	0.08	0.08	0.07	0.06	0.31	0.49	0.34	0.11	0.06	0.04	0.18	0.07
29	0.08	0.08	0.07	0.06	---	0.49	0.35	0.13	0.05	0.06	0.11	0.07
30	0.08	0.08	0.07	0.07	---	0.48	0.35	0.14	0.05	0.04	0.11	0.07
31	0.08	---	0.07	0.06	---	0.46	---	0.13	---	0.03	0.12	---
TOTAL	1.76	2.77	2.78	2.34	7.46	14.55	11.90	7.43	3.39	1.02	3.40	2.54
MEAN	0.057	0.092	0.090	0.075	0.27	0.47	0.40	0.24	0.11	0.033	0.11	0.085
MAX	0.09	0.13	0.18	0.19	0.85	1.4	0.51	0.35	0.15	0.06	0.68	0.13
MIN	0.03	0.07	0.07	0.04	0.06	0.23	0.31	0.11	0.05	0.01	0.01	0.06
AC-FT	3.5	5.5	5.5	4.6	15	29	24	15	6.7	2.0	6.7	5.0

e Estimated.

## 10257720 CHINO CANYON CREEK BELOW TRAMWAY, NEAR PALM SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.26	0.37	0.45	1.54	2.17	1.76	1.11	0.59	0.22	0.065	0.092	0.20
MAX	1.19	1.32	1.49	14.0	17.8	8.82	3.85	2.34	0.88	0.28	0.65	1.38
(WY)	1994	1987	1994	1993	1993	1993	1993	1998	1998	1987	1993	1993
MIN	0.000	0.000	0.000	0.031	0.095	0.022	0.047	0.002	0.000	0.000	0.000	0.000
(WY)	1991	1991	1991	1991	1999	1999	1999	1999	1992	1989	1990	1990

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1987 - 2003
ANNUAL TOTAL	27.69	61.34	
ANNUAL MEAN	0.076	0.17	0.73
HIGHEST ANNUAL MEAN			4.02 1993
LOWEST ANNUAL MEAN			0.086 1999
HIGHEST DAILY MEAN	0.22 Feb 2	1.4 Mar 16	49 Jan 17 1993
LOWEST DAILY MEAN	0.00 Jul 12	0.01 Jul 17	0.00 Jun 15 1989
ANNUAL SEVEN-DAY MINIMUM	0.00 Jul 9	0.02 Jul 14	0.00 Jun 15 1989
MAXIMUM PEAK FLOW		3.6 Mar 15	153 Jan 7 1993
MAXIMUM PEAK STAGE		9.72 Mar 15	10.32 Feb 14 1998
ANNUAL RUNOFF (AC-FT)	55	122	526
10 PERCENT EXCEEDS	0.17	0.39	1.5
50 PERCENT EXCEEDS	0.07	0.09	0.17
90 PERCENT EXCEEDS	0.01	0.04	0.00

10257720 CHINO CANYON CREEK BELOW TRAMWAY, NEAR PALM SPRINGS, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1987 to current year.

CHEMICAL DATA: Water years 1987 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	
NOV	04...	.10	8.2	201	10.5	74	26.3	2.13	4.39	
Date	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt titr., mg/L (00453)	Bromide, water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	
NOV	04...	.6	11.5	24	100	122	<.02	2.37	<.17	17.3
Date	Sulfate, water, fltrd, mg/L (00945)	Residue sum of water, constituents, mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue evap. at 180degC, wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	
NOV	04...	4.2	128	.17	124	e.05	<.04	<.06	<.008	<.02
Date	Phosphorus, water, fltrd, mg/L (00666)	Organic carbon, water, unfltrd, mg/L (00680)	Arsenic, water, fltrd, ug/L (01000)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)				
NOV	04...	e.02	2.4	<2	e8.1	<10	<2.0			

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

e Estimated.



## 10258000 TAHQUITZ CREEK NEAR PALM SPRINGS, CA

LOCATION.—Lat 33° 48' 18", long 116° 33' 30", in SW 1/4 SW 1/4 sec.22, T.4 S., R.4 E., [Riverside County](#), Hydrologic Unit 18100200, 2.2 mi southwest of Palm Springs and 7 mi upstream from mouth.

DRAINAGE AREA.—16.9 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1947 to September 1982, October 1983 to current year.

REVISED RECORDS.—WSP 1244: 1948, 1951. WDR CA-88-1: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 762.5 ft above NGVD of 1929 (levels by Riverside County Flood Control District). Prior to Aug. 25, 1970, at datum 2.00 ft higher.

REMARKS.—Records fair. No regulation or diversion upstream from station. See schematic diagram of [Salton Sea Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,900 ft<sup>3</sup>/s, Nov. 22, 1965, Jan. 25, 1969, gage height, 12.34 ft, from rating curve extended above 70 ft<sup>3</sup>/s, on basis of slope-area measurements at gage heights 10.45 and 12.34 ft; maximum gage height, 15.78 ft, Sept. 7, 1981, from debris wave produced by thunderstorm following a brushfire; no flow for parts of most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 85 ft<sup>3</sup>/s, or maximum, from rating curve extended above 147 ft<sup>3</sup>/s, on basis of slope-area measurements at gage heights 10.45 and 12.34 ft:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 15	2230	70	6.04

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.01	0.26	2.3	5.6	4.7	3.3	0.39	0.00	0.00
2	0.00	0.00	0.00	0.04	0.26	2.2	5.5	4.6	3.0	0.37	0.00	0.00
3	0.00	0.00	0.00	0.08	0.25	2.0	5.2	5.2	2.8	0.35	0.00	0.00
4	0.00	0.00	0.00	0.10	0.27	2.0	4.9	5.8	2.7	0.33	0.00	0.00
5	0.00	0.00	0.00	0.13	0.25	1.8	4.8	5.4	2.6	0.33	0.00	0.00
6	0.00	0.00	0.00	0.10	0.25	1.7	4.6	5.1	2.5	0.32	0.00	0.00
7	0.00	0.00	0.00	0.20	0.25	1.8	4.4	5.0	2.3	0.30	0.00	0.00
8	0.00	0.00	0.00	0.24	0.25	1.9	4.2	5.0	2.1	0.28	0.00	0.00
9	0.00	0.00	0.00	0.24	0.25	2.0	4.1	5.0	2.0	0.22	0.00	0.00
10	0.00	0.00	0.00	0.31	0.26	2.1	4.1	4.7	2.0	0.16	0.00	0.00
11	0.00	0.00	0.00	0.30	0.30	2.2	4.1	4.6	1.9	0.10	0.00	0.00
12	0.00	0.00	0.00	0.30	6.2	2.4	4.2	4.6	1.8	0.07	0.00	0.00
13	0.00	0.00	0.00	0.30	19	2.5	4.3	4.7	1.7	0.06	0.00	0.00
14	0.00	0.00	0.00	0.29	12	2.7	4.8	4.7	1.5	0.03	0.00	0.00
15	0.00	0.00	0.00	0.29	7.8	14	6.7	4.7	1.4	0.00	0.00	0.00
16	0.00	0.00	0.00	0.28	5.9	32	5.6	4.6	1.2	0.00	0.00	0.00
17	0.00	0.00	0.00	0.27	4.7	16	5.5	4.6	1.1	0.00	0.00	0.00
18	0.00	0.00	0.00	0.26	3.9	11	5.1	4.6	1.0	0.00	0.00	0.00
19	0.00	0.00	0.00	0.26	3.4	8.7	4.9	4.4	0.98	0.00	0.00	0.00
20	0.00	0.00	0.00	0.27	3.4	7.4	4.8	4.3	0.97	0.00	0.00	0.00
21	0.00	0.00	0.00	0.26	2.9	6.7	4.9	4.2	0.93	0.00	0.00	0.00
22	0.00	0.00	0.00	0.27	2.6	6.3	5.1	4.1	0.86	0.00	0.00	0.00
23	0.00	0.00	0.00	0.28	2.4	6.3	4.9	4.1	0.79	0.00	0.00	0.00
24	0.00	0.00	0.00	0.28	2.3	6.3	5.1	4.1	0.70	0.00	0.00	0.00
25	0.00	0.00	0.00	0.28	4.1	6.1	5.2	3.9	0.63	0.00	0.00	0.00
26	0.00	0.00	0.00	0.28	3.4	6.4	5.0	3.8	0.56	0.00	0.00	0.00
27	0.00	0.00	0.00	0.28	2.8	7.3	5.0	3.6	0.51	0.00	0.00	0.00
28	0.00	0.00	0.00	0.28	2.6	7.0	5.0	3.4	0.47	0.00	0.00	0.00
29	0.00	0.00	0.00	0.27	---	6.2	5.0	3.5	0.43	0.00	0.00	0.00
30	0.00	0.00	0.00	0.27	---	5.8	4.8	3.4	0.41	0.00	0.00	0.00
31	0.00	---	0.00	0.26	---	5.6	---	3.6	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	7.28	92.25	188.7	147.4	138.0	45.14	3.31	0.00	0.00
MEAN	0.000	0.000	0.000	0.23	3.29	6.09	4.91	4.45	1.50	0.11	0.000	0.000
MAX	0.00	0.00	0.00	0.31	19	32	6.7	5.8	3.3	0.39	0.00	0.00
MIN	0.00	0.00	0.00	0.01	0.25	1.7	4.1	3.4	0.41	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	14	183	374	292	274	90	6.6	0.00	0.00

## SALTON SEA BASIN

## 10258000 TAHQUITZ CREEK NEAR PALM SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.54	1.64	3.24	5.79	7.19	8.13	10.4	13.4	7.01	2.24	0.93	0.68
MAX	8.64	43.1	72.5	81.3	117	72.0	57.3	78.3	58.0	24.9	6.36	4.88
(WY)	1984	1966	1967	1993	1980	1995	1969	1969	1980	1980	1980	1976
MIN	0.000	0.000	0.000	0.000	0.21	0.17	0.023	0.000	0.000	0.000	0.000	0.000
(WY)	1948	1948	1948	1948	1964	1961	2002	1961	1961	1956	1948	1948

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1948 - 2003
ANNUAL TOTAL	20.50	622.08	
ANNUAL MEAN	0.056	1.70	5.09
HIGHEST ANNUAL MEAN			32.9 1980
LOWEST ANNUAL MEAN			0.058 2002
HIGHEST DAILY MEAN	0.28 Jan 24	32 Mar 16	1080 Jan 25 1969
LOWEST DAILY MEAN	0.00 Apr 9	0.00 Oct 1	0.00 Oct 1 1947
ANNUAL SEVEN-DAY MINIMUM	0.00 Apr 9	0.00 Oct 1	0.00 Oct 1 1947
MAXIMUM PEAK FLOW		70 Mar 15	2900 Nov 22 1965
MAXIMUM PEAK STAGE		6.04 Mar 15	15.78 Sep 7 1981
ANNUAL RUNOFF (AC-FT)	41	1230	3690
10 PERCENT EXCEEDS	0.24	5.0	11
50 PERCENT EXCEEDS	0.00	0.22	0.86
90 PERCENT EXCEEDS	0.00	0.00	0.00

## 10258500 PALM CANYON CREEK NEAR PALM SPRINGS, CA

LOCATION.—Lat 33° 44' 42", long 116° 32' 05", in SW 1/4 SE 1/4 sec.11, T.5 S., R.4 E., [Riverside County](#), Hydrologic Unit 18100200, on right bank, 0.8 mi upstream from Murray Canyon Creek, and 6 mi south of Palm Springs.

DRAINAGE AREA.—93.1 mi<sup>2</sup>.

PERIOD OF RECORD.—January 1930 to January 1942, October 1947 to current year.

REVISED RECORDS.—WSP 1314: 1936(M). WDR CA-88-1: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 700 ft above NGVD of 1929, from topographic map. Prior to Jan. 14, 1942, at datum 0.2 ft higher.

REMARKS.—Records poor. No regulation or diversion upstream from station. See schematic diagram of [Salton Sea Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,000 ft<sup>3</sup>/s, Feb. 21, 1980, gage height, 7.29 ft, from rating curve extended above 650 ft<sup>3</sup>/s, on basis of slope-area measurements at gage heights 6.38 ft and 6.81 ft; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended above 950 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height of 6.81 ft:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 16	0730	75	2.18

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	1.6	0.47	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	1.2	0.32	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	1.1	0.31	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.85	0.27	0.01	0.00	0.00	0.00	1.6
5	0.00	0.00	0.00	0.00	0.00	0.63	0.24	0.00	0.00	0.00	0.00	1.8
6	0.00	0.00	0.00	0.00	0.00	0.42	0.15	0.00	0.00	0.00	0.00	0.02
7	0.00	0.00	0.00	0.00	0.00	0.34	0.02	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	5.3	1.1	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	30	0.67	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	12	0.32	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	7.2	0.20	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	5.1	0.08	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	4.0	0.03	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	3.4	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	2.9	0.02	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	2.6	0.04	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	2.2	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.21	1.9	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.83	1.6	0.00	0.00	0.00	0.00	4.2	0.00
27	0.00	0.00	0.00	0.00	1.9	1.4	0.00	0.00	0.00	0.00	1.7	0.00
28	0.00	0.00	0.00	0.00	1.9	1.3	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	1.1	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.94	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.78	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	4.84	92.75	4.24	0.01	0.00	0.00	5.90	3.42
MEAN	0.000	0.000	0.000	0.000	0.17	2.99	0.14	0.000	0.000	0.000	0.19	0.11
MAX	0.00	0.00	0.00	0.00	1.9	30	1.1	0.01	0.00	0.00	4.2	1.8
MIN	0.00	0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	9.6	184	8.4	0.02	0.00	0.00	12	6.8

## SALTON SEA BASIN

## 10258500 PALM CANYON CREEK NEAR PALM SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.33	0.78	3.60	8.28	18.4	18.2	7.04	2.14	0.65	0.74	0.94	0.80
MAX	5.95	20.6	39.6	203	318	188	80.8	24.1	9.87	15.1	33.0	19.5
(WY)	1984	1966	1983	1993	1980	1983	1958	1983	1980	1979	1983	1976
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1931	1933	1950	1951	1951	1951	1934	1934	1931	1931	1932	1930

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1930 - 2003	
ANNUAL TOTAL	0.00		111.16			
ANNUAL MEAN	0.000		0.30		5.12	
HIGHEST ANNUAL MEAN					47.4 1980	
LOWEST ANNUAL MEAN					0.000 1972	
HIGHEST DAILY MEAN	0.00	Jan 1	30	Mar 16	2040	Feb 21 1980
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Jul 16 1930
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Jul 16 1930
MAXIMUM PEAK FLOW			75		7000 Feb 21 1980	
MAXIMUM PEAK STAGE			2.18		7.29 Feb 21 1980	
ANNUAL RUNOFF (AC-FT)	0.00		220		3710	
10 PERCENT EXCEEDS	0.00		0.43		6.0	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 10259000 ANDREAS CREEK NEAR PALM SPRINGS, CA

LOCATION.—Lat 33° 45' 36", long 116° 32' 57", in SE 1/4 SE 1/4 sec.3, T.5 S., R.4 E., [Riverside County](#), Hydrologic Unit 18100200, on left bank, at U.S. Bureau of Indian Affairs Diversion Dam, 1.1 mi upstream from mouth, and 5.1 mi south of Palm Springs.

DRAINAGE AREA.—8.65 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1948 to current year.

REVISED RECORDS.—WDR CA-88-1: Drainage area. WDR CA-91-1: 1986(M), 1988(M).

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 800 ft above NGVD of 1929, from topographic map. Prior to Mar. 25, 1949, reference point at same site at different datum.

REMARKS.—Records good above 1 ft<sup>3</sup>/s and fair below. No regulation upstream from station. One small diversion for domestic use about 1 mi upstream from station. See schematic diagram of [Salton Sea Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,960 ft<sup>3</sup>/s, Aug. 31, 1954, gage height, 7.11 ft, from rating curve extended above 80 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft<sup>3</sup>/s, or maximum, from rating curve extended above 98 ft<sup>3</sup>/s, by theoretical computations of flow over weir:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 9	2115	61	3.18	Mar. 15	2045	92	3.39

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.62	0.83	1.3	1.6	1.6	2.5	2.6	2.1	1.2	0.71	1.6	0.81
2	0.68	0.82	1.2	1.5	1.5	2.4	2.6	2.0	1.1	0.72	1.1	0.84
3	0.71	0.78	1.2	1.5	1.5	2.3	2.6	2.3	1.1	0.68	0.84	0.82
4	0.66	0.78	1.2	1.5	1.6	2.3	2.6	2.2	1.1	0.68	0.74	0.91
5	0.62	0.79	1.2	1.5	1.6	2.3	2.5	2.1	1.2	0.68	0.66	1.1
6	0.60	0.83	1.2	1.4	1.6	2.2	2.4	2.1	1.2	0.70	0.62	0.93
7	0.52	0.88	1.2	1.5	1.6	2.2	2.4	2.1	1.1	0.74	0.61	0.72
8	0.46	1.0	1.2	2.3	1.6	2.2	2.3	2.1	1.0	0.76	0.65	0.71
9	0.48	1.6	1.2	1.9	1.6	2.2	2.2	2.0	1.1	0.72	0.65	0.72
10	0.49	9.1	1.1	1.7	1.6	2.2	2.2	1.9	1.2	0.69	0.58	0.76
11	0.51	2.4	1.1	1.6	3.6	2.2	2.2	1.8	1.2	0.69	0.51	0.72
12	0.56	1.8	1.1	1.6	7.5	2.2	2.2	1.7	1.1	0.69	0.50	0.66
13	0.56	1.6	1.1	1.6	7.7	2.2	2.2	1.8	1.1	0.60	0.50	0.64
14	0.53	1.4	1.1	1.6	4.7	2.2	2.9	1.7	1.0	0.52	0.57	0.63
15	0.54	1.4	1.1	1.5	3.3	21	3.5	1.7	0.99	0.57	0.72	0.65
16	0.61	1.3	3.6	1.5	2.9	23	2.8	1.7	0.96	0.63	0.86	0.61
17	0.68	1.3	5.8	1.4	2.6	11	2.7	1.6	0.95	0.71	0.70	0.58
18	0.75	1.3	2.5	1.4	2.5	7.0	2.5	1.6	0.93	0.85	0.52	0.61
19	0.77	1.2	2.0	1.5	2.4	5.6	2.4	1.5	1.1	0.86	0.71	0.61
20	0.73	1.2	2.3	1.6	2.5	4.8	2.3	1.5	1.1	0.72	1.8	0.58
21	0.66	1.2	2.0	1.5	2.3	4.1	2.2	1.4	1.2	0.70	1.6	0.53
22	0.69	1.1	1.8	1.5	2.2	3.7	2.4	1.4	1.2	0.80	1.1	0.49
23	0.70	1.1	1.8	1.5	2.1	3.4	2.3	1.4	1.2	0.81	0.79	0.57
24	0.74	1.2	1.7	1.5	2.1	3.2	2.3	1.4	1.1	0.69	0.81	0.74
25	0.77	1.1	1.7	1.5	3.7	3.1	2.2	1.4	0.98	0.72	0.89	0.74
26	0.81	1.1	1.7	1.5	2.8	3.0	2.1	1.4	0.90	0.72	0.98	0.67
27	0.84	1.1	1.6	1.5	2.9	3.1	2.1	1.3	0.83	0.71	1.1	0.55
28	0.80	1.1	1.6	1.5	2.6	2.9	2.1	1.1	0.78	0.88	1.3	0.57
29	0.80	1.2	1.6	1.6	---	2.8	2.1	1.2	0.77	1.1	1.00	0.59
30	0.81	1.3	1.6	1.5	---	2.7	2.1	1.2	0.73	0.99	0.87	0.59
31	0.83	---	1.5	1.6	---	2.6	---	1.3	---	1.2	0.85	---
TOTAL	20.53	58.21	52.3	48.4	76.2	138.6	72.0	52.0	31.42	23.24	26.73	20.65
MEAN	0.66	1.94	1.69	1.56	2.72	4.47	2.40	1.68	1.05	0.75	0.86	0.69
MAX	0.84	1.6	5.8	2.3	7.7	23	3.5	2.3	1.2	1.2	1.8	1.1
MIN	0.46	0.78	1.1	1.4	1.5	2.2	2.1	1.1	0.73	0.52	0.50	0.49
AC-FT	41	115	104	96	151	275	143	103	62	46	53	41

## SALTON SEA BASIN

## 10259000 ANDREAS CREEK NEAR PALM SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.33	2.14	3.00	4.54	5.48	5.76	4.24	2.94	1.88	1.35	1.33	1.23
MAX	5.60	19.2	30.2	46.5	56.4	33.7	20.0	17.4	12.4	7.51	9.52	6.05
(WY)	1984	1966	1967	1993	1980	1980	1983	1983	1983	1983	1983	1983
MIN	0.38	0.60	0.96	0.95	1.03	0.99	0.68	0.51	0.23	0.087	0.14	0.24
(WY)	1966	1963	1963	1976	1961	1961	1961	1961	1961	1961	1963	1964

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1949 - 2003
ANNUAL TOTAL	330.74	620.28	
ANNUAL MEAN	0.91	1.70	2.92
HIGHEST ANNUAL MEAN			12.4 1983
LOWEST ANNUAL MEAN			0.66 1961
HIGHEST DAILY MEAN	16 Nov 9	23 Mar 16	395 Dec 6 1966
LOWEST DAILY MEAN	0.04 Aug 10	0.46 Oct 8	0.00 Jun 27 1961
ANNUAL SEVEN-DAY MINIMUM	0.08 Aug 5	0.51 Oct 7	0.00 Jul 13 1963
MAXIMUM PEAK FLOW		92 Mar 15	1960 Aug 31 1954
MAXIMUM PEAK STAGE		3.39 Mar 15	7.11 Aug 31 1954
ANNUAL RUNOFF (AC-FT)	656	1230	2120
10 PERCENT EXCEEDS	1.5	2.6	5.2
50 PERCENT EXCEEDS	0.82	1.2	1.6
90 PERCENT EXCEEDS	0.14	0.63	0.57

10259050 PALM CANYON WASH NEAR CATHEDRAL CITY, CA

LOCATION.—Lat 33° 47' 47", long 116° 28' 48", in SE 1/4 NE 1/4 sec.29, T.5 S., R.4 E., Riverside County, Hydrologic Unit 18100200, on right bank, 500 ft downstream from Golf Club Drive, 0.4 mi upstream from Whitewater River, and 1.5 mi northeast of Cathedral City.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—January 1988 to current year.

GAGE.—Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 330 ft above NGVD of 1929, from topographic map.

REMARKS.—Records poor. No regulation upstream from station. Two diversions for domestic use upstream from station on Andreas Creek. See schematic diagram of Salton Sea Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,280 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 8.70 ft, from rating curve extended above 1,350 ft<sup>3</sup>/s; no flow for most of each year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	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	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	7.5	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	5.9	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.58	0.00	0.00	24	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.03	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	9.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	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	0.61	7.50	9.20	29.90	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.020	0.24	0.33	0.96	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.58	7.5	9.2	24	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	1.2	15	18	59	0.00	0.00	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

	1988	1988	1988	1988	1988	1988	1988	1988	1988	1988	1988	1988
MEAN	0.000	0.001	0.039	14.3	3.93	6.86	0.24	1.35	1.38	0.16	0.39	0.20
MAX	0.000	0.023	0.45	202	35.2	93.3	3.81	18.3	22.1	1.32	1.77	2.23
(WY)	1988	1997	1993	1993	1993	1995	1993	1998	1998	1999	1989	1995
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1988	1988	1988	1988	1989	1988	1988	1988	1988	1988	1990	1988

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1988 - 2003
ANNUAL TOTAL	0.61	47.21	
ANNUAL MEAN	0.002	0.13	2.41
HIGHEST ANNUAL MEAN			20.4 1993
LOWEST ANNUAL MEAN			0.000 1990
HIGHEST DAILY MEAN	0.58 Dec 16	24 Mar 16	1700 Jan 16 1993
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1987
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1987
MAXIMUM PEAK FLOW		85 Jan 8	8280 Jan 16 1993
MAXIMUM PEAK STAGE		6.94 Jan 8	8.70 Jan 16 1993
ANNUAL RUNOFF (AC-FT)	1.2	94	1750
10 PERCENT EXCEEDS	0.00	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

## 10259100 WHITEWATER RIVER AT RANCHO MIRAGE, CA

LOCATION.—Lat 33° 44' 58", long 116° 25' 19", in NW 1/4 SW 1/4 sec.12, T.5 S., R.5 E., [Riverside County](#), Hydrologic Unit 18100200, on right bank, 0.2 mi upstream from Magnesia Spring Canyon storm channel, and 2.7 mi northwest of the intersection of Highways 111 and 74.

DRAINAGE AREA.—588 mi<sup>2</sup>.

PERIOD OF RECORD.—March 1989 to current year.

REVISED RECORDS.—WDR CA-93-1: 1989–92(M). WDR CA-95-1: 1993, 1993(M).

GAGE.—Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 230 ft above NGVD of 1929, from topographic map. Prior to Dec. 4, 1997, at datum 10.00 ft lower.

REMARKS.—Records good. No regulation upstream from station. Water diverted from tributary streams for municipal supply in vicinity of Palm Springs. Water from the Colorado River Basin is imported for ground-water recharge and irrigation. See schematic diagram of [Salton Sea Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9,060 ft<sup>3</sup>/s, Jan. 7, 1993, gage height, 5.93 ft, datum then in use, from rating curve extended above 1,460 ft<sup>3</sup>/s, on basis of critical depth computations, maximum gage height, 8.09 ft (present datum), Feb. 14, 1998; no flow for many days in each year.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	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	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.71	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	1.2	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.01	0.00	0.00	4.8	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	0.26	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	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	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	0.01	0.71	0.92	6.00	0.00	0.00	0.00	0.00	0.26	0.00
MEAN	0.000	0.000	0.000	0.023	0.033	0.19	0.000	0.000	0.000	0.000	0.008	0.000
MAX	0.00	0.00	0.01	0.71	0.92	4.8	0.00	0.00	0.00	0.00	0.26	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	0.02	1.4	1.8	12	0.00	0.00	0.00	0.00	0.5	0.00



## 10259100 WHITEWATER RIVER AT RANCHO MIRAGE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.002	0.002	0.023	23.5	5.29	5.40	0.028	0.025	0.006	0.019	0.094	0.13
MAX	0.016	0.021	0.18	310	52.3	66.0	0.21	0.27	0.051	0.23	0.78	1.30
(WY)	1993	1990	1993	1993	1993	1995	1993	1993	1998	1999	1989	1995
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1990	1991	1994	1994	1997	1990	1989	1989	1989	1989	1990	1989

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1989 - 2003
ANNUAL TOTAL	0.01	7.90	
ANNUAL MEAN	0.000	0.022	2.89
HIGHEST ANNUAL MEAN			30.4 1993
LOWEST ANNUAL MEAN			0.000 2002
HIGHEST DAILY MEAN	0.01 Dec 16	4.8 Mar 16	2950 Jan 16 1993
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Mar 30 1989
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Mar 30 1989
MAXIMUM PEAK FLOW		26 Mar 16	9060 Jan 7 1993
MAXIMUM PEAK STAGE		7.02 Mar 16	8.09 Feb 14 1998
ANNUAL RUNOFF (AC-FT)	0.02	16	2090
10 PERCENT EXCEEDS	0.00	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

## 10259200 DEEP CREEK NEAR PALM DESERT, CA

LOCATION.—Lat 33° 37' 52", long 116° 23' 29", in NE 1/4 SE 1/4 sec. 19, T.6 S., R.6 E., Riverside County, Hydrologic Unit 18100200, on left bank, 500 ft downstream from unnamed tributary, and 6.3 mi south of Palm Desert.

DRAINAGE AREA.—30.6 mi<sup>2</sup>.

PERIOD OF RECORD.—May 1962 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 1,440 ft above NGVD of 1929, from topographic map.

REMARKS.—Record fair. No regulation or diversion upstream from station. See schematic diagram of [Salton Sea Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,100 ft<sup>3</sup>/s, Sept. 10, 1976, gage height, 7.84 ft inside, 11.5 ft from floodmarks, from rating curve extended above 40 ft<sup>3</sup>/s on basis of slope-area measurement at gage heights 2.68, 5.15, and 7.84 ft; maximum gage height, 10.27 ft, Aug. 14, 1984; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 20 ft<sup>3</sup>/s, or maximum, from rating curve extended above 52 ft<sup>3</sup>/s, on basis of slope-area measurements at gage heights 5.15 and 10.27 ft:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 16	0845	42	2.61	Sep. 4	1730	117	3.09
Aug. 26	1445	521	4.26				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.08	0.08	0.00	0.19	0.10
2	0.00	0.00	0.00	0.00	0.00	0.21	0.26	0.09	0.07	0.00	0.03	0.08
3	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.09	0.06	0.00	0.02	0.07
4	0.00	0.00	0.00	0.00	0.00	0.25	0.24	0.10	0.04	0.00	0.00	5.4
5	0.00	0.00	0.00	0.00	0.00	0.25	0.22	0.10	0.03	0.00	0.00	0.34
6	0.00	0.00	0.00	0.00	0.00	0.25	0.21	0.12	0.01	0.00	0.00	0.16
7	0.00	0.00	0.00	0.00	0.00	0.24	0.21	0.13	0.00	0.00	0.00	0.10
8	0.00	0.00	0.00	0.00	0.00	0.23	0.20	0.14	0.00	0.00	0.00	0.07
9	0.00	0.00	0.00	0.00	0.00	0.23	0.20	0.15	0.00	0.00	0.00	0.06
10	0.00	0.00	0.00	0.00	0.00	0.22	0.20	0.15	0.00	0.00	0.00	0.05
11	0.00	0.00	0.00	0.00	0.00	0.21	0.17	0.16	0.00	0.00	0.00	0.05
12	0.00	0.00	0.00	0.00	0.00	0.21	0.17	0.16	0.00	0.00	0.00	0.03
13	0.00	0.00	0.00	0.00	0.00	0.20	0.17	0.17	0.00	0.00	0.00	0.03
14	0.00	0.00	0.00	0.00	0.00	0.20	0.16	0.18	0.00	0.00	0.00	0.03
15	0.00	0.00	0.00	0.00	0.00	0.23	0.15	0.18	0.00	0.00	0.00	0.04
16	0.00	0.00	0.00	0.00	0.00	15	0.15	0.18	0.00	0.00	0.00	0.03
17	0.00	0.00	0.00	0.00	0.00	4.8	0.12	0.19	0.00	0.00	0.00	0.03
18	0.00	0.00	0.00	0.00	0.00	1.6	0.12	0.19	0.00	0.00	0.00	0.03
19	0.00	0.00	0.00	0.00	0.00	0.81	0.12	0.19	0.00	0.00	0.00	0.03
20	0.00	0.00	0.00	0.00	0.00	0.60	0.13	0.17	0.00	0.00	0.13	0.03
21	0.00	0.00	0.00	0.00	0.00	0.50	0.14	0.16	0.00	0.00	0.14	0.02
22	0.00	0.00	0.00	0.00	0.00	0.44	0.13	0.14	0.00	0.00	0.03	0.02
23	0.00	0.00	0.00	0.00	0.00	0.41	0.11	0.12	0.00	0.00	0.04	0.03
24	0.00	0.00	0.00	0.00	0.00	0.38	0.10	0.12	0.00	0.00	0.06	0.03
25	0.00	0.00	0.00	0.00	0.00	0.36	0.10	0.11	0.00	0.00	0.06	0.03
26	0.00	0.00	0.00	0.00	0.00	0.35	0.10	0.10	0.00	0.00	16	0.04
27	0.00	0.00	0.00	0.00	0.00	0.35	0.09	0.09	0.00	0.00	0.48	0.03
28	0.00	0.00	0.00	0.00	0.00	0.32	0.08	0.09	0.00	0.00	0.26	0.03
29	0.00	0.00	0.00	0.00	---	0.31	0.08	0.09	0.00	0.00	0.18	0.03
30	0.00	0.00	0.00	0.00	---	0.29	0.08	0.09	0.00	0.00	0.13	0.03
31	0.00	---	0.00	0.00	---	0.28	---	0.09	---	0.00	0.11	---
TOTAL	0.00	0.00	0.00	0.00	0.00	29.98	4.73	4.12	0.29	0.00	17.86	7.05
MEAN	0.000	0.000	0.000	0.000	0.000	0.97	0.16	0.13	0.010	0.000	0.58	0.23
MAX	0.00	0.00	0.00	0.00	0.00	15	0.27	0.19	0.08	0.00	16	5.4
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.08	0.00	0.00	0.00	0.02
AC-FT	0.00	0.00	0.00	0.00	0.00	59	9.4	8.2	0.6	0.00	35	14

## 10259200 DEEP CREEK NEAR PALM DESERT, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.21	0.79	1.76	4.15	7.32	5.64	1.98	0.79	0.31	0.72	0.96	1.17
MAX	4.62	16.3	23.5	88.6	101	49.3	12.4	7.15	3.97	11.8	15.3	38.1
(WY)	1984	1966	1983	1993	1980	1983	1983	1983	1983	1979	1984	1976
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1963	1963	1963	1963	1963	1963	1963	1962	1962	1962	1962	1962

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1962 - 2003	
ANNUAL TOTAL	0.00		64.03			
ANNUAL MEAN	0.000		0.18		2.13	
HIGHEST ANNUAL MEAN					15.1	1993
LOWEST ANNUAL MEAN					0.000	2002
HIGHEST DAILY MEAN	0.00	Jan 1	16	Aug 26	850	Sep 10 1976
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	May 1 1962
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	May 1 1962
MAXIMUM PEAK FLOW			521	Aug 26	7100	Sep 10 1976
MAXIMUM PEAK STAGE			4.26	Aug 26	10.27	Aug 14 1984
ANNUAL RUNOFF (AC-FT)	0.00		127		1540	
10 PERCENT EXCEEDS	0.00		0.21		2.7	
50 PERCENT EXCEEDS	0.00		0.00		0.03	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 10259300 WHITEWATER RIVER AT INDIO, CA

LOCATION.—Lat 33°44'14", long 116°14'07", in SE 1/4 NE 1/4 sec.15, T.5 S., R.7 E., [Riverside County](#), Hydrologic Unit 18100200, on right bank of concrete drop structure, 1,000 ft upstream from Monroe Street Bridge, and 1.7 mi northwest of Indio.

DRAINAGE AREA.—1,073 mi<sup>2</sup>.

PERIOD OF RECORD.—March 1966 to current year.

REVISED RECORDS.—WDR CA-72-1: 1971.

GAGE.—Water-stage recorder and crest-stage gage. Concrete control since Oct. 1, 1979. Elevation of gage is mean sea level NGVD of 1929, from topographic map. Prior to Oct. 1, 1979, water-stage recorder at site 0.5 mi upstream at different datum. Oct. 1, 1979, to Feb. 17, 1983, and Feb. 18, 1983, to Nov. 18, 1991, at same site at different datums.

REMARKS.—Records good. No regulation upstream from station. Water diverted from tributary streams for municipal supply in vicinity of Palm Springs. Water from the Colorado River Basin is imported for ground-water recharge and irrigation. See schematic diagram of [Salton Sea Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,400 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 14.41 ft, site and datum then in use, from rating curve extended above 1,300 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 15.3 ft for flood of Nov. 22, 1965; no flow for all or most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 2 or 3, 1938, reached a discharge of 29,000 ft<sup>3</sup>/s, on basis of slope-area measurement, at site 5.0 mi upstream. Flood of Nov. 22, 1965, reached a stage of 15.3 ft, from floodmark, at site and datum used prior to Oct. 1, 1979, discharge, 14,100 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s, or maximum, from rating curve extended above 480 ft<sup>3</sup>/s on basis of critical-depth computations:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 20	1715	17	7.32

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	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	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	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	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	0.51	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	1.3	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	0.63	0.00
25	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	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	0.17	0.51	0.00	0.00	0.00	0.00	1.93	0.00
MEAN	0.000	0.000	0.000	0.000	0.006	0.016	0.000	0.000	0.000	0.000	0.062	0.000
MAX	0.00	0.00	0.00	0.00	0.17	0.51	0.00	0.00	0.00	0.00	1.3	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	0.3	1.0	0.00	0.00	0.00	0.00	3.8	0.00

## 10259300 WHITEWATER RIVER AT INDIO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.009	0.074	2.12	19.6	12.2	4.31	0.017	0.010	0.008	1.01	1.00	2.35
MAX	0.17	0.88	61.3	513	278	56.2	0.17	0.35	0.19	32.1	29.4	86.2
(WY)	1979	1979	1967	1993	1980	1978	1984	1972	1968	1979	1983	1976
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1967	1967	1968	1967	1967	1966	1966	1966	1966	1967	1966	1966

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1966 - 2003
ANNUAL TOTAL	0.00	2.61	
ANNUAL MEAN	0.000	0.007	3.54
HIGHEST ANNUAL MEAN			47.4 1993
LOWEST ANNUAL MEAN			0.000 1973
HIGHEST DAILY MEAN	0.00 Jan 1	1.3 Aug 20	5000 Jan 16 1993
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Mar 1 1966
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Mar 1 1966
MAXIMUM PEAK FLOW		17 Aug 20	11400 Jan 25 1969
MAXIMUM PEAK STAGE		7.32 Aug 20	14.41 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	0.00	5.2	2570
10 PERCENT EXCEEDS	0.00	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

## 10259540 WHITEWATER RIVER NEAR MECCA, CA

LOCATION.—Lat 33° 31' 29", long 116° 04' 36", in NW 1/4 NW 1/4 sec.32, T.7 S., R.9 E., [Riverside County](#), Hydrologic Unit 18100200, on left bank, 1.6 mi upstream from mouth at Salton Sea, and 3.3 mi south of Mecca.

DRAINAGE AREA.—1,495 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1960 to current year (since October 1992, low-flow records only).

GAGE.—Water-stage recorder. Datum of gage is 221 ft below NGVD of 1929 (levels by Coachella Valley Water District). Oct. 1, 1960, to Mar. 22, 1967, at site 1.3 mi downstream and Mar. 23, 1967, to July 22, 1970, at site 0.7 mi downstream at different datums.

REMARKS.—Records fair except for estimated daily discharges and Mar. 6 to May 21, which are poor. Most flow represents seepage and return flow from irrigated areas. No discharge records computed above 200 ft<sup>3</sup>/s since October 1992. See schematic diagram of [Salton Sea Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 2,500 ft<sup>3</sup>/s, estimated, Jan. 25, 1969; minimum daily, 37 ft<sup>3</sup>/s, Nov. 25–29, 1960.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	60	63	67	60	59	e68	68	58	58	60	61
2	57	58	62	65	62	59	68	65	59	58	60	60
3	58	61	64	60	62	63	68	66	57	57	59	60
4	58	84	63	65	62	64	66	68	56	56	58	60
5	57	71	64	63	63	63	65	68	56	55	57	61
6	56	e68	65	63	64	60	65	66	55	55	57	60
7	54	e64	62	59	62	62	67	e65	55	57	57	62
8	53	e61	60	58	65	62	64	e65	55	57	56	64
9	52	64	66	62	64	63	63	e63	56	56	55	63
10	53	60	60	62	64	60	64	65	56	58	56	63
11	54	58	58	61	63	61	64	62	56	57	56	63
12	52	58	61	61	66	61	66	63	57	58	56	63
13	49	61	62	61	70	59	68	64	57	58	56	63
14	52	59	61	63	70	58	67	67	57	59	56	62
15	53	57	63	64	69	60	65	68	58	59	57	62
16	52	57	62	61	68	65	64	64	58	58	57	62
17	54	57	61	62	69	68	69	61	56	58	57	62
18	55	59	60	63	66	63	69	58	56	58	57	63
19	57	63	59	62	64	61	67	57	57	57	57	63
20	59	59	63	61	63	62	68	57	57	56	58	62
21	55	68	65	61	60	63	67	59	58	56	73	62
22	54	70	63	62	60	65	66	57	57	56	64	62
23	54	63	62	61	60	66	67	56	58	56	60	60
24	55	62	60	65	63	e67	66	56	58	56	61	61
25	55	63	65	64	64	e67	63	55	58	56	62	63
26	56	60	66	61	66	e68	63	54	57	57	61	63
27	60	60	67	61	62	e68	63	55	58	58	60	63
28	56	60	65	62	60	e70	64	55	58	60	60	64
29	56	61	68	63	---	e71	66	54	57	60	60	65
30	54	62	69	62	---	e73	68	57	57	59	62	65
31	59	---	68	61	---	e69	---	59	---	59	61	---
TOTAL	1703	1868	1957	1926	1791	1980	1978	1897	1708	1778	1826	1867
MEAN	54.9	62.3	63.1	62.1	64.0	63.9	65.9	61.2	56.9	57.4	58.9	62.2
MAX	60	84	69	67	70	73	69	68	59	60	73	65
MIN	49	57	58	58	60	58	63	54	55	55	55	60
AC-FT	3380	3710	3880	3820	3550	3930	3920	3760	3390	3530	3620	3700

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1992, BY WATER YEAR (WY)

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
MEAN	99.9	94.9	95.0	107	125	124	119	118	107	107	120	115
MAX	147	149	141	236	396	222	172	173	145	198	183	220
(WY)	1976	1966	1983	1969	1980	1978	1976	1976	1975	1979	1983	1976
MIN	53.9	44.4	45.4	51.4	56.6	71.8	77.9	80.7	66.9	57.4	80.3	74.1
(WY)	1961	1961	1961	1961	1961	1961	1961	1992	1987	1987	1992	1992

## SUMMARY STATISTICS

WATER YEARS 1961 - 1992

ANNUAL TOTAL	
ANNUAL MEAN	111
HIGHEST ANNUAL MEAN	156
LOWEST ANNUAL MEAN	68.4
HIGHEST DAILY MEAN	e2500
LOWEST DAILY MEAN	37
ANNUAL SEVEN-DAY MINIMUM	37
ANNUAL RUNOFF (AC-FT)	80380
10 PERCENT EXCEEDS	140
50 PERCENT EXCEEDS	108
90 PERCENT EXCEEDS	76

e Estimated.

10260431 DEEP CREEK NEAR ARROWBEAR LAKE, CA

LOCATION.—Lat 34° 13'01", long 117° 04'28", in SW 1/4 NE 1/4 sec.34, T.2 N., R.2 W., San Bernardino County, Hydrologic Unit 18090208, 6.7 mi east of Lake Arrowhead, and 15.3 mi northeast of San Bernardino.

DRAINAGE AREA.—4.09 mi<sup>2</sup>.

PERIOD OF RECORD.—July 2001 to current year.

CHEMICAL DATA: July 2001 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, deg C (00010)	Chloride, water, fltrd, mg/L (00940)
DEC 11...	1400	.09	610	8.1	77	6.3	<sup>1</sup> 178	4.0	19.4
MAR 21...	1450	9.8	609	9.1	94	7.6	76	7.0	7.02
JUN 18...	1150	.32	611	7.2	88	6.8	148	14.5	16.6

Date	Fluoride, water, fltrd, mg/L (00950)	Sulfate, water, fltrd, mg/L (00945)	Residue on evap. at 180degC, wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Boron, water, fltrd, ug/L (01020)
DEC 11...	--	.5	120	.16	<.022	<.002	<.007	<.04	--
MAR 21...	<.17	1.0	79	.21	.076	e.002	.008	<.04	<13
JUN 18...	<.17	<.2	107	.13	<.022	<.002	<.007	<.04	e6.0

<sup>1</sup> Laboratory value.

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

e Estimated.

## 10260432 CRAB CREEK AT CRAB FLATS ROAD, NEAR LAKE ARROWHEAD, CA

LOCATION.—Lat 34° 15'32", long 117° 05'00", in SW 1/4 NW 1/4 sec.15, T.2 N., R.2 W., San Bernardino County, Hydrologic Unit 18090208, 6.1 mi east of Lake Arrowhead, and 16.5 mi southeast of Hesperia.

DRAINAGE AREA.—2.16 mi<sup>2</sup>.

PERIOD OF RECORD.—July 2001 to current year.

CHEMICAL DATA: July 2001 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)
DEC 10...	1530	.18	627	9.4	87	7.4	<sup>1</sup> 228	4.0	2.66
MAR 21...	1210	2.7	615	8.9	88	7.6	101	5.5	1.88
JUN 18...	1045	e.05	615	7.2	89	7.2	188	15.0	3.42

Date	Fluoride, water, fltrd, mg/L (00950)	Sulfate, water, fltrd, mg/L (00945)	Residue on evap. at 180degC, wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Boron, water, fltrd, ug/L (01020)
DEC 10...	--	.7	162	e.10	<.022	<.002	<.007	<.04	--
MAR 21...	<.17	1.1	108	.23	<.022	<.002	<.007	<.04	<13
JUN 18...	<.17	<.2	132	.10	<.022	<.002	<.007	<.04	e5.6

<sup>1</sup> Laboratory value.

e Estimated.

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



10260433 SHEEP CREEK BELOW LAKE ARROWHEAD SCOUT CAMP, NEAR LAKE ARROWHEAD, CA

LOCATION.—Lat 34° 15' 12", long 117° 07' 24", in SE 1/4 SE 1/4 sec.18, T.2 N., R.2 W., San Bernardino County, Hydrologic Unit 18090208, 3.8 mi east of Lake Arrowhead, and 15.0 mi southeast of Hesperia.

DRAINAGE AREA.—1.25 mi<sup>2</sup>.

PERIOD OF RECORD.—July 2001 to current year.

CHEMICAL DATA: July 2001 to current year.

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

Date	Time	Instan- taneous dis- charge, cfs (00061)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl- trd uS/cm 25 degC (00095)	Temper- ature, deg C (00010)	Chlor- ide, water, fltrd, mg/L (00940)
DEC 11...	1130	.11	636	7.5	72	7.0	<sup>1</sup> 305	6.0	47.2
MAR 20...	1615	1.7	628	9.7	97	7.4	229	7.0	29.5
JUN 18...	1400	.17	628	6.5	79	7.2	226	15.0	21.1

Date	Fluor- ide, water, fltrd, mg/L (00950)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00665)	Boron, water, fltrd, ug/L (01020)
DEC 11...	--	8.0	183	e.08	e.015	<.002	<.007	<.04	<7
MAR 20...	<.17	9.5	154	e.08	.240	<.002	e.006	<.04	24
JUN 18...	<.17	5.5	142	e.07	.047	<.002	.014	e.02	e6

<sup>1</sup> Laboratory value.

e Estimated.

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

## 10260434 HOLCOMB CREEK AT CRAB FLATS ROAD, NEAR LAKE ARROWHEAD, CA

LOCATION.—Lat 34° 16' 32", long 117° 02' 58", in SW 1/4 NW 1/4 sec.12, T.2 N., R.2 W., San Bernardino County, Hydrologic Unit 18090208, 8.2 mi east of Lake Arrowhead, and 17.3 mi southeast of Hesperia.

DRAINAGE AREA.—25.4 mi<sup>2</sup>.

PERIOD OF RECORD.—July 2001 to current year.

CHEMICAL DATA: July 2001 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)
DEC 10...	1400	.07	628	9.8	93	7.8	<sup>1</sup> 296	5.0	5.21
MAR 21...	0910	2.6	625	10.3	96	8.0	90	4.0	1.93
JUN 18...	0920	.23	625	6.7	80	7.8	277	14.0	3.77

Date	Fluoride, water, fltrd, mg/L (00950)	Sulfate, water, fltrd, mg/L (00945)	Residue on evap. at 180degC, wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Boron, water, fltrd, ug/L (01020)
DEC 10...	--	2.0	187	<.10	<.022	<.002	<.007	<.04	--
MAR 21...	<.17	1.2	96	.25	<.022	<.002	e.004	e.02	e7.0
JUN 18...	<.17	1.3	183	.18	e.014	<.002	e.004	<.04	20

<sup>1</sup> Laboratory value.

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

e Estimated.

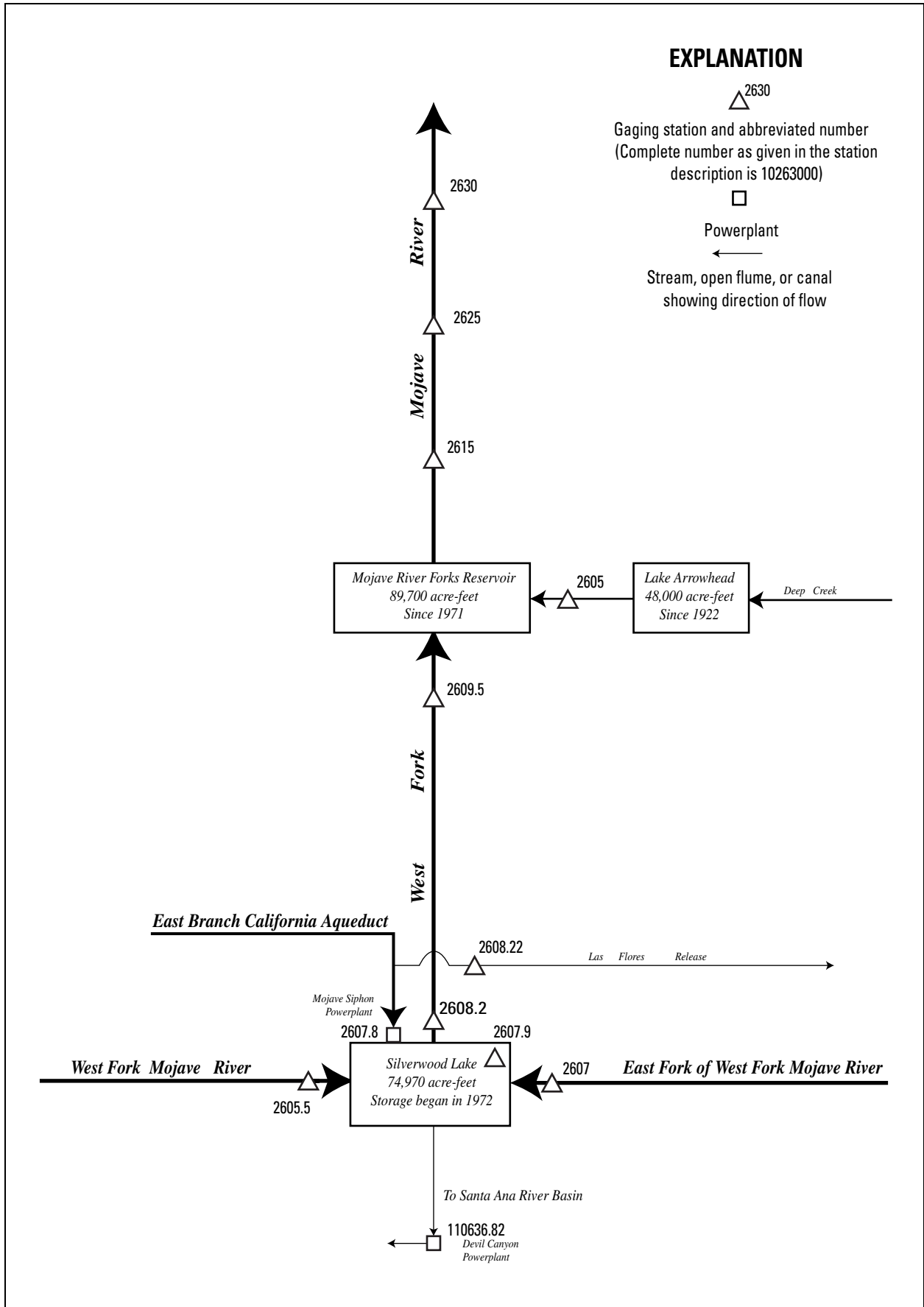


Figure 14. Diversions and storage in Mojave River Basin.

## 10260500 DEEP CREEK NEAR HESPERIA, CA

LOCATION.—Lat 34° 20'28", long 117° 13'39", in NE 1/4 SE 1/4 sec.18, T.3 N., R.3 W., San Bernardino County, Hydrologic Unit 18090208, on right bank, 0.5 mi upstream from confluence with West Fork Mojave River at Mojave River Forks Dam, 7 mi southeast of Hesperia, and 11 mi downstream from Lake Arrowhead.

DRAINAGE AREA.—134 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1904 to September 1922, October 1929 to current year. Prior to January 1930, monthly discharges only, published in WSP 1314.

REVISED RECORDS.—WSP 1314: 1931(M). WSP 1927: Drainage area.

GAGE.—Water-stage recorder. Broad-crested weir since December 1938. Elevation of gage is 3,050 ft above NGVD of 1929, from topographic map. See WSP 1314 for history of changes prior to Dec. 10, 1938.

REMARKS.—Records good above 1 ft<sup>3</sup>/s and fair below. Slight regulation by Lake Arrowhead, capacity, 48,000 acre-ft, principally used for recreation. Sewage effluent from Lake Arrowhead area is released above gage at times. See schematic diagram of [Mojave River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 46,600 ft<sup>3</sup>/s, Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of peak flow; maximum gage height, 23.81 ft, Feb. 10, 1978 (backwater from Mojave River Forks Reservoir); no flow July 17, 18, 1961.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 400 ft<sup>3</sup>/s, or maximum, from rating curve extended above 3,330 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 10	0030	2,380	4.57	Mar. 16	0545	6,010	6.76
Feb. 12	2030	5,330	6.41	Apr. 14	2345	876	3.43

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.85	1.7	3.8	6.9	5.7	41	24	24	7.7	2.1	0.64	0.40
2	0.90	1.9	3.9	6.7	5.7	34	22	22	7.2	2.0	0.67	0.36
3	0.89	1.9	3.9	6.7	5.4	30	22	26	7.2	1.8	1.0	0.50
4	0.89	1.9	3.9	6.5	5.4	28	21	103	7.0	1.7	0.91	0.84
5	0.89	2.2	3.8	6.6	5.3	25	20	75	7.0	1.5	0.74	0.62
6	0.86	2.3	3.8	7.2	5.3	22	21	56	6.9	1.4	0.60	0.46
7	0.85	2.3	3.8	7.5	5.3	26	19	46	6.7	1.2	0.48	0.41
8	0.84	2.4	3.8	7.7	5.3	34	18	41	6.4	1.2	0.42	0.40
9	0.80	38	3.8	8.6	5.3	42	17	37	6.2	1.1	0.38	0.39
10	0.79	547	3.7	8.8	5.3	45	16	33	6.1	1.0	0.36	0.43
11	0.76	44	3.8	8.3	8.2	45	15	30	5.9	0.92	0.31	0.44
12	0.84	20	3.8	7.9	1200	47	15	28	5.9	0.86	0.27	0.42
13	0.84	11	3.8	7.4	3220	45	14	25	5.9	0.77	0.23	0.39
14	0.84	8.1	3.8	6.8	781	46	57	24	5.8	0.67	0.18	0.38
15	0.84	6.8	3.6	6.7	135	478	228	22	5.5	0.58	0.17	0.38
16	0.83	5.7	4.2	6.4	72	3470	110	20	5.1	0.51	0.15	0.38
17	0.91	5.3	15	6.2	50	811	92	19	4.7	0.41	0.12	0.33
18	0.93	4.9	16	6.2	35	206	72	18	4.4	0.47	0.18	0.31
19	0.93	4.8	10	6.2	28	134	64	17	4.1	0.51	0.18	0.37
20	0.93	4.4	9.7	6.0	24	101	58	16	4.1	0.47	0.18	0.40
21	0.92	4.3	9.9	6.0	23	84	54	15	4.2	0.45	0.26	0.38
22	0.90	4.2	8.3	6.2	20	73	49	14	4.4	0.44	0.43	0.37
23	0.93	4.1	7.6	6.2	18	66	46	13	4.6	0.47	0.40	0.32
24	0.93	4.1	6.9	6.2	16	59	45	12	4.3	0.47	0.42	0.36
25	0.97	3.9	6.6	6.0	31	53	40	12	3.9	0.44	0.49	0.49
26	1.0	3.9	6.3	6.0	46	47	36	11	3.6	0.40	0.47	0.50
27	1.0	3.7	6.2	6.0	59	40	32	9.7	3.3	0.38	0.44	0.45
28	1.0	3.7	5.9	6.0	54	36	29	9.0	2.9	0.45	0.43	0.40
29	1.0	3.6	6.2	5.9	---	31	27	8.4	2.7	0.43	0.44	0.42
30	1.4	3.8	7.5	5.9	---	28	26	8.1	2.4	0.50	0.39	0.47
31	1.6	---	7.4	5.8	---	26	---	8.2	---	0.68	0.40	---
TOTAL	28.86	755.9	190.7	207.5	5874.2	6253	1309	802.4	156.1	26.28	12.74	12.77
MEAN	0.93	25.2	6.15	6.69	210	202	43.6	25.9	5.20	0.85	0.41	0.43
MAX	1.6	547	16	8.8	3220	3470	228	103	7.7	2.1	1.0	0.84
MIN	0.76	1.7	3.6	5.8	5.3	22	14	8.1	2.4	0.38	0.12	0.31
AC-FT	57	1500	378	412	11650	12400	2600	1590	310	52	25	25

10260500 DEEP CREEK NEAR HESPERIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.13	19.1	53.9	129	208	212	140	63.5	17.2	5.52	3.15	3.49
MAX	42.0	606	843	2062	2028	1539	747	456	80.4	25.9	29.2	54.3
(WY)	1984	1966	1922	1993	1993	1978	1958	1998	1998	1969	1983	1976
MIN	0.23	1.14	2.53	4.56	6.07	4.87	3.20	2.37	0.83	0.14	0.13	0.10
(WY)	1934	1957	1905	1951	1951	1956	1951	1934	2002	1961	1933	1933

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1905 - 2003	
ANNUAL TOTAL	1898.65		15629.45			
ANNUAL MEAN	5.20		42.8		70.9	
HIGHEST ANNUAL MEAN					411 1993	
LOWEST ANNUAL MEAN					3.06 1951	
HIGHEST DAILY MEAN	547	Nov 10	3470	Mar 16	14700	Jan 25 1969
LOWEST DAILY MEAN	0.22	Jul 9	0.12	Aug 17	0.00	Jul 17 1961
ANNUAL SEVEN-DAY MINIMUM	0.26	Jul 6	0.17	Aug 14	0.07	Jul 12 1961
MAXIMUM PEAK FLOW			6010	Mar 16	46600	Mar 2 1938
MAXIMUM PEAK STAGE			6.76	Mar 16	23.81	Feb 10 1978
ANNUAL RUNOFF (AC-FT)	3770		31000		51350	
10 PERCENT EXCEEDS	7.2		46		135	
50 PERCENT EXCEEDS	3.7		5.4		9.6	
90 PERCENT EXCEEDS	0.33		0.41		0.90	

## 10260550 WEST FORK MOJAVE RIVER ABOVE SILVERWOOD LAKE, NEAR HESPERIA, CA

LOCATION.—Lat 34° 17'06", long 117° 22'16", in NW 1/4 SE 1/4 sec.2, T.2 N., R.5 W., [San Bernardino County](#), Hydrologic Unit 18090208, San Bernardino National Forest, on left bank, 1.5 mi upstream from Silverwood Lake, and 10.6 mi southwest of Hesperia.

DRAINAGE AREA.—3.22 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1995 to current year. Unpublished records for water years 1961–95 available in files of the California Department of Water Resources.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 3,550 ft above NGVD of 1929, from topographic map.

REMARKS.—No regulation or diversion upstream from station. See schematic diagram of the [Mojave River Basin](#).

COOPERATION.—Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2426.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 584 ft<sup>3</sup>/s, Feb. 23, 1998, gage height, 3.88 ft; no flow for many days in each year.

NOTE: Records for water year 2003 are pending further review and will be published in a subsequent volume in this series.

10260700 EAST FORK OF WEST FORK MOJAVE RIVER ABOVE SILVERWOOD LAKE, NEAR HESPERIA, CA

LOCATION.—Lat 34° 16' 13", long 117° 17' 31", in NW 1/4 SW 1/4 sec.10, T.2 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, San Bernardino National Forest, on right bank, 0.8 mi downstream from Houston Creek, 1.5 mi upstream from Silverwood Lake, and 10.8 mi south of Hesperia.

DRAINAGE AREA.—11.2 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1995 to current year. Unpublished records for water years 1961–95 available in files of the California Department of Water Resources.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 3,590 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow slightly regulated by Lake Gregory 3.2 mi upstream. See schematic diagram of the Mojave River Basin.

COOPERATION.—Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2426.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,440 ft<sup>3</sup>/s, Feb. 23, 1998, gage height, 6.92 ft; no flow for many days in each year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.18	0.49	0.32	11	3.8	4.2	1.9	0.28	0.00	0.00
2	0.00	0.00	0.13	0.45	0.30	8.7	3.4	4.5	1.6	0.22	0.00	0.00
3	0.00	0.00	0.11	0.45	0.28	7.4	3.2	22	1.4	0.17	0.00	0.00
4	0.00	0.00	0.10	0.45	0.28	6.4	3.3	28	1.3	0.12	0.00	0.00
5	0.00	0.00	0.10	0.45	0.28	5.5	3.7	15	1.3	0.08	0.00	0.00
6	0.00	0.00	0.10	0.40	0.28	4.8	3.2	12	1.2	0.06	0.00	0.00
7	0.00	0.00	0.10	0.40	0.28	4.4	2.9	12	1.1	0.03	0.00	0.00
8	0.00	0.00	0.10	0.40	0.28	4.0	2.7	12	0.99	0.01	0.00	0.00
9	0.00	1.1	0.10	0.40	0.28	3.6	2.6	10	0.91	0.00	0.00	0.00
10	0.00	1.4	0.10	0.40	0.28	3.3	2.4	8.5	0.89	0.00	0.00	0.00
11	0.00	0.01	0.10	0.40	2.4	3.2	2.3	7.5	0.96	0.00	0.00	0.00
12	0.00	0.00	0.10	0.38	16	3.0	2.3	6.9	0.96	0.00	0.00	0.00
13	0.00	0.00	0.10	0.36	59	3.0	3.3	6.4	0.94	0.00	0.00	0.00
14	0.00	0.00	0.10	0.36	27	3.0	28	6.0	0.88	0.00	0.00	0.00
15	0.00	0.00	0.10	0.36	12	36	19	5.5	0.84	0.00	0.00	0.00
16	0.00	0.00	1.7	0.36	7.5	156	12	5.0	0.78	0.00	0.00	0.00
17	0.00	0.00	1.5	0.36	5.5	61	9.8	4.8	0.74	0.00	0.00	0.00
18	0.00	0.00	0.60	0.36	4.3	25	8.8	4.3	0.68	0.00	0.00	0.00
19	0.00	0.00	0.40	0.36	3.6	17	7.6	3.9	0.72	0.00	0.00	0.00
20	0.00	0.00	1.5	0.36	3.3	13	6.8	3.5	0.85	0.00	0.00	0.00
21	0.00	0.00	1.1	0.36	2.9	11	6.3	3.3	1.0	0.00	0.00	0.00
22	0.00	0.00	0.81	0.36	2.6	9.1	6.1	3.2	1.0	0.00	0.00	0.00
23	0.00	0.00	0.59	0.36	2.3	8.0	5.5	3.3	0.93	0.00	0.00	0.00
24	0.00	0.01	0.48	0.36	2.2	7.1	5.3	3.3	0.79	0.00	0.00	0.00
25	0.00	0.02	0.42	0.34	9.8	6.3	5.4	3.0	0.63	0.00	0.00	0.00
26	0.00	0.02	0.39	0.32	12	5.8	5.1	2.7	0.52	0.00	0.00	0.00
27	0.00	0.02	0.36	0.32	21	5.3	5.1	2.4	0.45	0.00	0.00	0.00
28	0.00	0.03	0.36	0.32	14	4.9	5.1	2.3	0.39	0.00	0.00	0.00
29	0.00	0.04	1.2	0.32	---	4.5	4.8	2.2	0.35	0.00	0.00	0.00
30	0.00	0.16	0.67	0.32	---	4.1	4.3	2.1	0.32	0.00	0.00	0.00
31	0.00	---	0.53	0.32	---	3.9	---	1.9	---	0.00	0.00	---
TOTAL	0.00	2.81	14.23	11.65	210.26	449.3	184.1	211.7	27.32	0.97	0.00	0.00
MEAN	0.000	0.094	0.46	0.38	7.51	14.5	6.14	6.83	0.91	0.031	0.000	0.000
MAX	0.00	1.4	1.7	0.49	59	156	28	28	1.9	0.28	0.00	0.00
MIN	0.00	0.00	0.10	0.32	0.28	3.0	2.3	1.9	0.32	0.00	0.00	0.00
AC-FT	0.00	5.6	28	23	417	891	365	420	54	1.9	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2002	2002	2002	2000	1996	1996
MEAN	0.080	0.47	1.66	4.95	19.3	12.6	8.85	8.42	2.51	0.66	0.14	0.32	
MAX	0.45	2.09	9.36	29.5	84.8	38.0	43.0	53.2	17.5	5.18	1.11	2.56	
(WY)	1999	1997	1997	1997	1998	1998	1998	1998	1998	1998	1998	1998	1998
MIN	0.000	0.000	0.080	0.26	0.39	0.44	0.33	0.17	0.003	0.000	0.000	0.000	
(WY)	1998	2000	2000	2000	2002	2002	2002	2002	2002	2000	1996	1996	

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1996 - 2003	
ANNUAL TOTAL	68.34		1112.34			
ANNUAL MEAN	0.19		3.05		4.92	
HIGHEST ANNUAL MEAN					20.5	
LOWEST ANNUAL MEAN					0.15	
HIGHEST DAILY MEAN	4.5 Jan 28		156 Mar 16		577 Feb 23 1998	
LOWEST DAILY MEAN	0.00 Jun 6		0.00 Oct 1		0.00 Jul 12 1996	
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 6		0.00 Oct 1		0.00 Jul 12 1996	
MAXIMUM PEAK FLOW			313 Mar 16		1440 Feb 23 1998	
MAXIMUM PEAK STAGE			4.86 Mar 16		6.92 Feb 23 1998	
ANNUAL RUNOFF (AC-FT)	136		2210		3560	
10 PERCENT EXCEEDS	0.45		7.2		11	
50 PERCENT EXCEEDS	0.07		0.32		0.36	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 10260776 EAST BRANCH CALIFORNIA AQUEDUCT AT ALAMO POWERPLANT, NEAR GORMAN, CA

LOCATION.—Lat 34° 48' 56", long 118° 41' 03", in NW 1/4 NE 1/4 sec.4, T.8 N., R.17 W., Los Angeles County, Hydrologic Unit 18070102, in powerplant 2.2 mi downstream from Tehachapi Tunnel on the East Branch California Aqueduct, and 9 mi east of Gorman.

PERIOD OF RECORD.—October 1995 to current year. Prior to October 1995 in files of California Department of Water Resources. Published as "Alamo Powerplant" prior to October 1999.

GAGE.—Acoustic-velocity meter in penstock and water-stage recorder in bypass flume. Elevation of gage is 2,932.5 ft above NGVD of 1929 (levels by California Department of Water Resources).

REMARKS.—Upstream the flow splits as it leaves the Tehachapi Tunnel. Flow at this site represents East Branch California Aqueduct water flowing southeast to Silverwood Lake. Flow at this site has three components which are combined for publication: flow through the powerplant, occasional bypass flow through the Alamo Bypass (Cottonwood Chute) and estimated leakage. The West Branch California Aqueduct flows through William Warne Powerplant (station 11109398). See schematic of [Santa Clara River Basin](#).

COOPERATION.—Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2426.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 2,510 ft<sup>3</sup>/s, July 12, 1997; no flow at times in some years.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1690	1150	1150	1710	1250	1270	2170	1370	2300	1620	1660	1720
2	1730	1300	1210	694	1500	1880	2320	1700	1820	1710	1600	1330
3	1620	1700	1110	675	1020	862	1770	1580	1730	1520	2050	1540
4	1240	905	1230	670	900	936	1520	1870	1500	1930	1660	1870
5	1360	1160	1050	1130	947	1310	1540	1720	1430	1720	1660	2030
6	1990	1270	1110	864	911	1430	1770	1620	1680	1930	1480	2200
7	1390	1480	1640	862	908	1220	1080	1480	1900	1620	1790	2210
8	1410	546	1780	774	973	1740	952	1450	1870	1580	1740	1900
9	1420	1620	1020	734	1060	2070	1560	1370	1850	1720	1500	1850
10	1190	1870	993	320	872	1440	1650	1190	1740	1530	1870	1820
11	1350	1300	769	425	942	1540	1210	1910	1790	1660	1500	1750
12	1500	1250	671	648	904	1460	1170	1640	1340	1760	1650	1930
13	1790	1170	215	270	795	1420	1320	1620	1440	2010	1750	2270
14	1170	1330	569	488	650	1640	1220	1630	1540	1730	1740	1830
15	1240	1100	1040	849	524	1660	1760	1650	1520	1600	1690	1480
16	1310	939	644	1000	507	2140	1330	1680	1130	1600	1680	1690
17	1350	1500	342	698	514	1460	1370	1740	1340	1730	1950	1680
18	1140	1160	104	658	542	1350	1150	1950	1600	1700	1830	1730
19	1520	1250	7.6	581	476	1190	1190	1770	1670	1810	1710	1760
20	1490	1610	485	580	514	1280	1250	1750	1580	1940	1780	1360
21	1320	1570	682	739	523	1080	902	1650	1150	1740	1760	2050
22	1120	1230	1080	865	498	123	858	1650	2300	1710	1720	1700
23	1170	1460	885	799	772	304	1050	1340	1660	1710	1820	1610
24	1100	1880	610	779	506	919	885	1720	1580	1920	1880	1520
25	1170	1240	1840	861	748	1200	1360	1790	1380	2020	1500	1670
26	1270	1240	864	573	850	1500	1410	2200	1530	1840	1760	1750
27	1270	1210	877	616	939	2250	2000	1600	1470	1980	1640	1690
28	1410	1240	1110	813	984	1950	1350	1790	1440	1740	1480	1810
29	1270	1140	1720	1110	---	2120	1240	1800	1760	1780	1490	1430
30	1070	1320	1360	1070	---	2040	1480	1800	1420	1780	1660	1530
31	931	---	912	0.00	---	1940	---	1990	---	1760	1910	---
TOTAL	42001	39140	29079.6	22855.00	22529	44724	41837	52020	48460	54400	52910	52710
MEAN	1355	1305	938	737	805	1443	1395	1678	1615	1755	1707	1757
MAX	1990	1880	1840	1710	1500	2250	2320	2200	2300	2020	2050	2270
MIN	931	546	7.6	0.00	476	123	858	1190	1130	1520	1480	1330
AC-FT	83310	77630	57680	45330	44690	88710	82980	103200	96120	107900	104900	104600

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2003	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	815	601	688	546	486	802	1101	1179	1216	1346	1356	1285				
MAX	1366	1382	1526	1177	1087	1443	1395	1678	1615	1755	1707	1757				
(WY)	2000	2001	2001	2000	2002	2003	2003	2003	2003	2003	2003	2003				
MIN	28.0	51.3	94.7	62.1	1.46	217	683	722	922	852	1044	820				
(WY)	1996	1997	1997	1999	1998	1998	1999	1999	1998	1998	1998	1998				

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR			FOR 2003 WATER YEAR			WATER YEARS 1996 - 2003		
ANNUAL TOTAL	457840.6			502665.60					
ANNUAL MEAN	1254			1377			954		
HIGHEST ANNUAL MEAN							1377		
LOWEST ANNUAL MEAN							603		
HIGHEST DAILY MEAN	2340			May 12			2510		
LOWEST DAILY MEAN	7.6			Dec 19			0.00		
ANNUAL SEVEN-DAY MINIMUM	417			Dec 13			0.00		
ANNUAL RUNOFF (AC-FT)	908100			997000			691200		
10 PERCENT EXCEEDS	1720			1880			1660		
50 PERCENT EXCEEDS	1240			1460			1030		
90 PERCENT EXCEEDS	811			689			37		



10260780 EAST BRANCH CALIFORNIA AQUEDUCT AT MOJAVE SIPHON POWERPLANT, NEAR HESPERIA, CA

LOCATION.—Lat 34° 18'25", long 117° 19'24", in SE 1/4 NW 1/4 sec.32, T.3 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, San Bernardino National Forest, in powerplant and bypass channel, 0.2 mi north of Silverwood Lake, and 8.3 mi south of Hesperia.

PERIOD OF RECORD.—October 1995 to current year. Unpublished records for water years 1975–94 available in files of the California Department of Water Resources. Published as "Mojave Siphon Powerplant" prior to October 1999.

REVISED RECORDS.—WDR CA-00-1: 1997–1999.

GAGE.—Acoustic-velocity meters on intake pipes. Water stage recorder in stilling well on bypass flume. Elevation of powerplant is 3,182 ft above NGVD of 1929. Elevation of bypass gage is 3,372.5 ft above NGVD of 1929, from California Department of Water Resources.

REMARKS.—Flow at this site represents East Branch California Aqueduct water to Silverwood Lake. Flow at this site has two components which are combined for publication: flow through the powerplant, and bypass flow through the flume. No flow through the bypass flume has occurred since Mar. 30, 2001. See schematic diagram of [Mojave River Basin](#).

COOPERATION.—Records collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2426.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 2,200 ft<sup>3</sup>/s, July 14, 1997; no flow for many days in some years.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1350	1090	1130	1450	998	1200	1890	1400	2040	1260	1480	1460
2	1560	1230	1280	839	1450	1510	2070	1490	1610	1650	1500	1580
3	1720	1370	1030	592	982	1070	1840	1550	1590	1290	1440	988
4	1120	1050	1130	621	953	787	1570	1550	1490	1680	1510	1670
5	1020	985	1040	931	872	1270	1260	1600	835	1660	1420	1700
6	1740	1110	1010	946	863	1300	1540	1590	1750	1700	1320	1820
7	1530	1550	1470	822	861	1230	1050	1360	1710	1440	1470	1920
8	1380	244	1670	792	937	1390	1050	1280	1520	1450	1490	1830
9	1240	1680	1110	565	971	1860	1320	1100	1800	1460	1280	1750
10	1070	1740	1080	363	829	1490	1390	1140	1590	1440	1560	1490
11	1210	1140	705	233	852	1350	1080	1630	1590	1500	1480	1480
12	1480	1370	603	628	675	1360	1010	1470	1250	1300	1420	1660
13	1380	1060	10	279	931	1400	1050	1560	1330	1830	1330	2010
14	1190	1280	662	399	461	1400	1060	1470	1300	1560	1330	1690
15	1190	1050	1040	627	741	1440	1640	1440	1240	1400	1550	1620
16	1210	942	375	647	534	1950	1320	1510	977	1420	1520	1520
17	1290	1220	9.0	533	520	1510	1280	1460	1230	1470	1610	1330
18	1030	1200	9.0	658	522	1290	1270	1780	1460	1450	1530	1420
19	1290	1320	317	635	515	1200	1130	1710	1550	1560	1580	1560
20	1290	1560	624	529	520	1170	962	1500	1250	1750	1420	1300
21	1230	1390	898	581	505	881	856	1510	761	1510	1550	1570
22	1190	1340	792	725	531	0.00	739	1670	2120	1500	1650	1620
23	973	1410	879	830	746	0.00	972	796	1880	1490	1600	1520
24	1080	1620	718	731	273	820	942	1800	1460	1610	1720	1310
25	1080	1190	1320	724	595	1090	1110	1640	1330	1610	1270	1530
26	1230	1120	1100	880	837	1240	1300	1780	1300	1820	1620	1590
27	1000	1340	773	516	945	1750	1570	1610	1430	1740	1470	1580
28	1250	1060	1110	639	873	1980	1290	1600	1310	1540	1280	1510
29	1110	1170	1370	830	---	1850	1070	1560	1410	1410	1420	1150
30	945	1200	1410	1020	---	1640	1490	1660	1250	1550	1410	1270
31	903	---	994	1060	---	1900	---	1450	---	1500	1590	---
TOTAL	38281	37031	27668.0	21625	21292	40328.00	38121	46666	43363	47550	45820	46448
MEAN	1235	1234	893	698	760	1301	1271	1505	1445	1534	1478	1548
MAX	1740	1740	1670	1450	1450	1980	2070	1800	2120	1830	1720	2010
MIN	903	244	9.0	233	273	0.00	739	796	761	1260	1270	988
AC-FT	75930	73450	54880	42890	42230	79990	75610	92560	86010	94320	90880	92130

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	710	522	616	486	448	703	992	1018
MAX	1235	1271	1431	1102	1034	1301	1271	1505
(WY)	2003	2001	2001	2000	2002	2003	2003	2003
MIN	22.6	0.000	0.95	7.89	0.52	169	584	531
(WY)	1996	1997	1997	1997	1997	1996	1999	1999

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1996 - 2003	
ANNUAL TOTAL	418108.0		454193.00			
ANNUAL MEAN	1146		1244		828	
HIGHEST ANNUAL MEAN					1244	
LOWEST ANNUAL MEAN					502	
HIGHEST DAILY MEAN	1940	Sep 22	2120	Jun 22	2200	Jul 14 1997
LOWEST DAILY MEAN	9.0	Dec 17	0.00	Mar 22	0.00	Oct 11 1995
ANNUAL SEVEN-DAY MINIMUM	346	Dec 13	346	Dec 13	0.00	Oct 11 1995
ANNUAL RUNOFF (AC-FT)	829300		900900		599700	
10 PERCENT EXCEEDS	1550		1680		1470	
50 PERCENT EXCEEDS	1130		1310		893	
90 PERCENT EXCEEDS	762		654		10	

## 10260790 SILVERWOOD LAKE NEAR HESPERIA, CA

LOCATION.—Lat 34° 18' 15", long 117° 19' 05", in SW 1/4 NE 1/4 sec.32, T.3 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, San Bernardino National Forest, in control structure, near spillway of Cedar Springs Dam, and 8.7 mi south of Hesperia.

DRAINAGE AREA.—34.0 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1995 to current year. Unpublished records for water years 1972–95 available in files of the California Department of Water Resources.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929.

REMARKS.—Lake is formed by earthfill dam completed in 1972. Capacity, 74,970 acre-ft, at spillway crest of 3,355 ft. Dead storage at invert of outlet structure, 3,967 acre-ft, elevation, 3,235 ft. Lake is a holding basin for East Branch California Aqueduct. See REMARKS for station 10260820. See schematic diagram of Mojave River Basin.

COOPERATION.—Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2426. Contents not rounded to U.S. Geological Survey standards.

EXTREMES (AT 2400 HOURS) FOR PERIOD OF RECORD.—Maximum contents, 74,843 acre-ft, Oct. 24, 1999, elevation, 3,354.87 ft; minimum contents, 38,006 acre-ft, Mar. 22, 1996, elevation, 3,310.24 ft.

EXTREMES (AT 2400 HOURS) FOR CURRENT YEAR.—Maximum contents, 73,736 acre-ft, Dec. 10, elevation, 3,353.73 ft; minimum contents, 64,497 acre-ft, Mar. 24, elevation, 3,343.83 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on table provided by California Department of Water Resources, dated January 1978)

3,300	31,395	3,325	48,732	3,345	65,554	3,355	74,970
3,315	41,311	3,335	56,811				

## RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71397	70478	71863	72350	71055	69341	70393	71387	72868	71463	72494	69052
2	71711	70846	72235	72571	71901	69829	71425	70903	72945	71758	72350	68865
3	72503	71055	71882	72083	72121	69557	72235	71055	73166	71055	72494	67706
4	72025	70629	71806	71977	72235	68865	72274	71235	73128	71425	72274	68772
5	71425	70403	71454	72083	72121	69117	72054	71939	72016	71387	72016	68912
6	72016	69847	71159	71787	71901	68865	72676	72312	72312	71901	72083	69379
7	72264	70469	71658	72016	71825	68843	72121	72312	72676	71825	72054	70280
8	72427	68577	72734	72274	71863	68437	71720	72054	72571	71425	71901	70837
9	72312	69229	73349	72121	72121	68940	71568	71425	73128	71311	71568	70554
10	71892	69979	73736	72121	71977	69304	71530	71055	73166	71055	71644	70271
11	71473	70544	73707	71863	72159	69304	71311	71758	73089	71093	71720	70742
12	71920	71930	73417	72274	72571	69229	70572	71758	72945	70865	71387	71311
13	72016	71644	72092	72016	73610	69229	70318	71825	72868	71387	71235	72073
14	71701	71911	72054	71644	73369	69089	70318	71606	72753	71311	70469	72456
15	71606	71749	72695	71606	73600	69379	71235	71530	72791	71159	70610	72830
16	71473	71340	72044	71758	73272	71235	71644	71387	72016	71017	70506	72839
17	71558	71416	70544	71159	72955	71387	72054	71055	71901	70865	70610	72360
18	71178	71273	69819	71093	72551	70865	72350	71606	71787	70544	70506	72121
19	71159	71112	69192	70979	72083	70799	72753	72054	71682	70610	70412	72025
20	71463	71416	68828	70610	71825	70648	72714	72274	71093	70979	70365	71644
21	71653	71549	69632	70393	71663	69810	72714	72274	69632	70941	70412	72456
22	71701	71492	69229	70610	71425	67429	72753	72868	70979	70799	70459	72551
23	71245	71634	69014	71055	71682	64957	72907	71093	71758	70610	70837	71882
24	71083	71987	68437	71159	70610	64497	72907	71568	72054	70979	70686	71596
25	70903	71739	68828	71311	70544	64605	72494	71311	72083	71159	70139	71501
26	71283	71615	68977	71825	70648	65029	72494	71758	72016	71977	70610	71492
27	70894	71939	68363	71606	70431	66118	72609	71901	72083	72456	70365	71596
28	70970	71625	68725	71197	69772	67503	72312	72121	72494	72494	70176	71501
29	70989	71710	69519	70941	---	68326	71720	72312	72274	72274	69894	70648
30	70695	71873	70544	71017	---	68502	71720	72494	71977	72350	69452	69988
31	70478	---	71017	70998	---	69379	---	72054	---	72417	69238	---
MAX	72503	71987	73736	72571	73610	71387	72907	72868	73166	72494	72494	72839
MIN	70478	68577	68363	70393	69772	64497	70318	70903	69632	70544	69238	67706
a	3350.32	3351.79	3350.89	3350.87	3349.57	3349.15	3351.63	3351.98	3351.90	3352.36	3349.00	3349.80
b	-1090	+1395	-856	-19	-1226	-393	+2341	+334	-77	+440	-3179	+750

CAL YR 2002 b -1085

WTR YR 2003 b -1580

a Elevation, in feet, at end of month.

b Change in contents, in acre feet.

10260820 WEST FORK MOJAVE RIVER BELOW SILVERWOOD LAKE, NEAR HESPERIA, CA

LOCATION.—Lat 34° 18' 15", long 117° 19' 06", in SW 1/4 NE 1/4 sec.32, T.3 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, San Bernardino National Forest, in control room under spillway at Cedar Springs Dam, and 8.7 mi south of Hesperia.

DRAINAGE AREA.—34.0 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1980 to September 1983, October 1995 to current year. Unpublished records for water years 1973–95 available in files of the California Department of Water Resources.

GAGE.—Flowmeter on release valve and theoretical rating on two slide gates. Elevation of gage is 3,180 ft above NGVD of 1929, from topographic map. Prior to October 1983, at recording site 0.3 mi downstream, at different datum.

REMARKS.—Flow regulated by Silverwood Lake (station 10260790). Lake stores water received from the East Branch California Aqueduct through Mojave Siphon Powerplant (station 10260780) until it is transferred to Santa Ana River Basin area through Devil Canyon Powerplant (station 11063682). Las Flores Release from East Branch California Aqueduct (station 10260822) delivers water to vicinity of West Fork Mojave River. See schematic diagram of [Mojave River Basin](#).

COOPERATION.—Records collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2426.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,290 ft<sup>3</sup>/s, Mar. 2, 1983, gage height, 7.51 ft, site and datum then in use; no flow for most of every year.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	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	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	34	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	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	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	28	0.00	18	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	18	0.00	40	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	122	23	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	148	17	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	40	3.1	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	40	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	39	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	40	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	39	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	20	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	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	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	46.00	488.00	101.10	50.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	1.64	15.7	3.37	1.61	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	28	148	40	34	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	91	968	201	99	0.00	0.00	0.00	0.00
a	0	0	0	46	323	600	513	512	431	317	315	228

a Flow, in acre-feet, through Las Flores Release (station 10260822), provided by California Department of Water Resources.

## 10260820 WEST FORK MOJAVE RIVER BELOW SILVERWOOD LAKE, NEAR HESPERIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.032	0.49	6.84	13.5	62.1	87.0	21.1	19.8	3.53	0.48	1.36	0.11
MAX	0.19	4.03	50.8	73.9	403	739	87.8	126	28.9	2.65	14.6	1.18
(WY)	1983	1983	1983	1997	1983	1983	1998	1998	1998	1997	1997	1983
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1996	1996	1996	1999	1999	1999	1997	1997	1981	1996	1996	1996

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1981 - 2003	
ANNUAL TOTAL	0.00		685.10			
ANNUAL MEAN	0.000		1.88		17.8	
HIGHEST ANNUAL MEAN					118	
LOWEST ANNUAL MEAN					0.000	
HIGHEST DAILY MEAN	0.00	Jan 1	148	Mar 18	1990	Mar 3 1983
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1980
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1980
MAXIMUM PEAK FLOW					2290	
MAXIMUM PEAK STAGE					7.51	
ANNUAL RUNOFF (AC-FT)	0.00		1360		12910	Mar 2 1983
TOTAL FLOW (AC-FT) b	279		4640			
10 PERCENT EXCEEDS	0.00		0.00		20	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

b Total flow, in acre-ft, including flow through Las Flores Release (10260822), provided by California Department of Water Resources.

## 10260950 WEST FORK MOJAVE RIVER ABOVE MOJAVE RIVER FORKS RESERVOIR, NEAR HESPERIA, CA

LOCATION.—Lat 34° 20' 20", long 117° 15' 25", in NW 1/4 NW 1/4 sec.24, T.3 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, on left bank, on upstream wingwall of concrete double-box culvert on Arrowhead Lake Road, 0.1 mi northeast of junction with Highway 174, 4.5 mi downstream from Cedar Springs Dam on Silverwood Lake, and 6.5 mi southeast of Hesperia.

DRAINAGE AREA.—70.3 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1974 to current year. October 1974 to September 1991 published incorrectly as station 10261000. Records for station 10261000 are not equivalent due to difference in drainage area.

REVISED RECORDS.—WDR CA-84: 1983.

GAGE.—Water-stage recorder and culvert control. Elevation of gage is 3,040 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Flow regulated by Silverwood Lake (holding basin for imported water from East Branch California Aqueduct), total capacity, 74,970 acre-ft, 4.5 mi upstream, which releases all natural inflow as soon as possible after a storm. See schematic diagram of Mojave River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,300 ft<sup>3</sup>/s, Feb. 10, 1978, gage height, 23.2 ft, on basis of slope-area measurement of peak flow; maximum gage height possibly affected by backwater from Mojave River Forks Reservoir; no flow for several months in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 26,100 ft<sup>3</sup>/s, Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of peak flow for station 10261000 at site 1.5 mi downstream.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	7.3	6.1	3.8	0.83	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	7.1	6.0	3.5	0.74	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	7.0	5.5	6.8	0.64	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	6.8	5.5	11	0.67	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	6.6	5.6	9.6	0.54	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	6.5	5.3	51	0.55	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	6.4	5.0	16	0.45	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	6.2	5.4	5.7	0.38	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	6.2	5.8	4.6	0.31	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	6.2	5.7	4.0	0.23	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	6.2	5.1	3.6	0.21	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	26	6.0	5.0	3.3	0.23	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	83	e5.8	5.7	3.1	0.34	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	31	e5.7	14	3.0	0.22	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	54	e5.6	20	3.1	0.17	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	13	e40	53	2.8	0.07	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	8.4	e105	46	2.8	0.08	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	8.4	e193	13	2.6	0.13	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	8.9	64	26	2.4	0.45	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	9.1	61	6.5	1.9	0.94	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	7.4	60	5.5	1.9	0.98	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	6.8	58	5.2	1.9	1.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	6.8	57	4.8	1.8	0.67	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	6.7	50	4.4	1.6	0.01	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	14	11	4.5	1.7	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	9.6	8.0	4.6	1.6	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	8.2	7.4	4.4	1.4	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	7.5	6.6	4.2	1.2	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	6.2	4.1	1.1	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	6.2	4.0	1.0	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	6.3	---	0.96	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	308.80	835.3	295.9	160.76	10.84	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	11.0	26.9	9.86	5.19	0.36	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	83	193	53	51	1.0	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	5.6	4.0	0.96	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	613	1660	587	319	22	0.00	0.00	0.00

e Estimated.

## 10260950 WEST FORK MOJAVE RIVER ABOVE MOJAVE RIVER FORKS RESERVOIR, NEAR HESPERIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.33	4.26	12.5	64.1	142	136	47.3	30.0	12.5	1.26	0.50	0.60
MAX	41.8	50.4	68.6	810	883	948	253	296	169	10.1	11.4	8.29
(WY)	1994	1993	1984	1993	1993	1983	1980	1978	1978	1998	1997	1993
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1975	1975	1976	1975	2002	2002	1987	1984	1975	1975	1975	1975

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1975 - 2003	
ANNUAL TOTAL	0.00		1611.60			
ANNUAL MEAN	0.000		4.42		37.2	
HIGHEST ANNUAL MEAN					183	1978
LOWEST ANNUAL MEAN					0.000	2002
HIGHEST DAILY MEAN	0.00	Jan 1	193	Mar 18	4900	Feb 10 1978
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1974
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1974
MAXIMUM PEAK FLOW			270	Mar 17	11300	Feb 10 1978
MAXIMUM PEAK STAGE			1.88	Mar 17	23.20	Feb 10 1978
ANNUAL RUNOFF (AC-FT)	0.00		3200		26960	
10 PERCENT EXCEEDS	0.00		7.3		57	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

10261100 MOJAVE RIVER BELOW FORKS RESERVOIR, NEAR HESPERIA, CA

LOCATION.—Lat 34° 20'45", long 117° 14'14", in NW 1/4 NW 1/4 sec.18, T.3 N., R.3 W., San Bernardino County, Hydrologic Unit 18090208, 6.0 mi southeast of Hesperia, and 10.4 mi south of Apple Valley.

DRAINAGE AREA.—211 mi<sup>2</sup>.

PERIOD OF RECORD.—July 2001 to current year.

CHEMICAL DATA: July 2001 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, unfltrd field, std units (00400)	Specific conductance, uS/cm 25 degC (00095)	Temperature, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)
DEC 12...	1040	2.5	694	11.1	97	8.1	471	5.5	13.3	--
MAR 19...	1045	207	690	11.9	114	8.0	248	9.0	25.1	.36
JUN 17...	1030	1.9	684	6.3	84	7.9	362	24.0	9.84	2.2
Date	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC, wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Phosphorus, water, unfltrd mg/L (00665)	Boron, water, fltrd, ug/L (01020)	1,1,1-Tri-chloro-ethane, water, unfltrd, ug/L (34506)	CFC-113 water, unfltrd, ug/L (77652)	1,1-Di-chloro-ethane, water, unfltrd, ug/L (34496)
DEC 12...	62.3	294	.20	<.022	<.002	.07	--	<.1	<.1	<.1
MAR 19...	19.6	168	.33	.505	.006	.04	60	<.1	<.1	<.1
JUN 17...	33.1	214	.19	<.022	<.002	.07	100	<.1	<.1	<.1
Date	1,1-Di-chloro-ethene, water, unfltrd, ug/L (34501)	1,2-Di-chloro-benzene, water, unfltrd, ug/L (34536)	1,2-Di-chloro-ethane, water, unfltrd, ug/L (32103)	1,2-Di-chloro-propane, water, unfltrd, ug/L (34541)	1,3-Di-chloro-benzene, water, unfltrd, ug/L (34566)	1,4-Di-chloro-benzene, water, unfltrd, ug/L (34571)	Benzene, water, unfltrd, ug/L (34030)	Bromo-di-chloro-methane, water, unfltrd, ug/L (32101)	Chloro-benzene, water, unfltrd, ug/L (34301)	Styrene, water, unfltrd, ug/L (77128)
DEC 12...	<.1	<.1	<.2	<.1	<.1	<.1	<.1	<.1	<.1	<.1
MAR 19...	<.1	<.1	<.2	<.1	<.1	<.1	<.1	<.1	<.1	<.1
JUN 17...	<.1	<.1	<.2	<.1	<.1	<.1	<.1	<.1	<.1	<.1
Date	cis-1,2-Di-chloro-ethene, water, unfltrd, ug/L (77093)	Di-bromo-chloro-methane, water, unfltrd, ug/L (32105)	Di-chloro-di-fluoro-methane, water, unfltrd, ug/L (34668)	Di-chloro-methane, water, unfltrd, ug/L (34423)	Di-ethyl ether, water, unfltrd, ug/L (81576)	Diiso-propyl ether, water, unfltrd, ug/L (81577)	Ethyl-benzene, water, unfltrd, ug/L (34371)	Methyl tert-pentyl ether, water, unfltrd, ug/L (50005)	meta-Xylene, water, unfltrd, ug/L (85795)	o-Xylene, water, unfltrd, ug/L (77135)
DEC 12...	<.1	<.2	<.2	<.2	<.2	<.2	<.1	<.2	<.2	<.1
MAR 19...	<.1	<.2	<.2	<.2	<.2	<.2	<.1	<.2	<.2	<.1
JUN 17...	<.1	<.2	<.2	<.2	<.2	<.2	<.1	<.2	<.2	<.1

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

## 10261100 MOJAVE RIVER BELOW FORKS RESERVOIR, NEAR HESPERIA, CA—Continued

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

Date	t-Butyl ethyl ether, water, unfltrd ug/L (500004)	Methyl t-butyl ether, water, unfltrd ug/L (78032)	Tetra- chloro- ethene, water, unfltrd ug/L (34475)	Tetra- chloro- methane water, unfltrd ug/L (32102)	Toluene water, unfltrd ug/L (34010)	trans- 1,2-Di- chloro- ethene, water, unfltrd ug/L (34546)	Tri- bromo- methane water, unfltrd ug/L (32104)	Tri- chloro- ethene, water, unfltrd ug/L (39180)	Tri- chloro- fluoro- methane water, unfltrd ug/L (34488)	Tri- chloro- methane water, unfltrd ug/L (32106)	Vinyl chlor- ide, water, unfltrd ug/L (39175)
DEC 12...	<.1	<.2	<.1	<.2	<.1	<.1	<.2	<.1	<.2	<.1	<.2
MAR 19...	<.1	<.2	<.1	<.2	<.1	<.1	<.2	<.1	<.2	<.1	<.2
JUN 17...	<.1	<.2	<.1	<.2	<.1	<.1	<.2	<.1	<.2	<.1	<.2

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

Date	Time	Depth at sample location, feet (81903)	Sam- pling depth, feet (00003)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L oxygen, (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf 25 degC uS/cm (00095)	Temper- ature, deg C water, (00010)	Locatn in X-sect. looking downstrm 1 bank ft from (00009)
MAR										
19...*	1020	1.10	.60	690	10.9	104	8.0	248	9.0	4.00
19...*	1021	1.50	.80	690	10.9	104	8.0	248	9.0	9.00
19...*	1022	1.80	.90	690	11.0	105	8.0	248	9.1	14.0
19...*	1023	1.10	.60	690	11.2	107	8.0	248	9.1	19.0
19...*	1024	1.00	.50	690	11.1	106	8.0	248	9.1	24.0
19...*	1025	1.00	.50	690	11.5	110	8.0	248	9.1	29.0
19...*	1026	1.10	.50	690	11.8	113	8.0	248	9.1	34.0
19...*	1027	1.10	.50	690	11.9	114	8.0	248	9.1	39.0
19...*	1028	1.30	.60	690	11.7	112	8.0	248	9.1	44.0
19...*	1029	1.30	.60	690	11.7	112	8.0	248	9.1	49.0
19...*	1030	1.40	.70	690	12.0	115	8.0	248	9.2	54.0
19...*	1031	1.20	.60	690	12.3	118	8.0	248	9.2	59.0
19...*	1032	1.00	.50	690	12.6	121	8.0	248	9.2	64.0
19...*	1033	.90	.50	690	13.0	125	8.0	248	9.2	69.0
19...*	1035	1.00	.50	690	13.2	127	8.0	248	9.4	74.0
19...*	1036	1.30	.60	690	13.3	129	8.0	248	9.5	79.0

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

\* Instantaneous discharge at the time of cross-sectional measurement: Mar. 19, 207 ft<sup>3</sup>/s.



10261480 MOJAVE RIVER AT UPPER NARROWS, AT VICTORVILLE, CA

LOCATION.—Lat 34° 31' 59", long 117° 17' 10", in SW 1/4 SE 1/4 sec.10, T.5 N., R.4 W., San Bernardino County, Hydrologic Unit 18090208, 3.3 mi southeast of U.S. Geological Survey station 10261500, and 6.9 mi northwest of Apple Valley.

DRAINAGE AREA.—315 mi<sup>2</sup>.

PERIOD OF RECORD.—July 2001 to current year.

CHEMICAL DATA: July 2001 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, of saturation (00301)	pH, unfltrd field, units (00400)	Specific conductance, uS/cm water, 25 degC (00095)	Temperature, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Sulfate, water, fltrd, mg/L (00945)
DEC 12...	1300	3.2	698	5.4	56	7.5	742	13.0	64.9	--	61.2
MAR 19...	1415	15	692	7.1	77	7.4	508	14.5	33.0	.37	34.1
JUN 19...	0745	3.5	687	3.8	44	7.3	770	17.5	63.8	.5	55.1

Date	Residue on evap. at 180degC, mg/L (70300)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Phosphorus, water, unfltrd, mg/L (00665)	Boron, water, fltrd, ug/L (01020)	1,1,1-Tri-chloro-ethane, water, unfltrd, ug/L (34506)	CFC-113, water, unfltrd, ug/L (77652)	1,1-Di-chloro-ethane, water, unfltrd, ug/L (34496)	1,1-Di-chloro-ethene, water, unfltrd, ug/L (34501)
DEC 12...	455	.15	.712	.008	e.03	--	<.1	<.1	<.1	<.1
MAR 19...	315	.34	.301	.008	.10	90	<.1	<.1	<.1	<.1
JUN 19...	461	.20	.728	.010	.05	210	<.1	<.1	<.1	<.1

Date	1,2-Di-chloro-benzene, water, unfltrd, ug/L (34536)	1,2-Di-chloro-ethane, water, unfltrd, ug/L (32103)	1,2-Di-chloro-propane, water, unfltrd, ug/L (34541)	1,3-Di-chloro-benzene, water, unfltrd, ug/L (34566)	1,4-Di-chloro-benzene, water, unfltrd, ug/L (34571)	Benzene, water, unfltrd, ug/L (34030)	Bromo-di-chloro-methane, water, unfltrd, ug/L (32101)	Chloro-benzene, water, unfltrd, ug/L (34301)	cis-1,2-Di-chloro-ethene, water, unfltrd, ug/L (77093)	Di-bromo-chloro-methane, water, unfltrd, ug/L (32105)
DEC 12...	<.1	<.2	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.2
MAR 19...	<.1	<.2	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.2
JUN 19...	<.1	<.2	<.1	<.1	<.1	<.1	<.1	<.1	<.1	<.2

Date	Di-chloro-di-fluoro-methane, water, unfltrd, ug/L (34668)	Di-chloro-methane, water, unfltrd, ug/L (34423)	Di-ethyl ether, water, unfltrd, ug/L (81576)	Diiso-propyl ether, water, unfltrd, ug/L (81577)	Ethyl-benzene, water, unfltrd, ug/L (34371)	Methyl tert-pentyl ether, water, unfltrd, ug/L (50005)	meta-Xylene, water, unfltrd, ug/L (85795)	o-Xylene, water, unfltrd, ug/L (77135)	Styrene, water, unfltrd, ug/L (77128)	t-Butyl ether, water, unfltrd, ug/L (50004)
DEC 12...	<.2	<.2	<.2	<.2	<.1	<.2	<.2	<.1	<.1	<.1
MAR 19...	<.2	<.2	<.2	<.2	<.1	<.2	<.2	<.1	<.1	<.1
JUN 19...	<.2	<.2	<.2	<.2	<.1	<.2	<.2	<.1	<.1	<.1

e Estimated.

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

## 10261480 MOJAVE RIVER AT UPPER NARROWS, AT VICTORVILLE, CA—Continued

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

Date	Methyl t-butyl ether, water, unfltrd ug/L (78032)	Tetra- chloro- ethene, water, unfltrd ug/L (34475)	Tetra- chloro- methane water unfltrd ug/L (32102)	Toluene water unfltrd ug/L (34010)	trans- 1,2-Di- chloro- ethene, water, unfltrd ug/L (34546)	Tri- bromo- methane water unfltrd ug/L (32104)	Tri- chloro- ethene, water, unfltrd ug/L (39180)	Tri- chloro- fluoro- methane water unfltrd ug/L (34488)	Tri- chloro- methane water unfltrd ug/L (32106)	Vinyl chlor- ide, water, unfltrd ug/L (39175)
DEC 12...	.3	<.1	<.2	<.1	<.1	<.2	<.1	<.2	<.1	<.2
MAR 19...	e.1	<.1	<.2	<.1	<.1	<.2	<.1	<.2	<.1	<.2
JUN 19...	<.2	<.1	<.2	<.1	<.1	<.2	<.1	<.2	<.1	<.2

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

e Estimated.

## 10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CA

LOCATION.—Lat 34° 34' 23", long 117° 19' 11", in SW 1/4 SE 1/4 sec.29, T.6 N., R.4 W., [San Bernardino County](#), Hydrologic Unit 18090208, on left bank, 650 ft upstream from bridge on National Trails Highway (formerly U.S. Highway 66), 0.6 mi downstream from Atchison, Topeka, & Santa Fe Railway bridge, and 3 mi northwest of Victorville.

DRAINAGE AREA.—513 mi<sup>2</sup>.

PERIOD OF RECORD.—February 1899 to September 1906, October 1930 to current year. Monthly discharge only for January to September 1906, October, November 1930, published in WSP 1314. Prior to October 1936, published as "at Victorville" and as "near Victorville" in 1937.

SPECIFIC CONDUCTANCE: Water years 1975–81.

WATER TEMPERATURE: Water years 1962–80.

REVISED RECORDS.—WSP 1927: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Auxiliary gage with water-stage recorder 85 ft upstream, on right bank. Elevation of gage is 2,643.01 ft above NGVD of 1929. See WSP 1314 for history of gage changes prior to Mar. 28, 1938. Mar. 28, 1938, to Apr. 14, 1966, at site 350 ft upstream at datum 5.00 ft higher; Apr. 15, 1966, to July 17, 1969, at site 350 ft upstream at datum 3.00 ft higher.

REMARKS.—Records poor. Flow regulated by Mojave River Forks Reservoir, capacity, 89,700 acre-ft, since 1971, 17.8 mi upstream; Silverwood Lake, capacity, 74,970 acre-ft, since 1972; and Lake Arrowhead, capacity, 48,000 acre-ft, since 1922. Some water is imported into basin. Diversions and pumping for irrigation and for Mojave State Fish Hatchery upstream from station. See schematic diagram of [Mojave River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 70,600 ft<sup>3</sup>/s, Mar. 2, 1938, gage height, 23.7 ft, present datum, from rating curve extended above 10,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; no flow Sept. 21–23, 1995.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	3.5	7.7	9.3	8.4	15	e8.0	7.9	1.9	1.0	e1.5	e0.74
2	1.1	3.6	7.5	9.1	e8.5	14	e7.9	6.5	2.0	e1.0	e1.2	e0.71
3	1.1	4.2	7.1	9.3	8.5	11	e7.8	7.0	2.0	e1.0	e1.0	e0.71
4	1.2	4.2	7.3	9.3	7.8	11	e7.7	6.7	1.9	e1.0	e0.85	e0.70
5	1.2	4.3	7.8	9.1	8.8	13	e7.6	7.3	1.6	e1.1	e0.90	e0.70
6	1.1	4.6	8.5	9.7	9.5	13	e7.5	6.5	1.4	e1.1	1.00	e0.69
7	1.1	5.3	8.0	9.6	9.0	13	e7.4	5.8	1.4	e1.0	1.1	e0.68
8	1.1	5.9	8.7	9.7	8.5	11	7.3	e5.7	1.3	e1.1	1.1	e0.67
9	1.2	5.3	9.1	9.7	9.2	12	7.3	e5.6	1.4	e1.0	0.88	e0.68
10	1.1	5.1	9.1	9.9	11	12	e7.3	e5.5	1.5	e0.95	1.1	0.73
11	1.2	4.6	9.9	10	33	12	e7.3	e5.3	2.0	1.0	0.71	0.68
12	1.3	5.3	10	9.5	e140	13	e7.2	e5.2	2.3	e0.92	0.83	0.65
13	1.3	5.8	9.9	9.2	e190	13	e7.0	5.1	1.9	e0.80	0.74	0.56
14	1.2	6.5	9.1	9.5	e122	17	46	e5.0	1.7	0.68	0.82	0.50
15	1.1	6.3	9.8	e8.9	e20	20	55	e4.8	e1.4	0.75	0.85	0.58
16	0.98	6.4	13	8.4	e15	382	11	4.7	e1.3	e0.79	0.96	0.58
17	1.1	6.3	12	8.4	e14	146	e10	e4.5	1.3	0.88	0.87	0.59
18	1.2	6.4	9.5	8.6	e12	35	e9.8	e4.2	1.3	0.87	0.85	e0.56
19	1.2	6.0	9.3	8.8	12	e17	e9.5	e3.7	1.5	0.89	0.67	0.52
20	1.1	5.8	11	8.7	15	e15	e9.3	3.5	1.8	0.70	e0.70	0.56
21	1.0	e6.0	8.6	8.8	14	e13	e9.3	3.6	1.8	0.60	e0.69	0.53
22	1.2	e6.0	8.7	9.8	13	12	e9.2	3.2	1.4	0.71	0.66	0.52
23	1.2	6.0	8.6	9.7	11	12	e8.9	2.6	1.0	e0.75	0.66	0.52
24	1.5	6.6	8.3	9.3	9.8	13	8.6	2.6	1.1	e0.72	0.72	e0.54
25	1.6	7.5	8.4	9.7	65	11	e8.6	e2.6	1.1	e0.70	0.72	e0.53
26	1.8	7.8	8.2	10	27	e10	8.6	2.7	1.1	e0.66	0.74	e0.55
27	1.6	7.5	9.3	9.7	e18	e10	8.7	2.6	e1.0	e0.63	e0.74	e0.57
28	1.6	7.6	9.8	9.0	e16	e9.6	e8.6	2.5	e1.0	e0.60	e0.73	e0.59
29	1.5	7.8	11	e8.7	---	e9.3	e8.5	2.0	e0.99	19	e0.75	0.54
30	1.9	8.2	9.1	8.5	---	e8.8	8.4	1.9	e0.96	4.5	e0.78	0.65
31	2.9	---	9.2	8.3	---	e8.2	---	1.9	---	e1.8	e0.76	---
TOTAL	40.78	176.4	283.5	286.2	836.0	911.9	335.3	138.7	44.35	49.20	26.58	18.33
MEAN	1.32	5.88	9.15	9.23	29.9	29.4	11.2	4.47	1.48	1.59	0.86	0.61
MAX	2.9	8.2	13	10	190	382	55	7.9	2.3	19	1.5	0.74
MIN	0.98	3.5	7.1	8.3	7.8	8.2	7.0	1.9	0.96	0.60	0.66	0.50
AC-FT	81	350	562	568	1660	1810	665	275	88	98	53	36

e Estimated.

## MOJAVE RIVER BASIN

## 10261500 MOJAVE RIVER AT LOWER NARROWS, NEAR VICTORVILLE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	22.8	34.0	49.4	94.0	202	213	121	46.5	20.6	14.1	14.2	16.0
MAX	58.2	222	376	1487	2334	2229	1015	312	157	32.5	29.3	41.7
(WY)	1977	1966	1967	1993	1993	1938	1958	1998	1978	1969	1969	1976
MIN	1.01	5.40	9.15	9.23	14.0	12.6	9.02	4.06	1.48	1.13	0.73	0.61
(WY)	2002	2002	2003	2003	2002	1990	2002	2001	2003	2002	2002	2003

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1931 - 2003
ANNUAL TOTAL	2297.59	3147.24	
ANNUAL MEAN	6.29	8.62	69.9
HIGHEST ANNUAL MEAN			402 1969
LOWEST ANNUAL MEAN			6.29 2002
HIGHEST DAILY MEAN	17 Feb 25	382 Mar 16	21000 Feb 25 1969
LOWEST DAILY MEAN	0.53 Aug 6	0.50 Sep 14	0.00 Sep 21 1995
ANNUAL SEVEN-DAY MINIMUM	0.65 Aug 20	0.53 Sep 19	0.37 Sep 20 1995
MAXIMUM PEAK FLOW		890 Mar 16	70600 Mar 2 1938
MAXIMUM PEAK STAGE		6.91 Jul 29	23.70 Mar 2 1938
ANNUAL RUNOFF (AC-FT)	4560	6240	50660
10 PERCENT EXCEEDS	14	12	52
50 PERCENT EXCEEDS	5.1	5.3	26
90 PERCENT EXCEEDS	0.80	0.70	9.0

10262500 MOJAVE RIVER AT BARSTOW, CA

LOCATION.—Lat 34° 54'25", long 117° 01'19", in SW 1/4 SE 1/4 sec.31, T.10 N., R.1 W., [San Bernardino County](#), Hydrologic Unit 18090208, on left bank, 75 ft upstream from bridge on 1st Avenue (formerly U.S. Highway 91), at Barstow.

DRAINAGE AREA.—1,291 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1930 to current year.

REVISED RECORDS.—WSP 1564: 1932. WDR CA-76-1: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 2,089.34 ft above NGVD of 1929.

REMARKS.—Flow regulated by Mojave River Forks Reservoir, capacity, 89,700 acre-ft, since 1971, 60 mi upstream; Silverwood Lake, capacity, 74,970 acre-ft, since 1972; and Lake Arrowhead, capacity, 48,000 acre-ft, since 1922. Some water is imported into basin. Diversions and pumping for irrigation of about 15,000 acres upstream from station. Southern California Water Company releases water from Crook Plant Pumping Station into the river 600 ft upstream of the gage at times in some years. See schematic diagram of [Mojave River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 64,300 ft<sup>3</sup>/s, Mar. 3, 1938, gage height, 8.60 ft, on basis of slope-area measurement of peak flow; no flow for all or most of each year.

EXTREMES FOR CURRENT YEAR.—No flow for entire water year.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.001	0.34	3.22	23.7	91.7	106	38.9	5.15	0.001	0.003	0.020	0.016
MAX	0.061	20.2	116	747	1640	1962	547	93.5	0.080	0.090	1.31	0.71
(WY)	1959	1966	1967	1969	1993	1938	1941	1941	1972	1958	1979	1984
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1931	1931	1931	1931	1931	1931	1931	1931	1931	1931	1931	1931

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003	
ANNUAL TOTAL	0.00		0.00			
ANNUAL MEAN	0.000		0.000		22.1	
HIGHEST ANNUAL MEAN					202 1969	
LOWEST ANNUAL MEAN					0.000 1931	
HIGHEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	18100	Mar 3 1938
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1930
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1930
MAXIMUM PEAK FLOW					64300 Mar 3 1938	
MAXIMUM PEAK STAGE					8.60 Mar 3 1938	
ANNUAL RUNOFF (AC-FT)	0.00		0.00		15990	
10 PERCENT EXCEEDS	0.00		0.00		0.00	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 10263000 MOJAVE RIVER AT AFTON, CA

LOCATION.—Lat 35° 02' 14", long 116° 23' 00", in NW 1/4 SE 1/4 sec.18, T.11 N., R.6 E., [San Bernardino County](#), Hydrologic Unit 18090208, on right bank side of right pier of Union Pacific Railroad bridge, 0.3 mi west of Afton, and 63 mi east of Barstow.

DRAINAGE AREA.—2,121 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1929 to September 1932, October 1952 to current year. Records for water year 1930 are incomplete; yearly estimate published in WSP 1314. Records for water years 1979 and 1980 are incomplete; discharge measurements only were published at that time.

REVISED RECORDS.—WSP 1564: 1931. WDR CA-00-1: 1982(M).

GAGE.—Water-stage recorder. Datum of gage is 1,398.15 ft above NGVD of 1929. Dec. 21, 1929, to Sept. 30, 1932, at site 1.7 mi downstream at different datum; October 1952 to May 1978, at datum 2 ft higher.

REMARKS.—Records fair above 0.5 ft<sup>3</sup>/s and poor below. Natural flow affected by ground-water withdrawals, diversions, municipal use, and storage in reservoirs 100 mi upstream. For description of upstream reservoirs see "Mojave River at Barstow" ([station 10262500](#)). See schematic diagram of [Mojave River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 18,000 ft<sup>3</sup>/s, Jan. 26, 1969, gage height, 12.40 ft (present datum), from rating curve extended above 3,200 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; no flow at times during many 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)
Feb. 26	0130	1.9	2.88

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.17	0.40	0.63	0.59	0.63	0.69	0.47	0.47	0.11	0.00	0.00	0.00
2	0.19	0.41	0.61	0.55	0.61	0.66	0.45	0.46	0.09	0.00	0.00	0.00
3	0.20	0.43	0.63	0.55	0.59	0.66	0.46	0.49	0.09	0.00	0.00	0.00
4	0.21	0.43	0.61	0.55	0.60	0.68	0.47	0.51	0.07	0.00	0.00	0.48
5	0.21	0.44	0.61	0.56	0.57	0.65	0.48	0.46	0.07	0.00	0.00	0.18
6	0.22	0.45	0.62	0.56	0.55	0.66	0.48	0.44	0.07	0.00	0.00	0.07
7	0.21	0.48	0.62	0.55	0.58	0.66	0.47	0.42	0.07	0.00	0.00	0.03
8	0.22	0.50	0.61	0.56	0.54	0.65	0.47	0.44	0.04	0.00	0.00	0.03
9	0.21	0.50	0.60	0.57	0.58	0.64	0.46	0.42	0.01	0.00	0.00	0.02
10	0.21	0.48	0.58	0.56	0.59	0.64	0.44	0.46	0.01	0.00	0.00	0.02
11	0.20	0.48	0.58	0.55	0.61	0.65	0.41	0.43	0.01	0.00	0.00	e0.05
12	0.23	0.50	0.58	0.55	0.72	0.64	0.42	0.40	0.02	0.00	0.00	e0.09
13	0.24	0.50	0.59	0.55	0.80	0.63	0.41	0.35	0.03	0.00	0.00	0.09
14	0.24	0.50	0.61	0.57	0.62	0.62	0.49	0.37	0.03	0.00	0.00	0.09
15	0.25	0.50	0.61	0.57	0.55	0.64	0.88	0.34	0.01	0.00	0.00	0.07
16	0.25	0.50	0.61	0.57	0.51	1.2	0.68	0.30	0.01	0.00	0.00	0.06
17	0.26	0.53	0.62	0.58	0.50	0.77	0.64	0.27	0.00	0.00	0.00	0.03
18	0.28	0.52	0.60	0.58	0.49	0.70	0.61	0.27	0.00	0.00	0.00	0.03
19	0.28	0.53	0.58	0.59	0.48	0.62	0.58	0.25	0.00	0.00	0.00	0.07
20	0.29	0.55	0.62	0.59	0.48	0.58	0.57	0.24	0.00	0.00	0.00	0.09
21	0.30	0.55	0.61	0.62	0.47	0.55	0.58	0.24	0.01	0.00	0.00	0.09
22	0.29	0.55	0.59	0.60	0.47	0.60	0.56	0.21	0.02	0.00	0.00	0.08
23	0.30	0.51	0.56	0.61	0.48	0.63	0.56	0.19	0.03	0.00	0.00	0.08
24	0.31	0.56	0.56	0.61	0.49	0.59	0.55	0.20	0.01	0.00	0.00	0.08
25	0.33	0.56	0.56	0.61	0.85	0.53	0.52	0.18	0.02	0.00	0.00	0.10
26	0.38	0.54	0.58	0.60	1.2	0.55	0.50	0.19	0.03	0.00	0.00	0.10
27	0.40	0.55	0.58	0.61	0.77	0.49	0.49	0.23	0.02	0.00	0.00	0.08
28	0.38	0.58	0.59	0.61	0.69	0.49	0.46	0.21	0.00	0.00	0.00	0.07
29	0.37	0.58	0.62	0.60	---	0.50	0.47	0.18	0.00	0.00	0.00	0.08
30	0.38	0.66	0.59	0.59	---	0.50	0.47	0.13	0.00	0.00	0.00	0.07
31	0.39	---	0.61	0.61	---	0.48	---	0.12	---	0.00	0.00	---
TOTAL	8.40	15.27	18.57	17.97	17.02	19.55	15.50	9.87	0.88	0.00	0.00	2.33
MEAN	0.27	0.51	0.60	0.58	0.61	0.63	0.52	0.32	0.029	0.000	0.000	0.078
MAX	0.40	0.66	0.63	0.62	1.2	1.2	0.88	0.51	0.11	0.00	0.00	0.48
MIN	0.17	0.40	0.56	0.55	0.47	0.48	0.41	0.12	0.00	0.00	0.00	0.00
AC-FT	17	30	37	36	34	39	31	20	1.7	0.00	0.00	4.6

e Estimated.

10263000 MOJAVE RIVER AT AFTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.72	0.92	2.59	12.6	40.9	16.5	2.69	0.64	0.38	0.64	1.28	0.82
MAX	2.97	2.29	63.9	347	876	415	56.4	1.80	1.58	3.83	18.0	5.46
(WY)	1993	1981	1966	1969	1993	1978	1969	1931	1981	1999	1984	1998
MIN	0.000	0.000	0.21	0.34	0.55	0.22	0.20	0.099	0.000	0.000	0.000	0.000
(WY)	1967	1969	1978	1976	2001	1975	1977	1977	1976	1966	1966	1966

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1930 - 2003
ANNUAL TOTAL	128.74	125.36	
ANNUAL MEAN	0.35	0.34	6.53
HIGHEST ANNUAL MEAN			100 1969
LOWEST ANNUAL MEAN			0.22 1975
HIGHEST DAILY MEAN	0.87 Mar 7	1.2 Feb 26	10000 Feb 20 1993
LOWEST DAILY MEAN	0.00 Jun 9	0.00 Jun 17	0.00 Jun 28 1961
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 13	0.00 Jun 28	0.00 Jul 14 1961
MAXIMUM PEAK FLOW		1.9 Feb 26	18000 Jan 26 1969
MAXIMUM PEAK STAGE		2.88 Feb 26	12.40 Jan 26 1969
ANNUAL RUNOFF (AC-FT)	255	249	4730
10 PERCENT EXCEEDS	0.68	0.62	1.6
50 PERCENT EXCEEDS	0.42	0.44	0.70
90 PERCENT EXCEEDS	0.00	0.00	0.04

## 10263500 BIG ROCK CREEK NEAR VALYERMO, CA

LOCATION.—Lat 34° 25' 15", long 117° 50' 19", in SE 1/4 NE 1/4 sec.20, T.4 N., R.9 W., Los Angeles County, Hydrologic Unit 18090206, on left bank, 0.1 mi upstream from Punchbowl Canyon, and 1.9 mi southeast of Valyermo.

DRAINAGE AREA.—22.9 mi<sup>2</sup>.

PERIOD OF RECORD.—January 1923 to current year. Monthly discharge only for June 1938 to January 1939, published in WSP 1314. Prior to October 1954, published as "Rock Creek near Valyermo."

REVISED RECORDS.—WSP 1314: 1938–39. WSP 1564: 1932, 1937, 1939(M). WSP 1927: Drainage area.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 4,050 ft above NGVD of 1929, from topographic map. Prior to May 4, 1938, at same site at different datums. May 4, 1938, to Jan. 26, 1939, at site 0.2 mi downstream (below Punchbowl Canyon) at different datum.

REMARKS.—Records fair through May and poor thereafter. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,300 ft<sup>3</sup>/s, Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of peak flow; maximum gage height, 7.70 ft, Jan. 25, 1969; minimum daily, 0.70 ft<sup>3</sup>/s, Nov. 5, 1951.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft<sup>3</sup>/s, or maximum, from rating curve extended above 379 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	1300	1,340	4.73	Apr. 14	1600	52	2.34
Mar. 16	0245	215	3.05	May 3	1230	60	2.40

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.2	1.2	1.5	2.0	9.9	13	16	12	e8.8	e7.3	5.7
2	1.3	1.1	1.2	1.5	2.1	9.6	13	16	11	e8.8	e7.2	e5.6
3	1.3	1.1	1.2	1.6	2.1	9.6	13	41	11	e8.7	e7.2	e5.6
4	1.3	1.2	1.2	1.6	2.1	9.0	13	41	11	e8.7	e7.2	e5.5
5	1.3	1.2	1.2	1.6	2.1	8.8	13	35	11	e8.7	e7.2	e5.5
6	1.2	1.2	1.2	1.6	2.1	8.6	12	32	10	e8.6	e7.1	5.5
7	1.1	1.2	1.2	1.6	2.1	8.6	12	30	10	e8.6	e7.1	5.4
8	1.1	1.4	1.2	1.6	2.1	8.4	12	27	9.9	e8.5	e7.0	5.3
9	1.1	1.5	1.2	1.7	2.0	8.3	12	25	9.6	e8.4	e7.0	5.4
10	1.2	1.5	1.2	1.7	2.0	8.2	12	23	9.7	8.3	e6.9	5.6
11	1.3	1.5	1.2	1.7	3.0	8.2	12	22	9.9	e8.1	e6.9	5.3
12	1.3	1.5	1.3	1.7	405	8.3	11	21	9.6	e7.8	e6.8	5.5
13	1.3	1.5	1.3	1.8	156	8.3	11	20	9.6	7.6	e6.8	e5.4
14	1.3	1.4	1.4	1.8	86	8.3	28	20	e9.5	7.7	e6.7	5.2
15	1.2	1.3	1.6	1.8	68	32	28	19	e9.5	e7.6	e6.7	e5.1
16	1.3	1.4	2.5	1.8	54	102	24	18	e9.4	e7.6	e6.7	e5.1
17	1.3	1.3	1.7	1.8	44	64	23	18	e9.4	7.7	6.8	e5.1
18	1.3	1.4	1.5	1.8	35	48	21	17	e9.4	7.5	e6.6	e5.0
19	1.2	1.3	1.4	1.8	29	38	19	18	e9.3	7.5	e6.5	e5.0
20	1.2	1.3	1.8	1.8	24	32	19	17	e9.3	7.5	e6.5	e4.9
21	1.2	1.4	1.8	1.8	21	28	19	17	e9.3	7.6	e6.4	e4.8
22	1.2	1.3	1.8	1.8	17	25	18	16	e9.2	7.6	e6.3	4.7
23	1.3	1.3	1.8	1.8	15	22	18	15	e9.2	e7.5	e6.2	4.5
24	1.3	1.3	1.7	1.8	12	19	17	15	e9.1	e7.5	e6.1	4.6
25	1.3	1.4	1.7	1.8	12	17	17	14	e9.1	e7.5	e6.1	e4.6
26	1.3	1.4	1.6	1.8	11	16	17	14	e9.0	e7.5	e6.0	e4.6
27	1.2	1.4	1.6	1.9	11	15	16	13	e9.0	e7.4	e5.9	e4.7
28	1.2	1.4	1.6	2.0	10	14	16	12	e8.9	e7.4	e5.9	4.7
29	1.1	1.3	1.6	2.0	---	14	17	12	e8.9	e7.4	e5.8	e4.6
30	1.1	1.3	1.6	2.0	---	13	16	11	e8.9	e7.3	e5.8	e4.5
31	1.2	---	1.6	2.0	---	14	---	11	---	e7.3	e5.7	---
TOTAL	38.2	40.0	46.1	54.5	1033.7	635.1	492	626	290.7	244.7	204.4	153.0
MEAN	1.23	1.33	1.49	1.76	36.9	20.5	16.4	20.2	9.69	7.89	6.59	5.10
MAX	1.3	1.5	2.5	2.0	405	102	28	41	12	8.8	7.3	5.7
MIN	1.1	1.1	1.2	1.5	2.0	8.2	11	11	8.9	7.3	5.7	4.5
AC-FT	76	79	91	108	2050	1260	976	1240	577	485	405	303

e Estimated.



10263500 BIG ROCK CREEK NEAR VALYERMO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.07	7.23	10.1	17.9	30.5	37.1	30.3	27.6	18.6	10.8	7.80	6.16
MAX	19.0	116	67.0	245	303	432	144	120	91.4	42.2	26.5	19.7
(WY)	1984	1966	1947	1969	1980	1978	1978	1941	1978	1983	1983	1983
MIN	1.05	1.09	1.49	1.76	2.39	2.40	2.67	2.35	1.61	1.15	1.09	1.01
(WY)	1952	1952	2003	2003	1951	1951	1951	1951	1961	1961	1961	1961

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1923 - 2003	
ANNUAL TOTAL	853.4		3858.4			
ANNUAL MEAN	2.34		10.6		17.4	
HIGHEST ANNUAL MEAN					90.9 1978	
LOWEST ANNUAL MEAN					1.91 1951	
HIGHEST DAILY MEAN	5.3	Jan 28	405	Feb 12	3300	Mar 2 1938
LOWEST DAILY MEAN	1.1	Jul 25	1.1	Oct 7	0.70	Nov 5 1951
ANNUAL SEVEN-DAY MINIMUM	1.1	Sep 4	1.1	Oct 28	0.87	Nov 3 1951
MAXIMUM PEAK FLOW			1340	Feb 12	8300	Mar 2 1938
MAXIMUM PEAK STAGE			4.73	Feb 12	7.70	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	1690		7650		12610	
10 PERCENT EXCEEDS	4.1		19		36	
50 PERCENT EXCEEDS	1.7		6.8		7.2	
90 PERCENT EXCEEDS	1.2		1.3		2.6	

## 10263630 BIG ROCK CREEK ABOVE PALLETT CREEK, NEAR VALYERMO, CA

LOCATION.—Lat 34° 27' 36", long 117° 51' 43", in NE 1/4 SW 1/4 sec.6, T.4 N., R.9 W., Los Angeles County, Hydrologic Unit 18090206, on right bank, 300 ft upstream from confluence with Pallett Creek, and 1.4 mi northwest of Valyermo.

DRAINAGE AREA.—34.4 mi<sup>2</sup>.

PERIOD OF RECORD.—August 2002 to current year.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 3,555 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Natural flow affected by pumping along creek. This station is designated by the Los Angeles County Department of Public Works as station F394-R.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,230 ft<sup>3</sup>/s, Feb. 12, 2003, gage height, 3.32 ft, from rating curve extended above 121 ft<sup>3</sup>/s on basis of critical-depth computations; minimum daily, 0.06 ft<sup>3</sup>/s, Nov. 4–6, 2002.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 70 ft<sup>3</sup>/s, or maximum, from rating curve extended above 121 ft<sup>3</sup>/s as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	1215	1,230	3.32	May 3	1015	142	1.72
Mar. 16	0245	475	2.34				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.26	0.07	0.19	0.53	0.35	1.9	13	12	12	8.6	7.0	4.3
2	0.26	0.07	0.23	0.55	0.30	1.8	12	12	12	8.6	6.8	4.5
3	0.26	0.07	0.26	0.60	0.39	1.7	12	51	12	8.4	7.0	4.7
4	0.25	0.06	0.56	0.60	0.45	1.7	12	22	12	8.3	6.6	4.5
5	0.24	0.06	0.34	0.61	0.50	1.7	13	20	12	8.2	6.2	4.5
6	0.23	0.06	0.25	0.61	0.57	1.7	13	21	12	8.3	5.8	4.6
7	0.21	0.08	0.17	0.61	0.84	1.6	12	22	12	8.5	5.3	4.9
8	0.20	0.12	0.15	0.61	0.69	1.6	11	22	11	8.4	5.1	4.8
9	0.20	0.26	0.19	0.61	0.33	1.7	11	23	11	7.9	4.9	4.6
10	0.20	0.32	0.22	0.61	0.19	1.7	11	22	11	7.8	4.9	4.5
11	0.16	0.39	0.31	0.62	0.46	1.8	12	21	11	7.7	5.3	4.3
12	0.17	0.41	0.34	0.62	420	1.9	12	19	11	7.5	4.9	4.1
13	0.16	0.36	0.34	0.61	e175	1.9	12	21	11	7.4	4.6	4.0
14	0.16	0.35	0.42	0.61	e25	1.9	19	19	11	7.3	4.3	4.0
15	0.16	0.42	0.50	0.61	e3.5	109	14	10	10	7.4	4.3	4.3
16	0.16	0.47	2.1	0.61	e2.9	157	16	14	10	7.6	4.1	4.2
17	0.16	1.4	0.35	0.72	e2.4	34	17	20	10	7.8	4.3	4.2
18	0.15	1.9	0.34	0.73	2.2	22	18	19	9.7	7.9	4.1	4.2
19	0.13	1.4	0.39	0.73	2.2	21	14	17	9.4	8.1	3.6	4.4
20	0.12	1.1	0.52	0.79	2.0	17	14	16	9.3	7.8	3.8	4.4
21	0.12	0.41	0.50	0.53	1.6	12	14	18	9.1	7.7	4.2	4.2
22	0.12	0.11	0.50	0.29	1.5	13	14	17	9.2	7.6	4.0	3.9
23	0.12	0.13	0.50	0.22	1.5	13	14	17	8.9	7.3	3.8	3.9
24	0.12	0.66	0.50	0.26	1.3	13	13	16	8.5	7.4	4.2	3.9
25	0.15	1.5	0.52	0.33	15	13	13	15	8.5	7.6	4.7	4.0
26	0.15	0.72	0.55	0.39	2.4	14	13	15	8.4	7.4	4.5	4.0
27	0.16	0.12	0.59	0.47	1.9	13	13	15	8.4	7.4	4.4	3.9
28	0.15	0.13	0.61	0.50	1.9	13	13	14	8.2	7.2	4.2	3.9
29	0.13	0.13	0.61	0.50	---	12	13	11	8.1	7.4	4.0	4.0
30	0.10	0.16	0.54	0.59	---	13	13	12	8.2	7.4	4.1	3.9
31	0.08	---	0.53	0.58	---	13	---	12	---	7.2	4.4	---
TOTAL	5.24	13.44	14.12	17.25	667.37	526.6	401	565	304.9	241.1	149.4	127.6
MEAN	0.17	0.45	0.46	0.56	23.8	17.0	13.4	18.2	10.2	7.78	4.82	4.25
MAX	0.26	1.9	2.1	0.79	420	157	19	51	12	8.6	7.0	4.9
MIN	0.08	0.06	0.15	0.22	0.19	1.6	11	10	8.1	7.2	3.6	3.9
AC-FT	10	27	28	34	1320	1040	795	1120	605	478	296	253

e Estimated.

10263630 BIG ROCK CREEK ABOVE PALLETT CREEK, NEAR VALYERMO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.17	0.45	0.46	0.56	23.8	17.0	13.4	18.2	10.2	7.78	4.82	2.27
MAX	0.17	0.45	0.46	0.56	23.8	17.0	13.4	18.2	10.2	7.78	4.82	4.25
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003
MIN	0.17	0.45	0.46	0.56	23.8	17.0	13.4	18.2	10.2	7.78	4.82	0.28
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2002

SUMMARY STATISTICS

FOR 2003 WATER YEAR

WATER YEARS 2002 - 2003

ANNUAL TOTAL	3033.02		
ANNUAL MEAN	8.31	8.31	
HIGHEST ANNUAL MEAN		8.31	2003
LOWEST ANNUAL MEAN		8.31	2003
HIGHEST DAILY MEAN	420	Feb 12	420 Feb 12 2003
LOWEST DAILY MEAN	0.06	Nov 4	0.06 Nov 4 2002
ANNUAL SEVEN-DAY MINIMUM	0.07	Oct 31	0.07 Oct 31 2002
MAXIMUM PEAK FLOW	1230	Feb 12	1230 Feb 12 2003
MAXIMUM PEAK STAGE	3.32	Feb 12	3.32 Feb 12 2003
ANNUAL RUNOFF (AC-FT)	6020		6020
10 PERCENT EXCEEDS	15		15
50 PERCENT EXCEEDS	4.2		4.2
90 PERCENT EXCEEDS	0.17		0.17

## 10263665 PALLETT CREEK AT BIG ROCK CREEK, NEAR VALYERMO, CA

LOCATION.—Lat 34° 27' 38", long 117° 51' 50", in NE 1/4 SW 1/4 sec.6, T.4 N., R.9 W., Los Angeles County, Hydrologic Unit 18090206, on left bank, on upstream side of Valyermo Road Bridge, 150 ft upstream from mouth, and 1.4 mi northwest of Valyermo.

DRAINAGE AREA.—15.1 mi<sup>2</sup>.

PERIOD OF RECORD.—November 2001 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 3,550 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. This station is designated by the Los Angeles County Department of Public Works as station F122-R.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 65 ft<sup>3</sup>/s, Feb. 12, 2003, gage height, 4.80 ft; no flow for many days in some 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. 12	1630	65	4.80

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.16	0.24	0.20	0.20	0.14	0.12	0.23
2	0.00	0.00	0.00	0.00	0.00	0.16	0.24	0.21	0.19	0.12	0.12	0.23
3	0.00	0.00	0.00	0.00	0.00	0.16	0.23	0.22	0.19	0.12	0.12	0.23
4	0.00	0.00	0.00	0.00	0.00	0.16	0.22	0.22	0.19	0.12	0.10	0.23
5	0.00	0.00	0.00	0.00	0.00	0.16	0.22	0.22	0.19	0.12	0.11	0.23
6	0.00	0.00	0.00	0.00	0.00	0.16	0.22	0.21	0.19	0.13	0.12	0.23
7	0.00	0.00	0.00	0.00	0.00	0.16	0.24	0.22	0.19	0.14	0.13	0.20
8	0.00	0.00	0.00	0.00	0.00	0.16	0.24	0.22	0.18	0.14	0.12	0.21
9	0.00	0.00	0.00	0.00	0.00	0.16	0.24	0.22	0.18	0.14	0.12	0.22
10	0.00	0.00	0.00	0.00	0.00	0.16	0.24	0.21	0.18	0.15	0.12	0.22
11	0.00	0.00	0.00	0.00	0.00	0.16	0.24	0.21	0.18	0.17	0.12	0.22
12	0.00	0.00	0.00	0.00	18	0.16	0.24	0.19	0.17	0.17	0.12	0.22
13	0.00	0.00	0.00	0.00	e5.4	0.16	0.24	0.19	0.17	0.17	0.13	0.20
14	0.00	0.00	0.00	0.00	e1.6	0.16	0.25	0.19	0.16	0.14	0.12	0.20
15	0.00	0.00	0.00	0.00	e0.81	0.18	0.24	0.18	0.15	0.14	0.13	0.20
16	0.00	0.00	0.01	0.00	e0.40	1.5	0.24	0.18	0.15	0.14	0.14	0.20
17	0.00	0.00	0.00	0.00	e0.16	0.36	0.24	0.18	0.15	0.15	0.17	0.20
18	0.00	0.00	0.00	0.00	e0.10	0.24	0.24	0.18	0.15	0.15	0.17	0.20
19	0.00	0.00	0.00	0.00	0.10	0.24	0.24	0.17	0.15	0.15	0.17	0.20
20	0.00	0.00	0.00	0.00	0.10	0.22	0.24	0.17	0.15	0.15	0.18	0.16
21	0.00	0.00	0.00	0.00	0.11	0.22	0.24	0.17	0.16	0.12	0.21	0.15
22	0.00	0.00	0.00	0.00	0.12	0.22	0.23	0.17	0.15	0.12	0.21	0.15
23	0.00	0.00	0.00	0.00	0.13	0.22	0.24	0.17	0.13	0.13	0.20	0.15
24	0.00	0.00	0.00	0.00	0.14	0.22	0.24	0.17	0.14	0.12	0.17	0.15
25	0.00	0.00	0.00	0.00	0.14	0.24	0.24	0.18	0.14	0.11	0.20	0.16
26	0.00	0.00	0.00	0.00	0.14	0.24	0.23	0.17	0.14	0.12	0.22	0.16
27	0.00	0.00	0.00	0.00	0.14	0.24	0.21	0.16	0.14	0.12	0.23	0.15
28	0.00	0.00	0.00	0.00	0.16	0.24	0.21	0.16	0.14	0.11	0.22	0.14
29	0.00	0.00	0.00	0.00	---	0.24	0.20	0.15	0.14	0.13	0.21	0.14
30	0.00	0.00	0.00	0.00	---	0.24	0.20	0.16	0.14	0.13	0.21	0.14
31	0.00	---	0.00	0.00	---	0.24	---	0.17	---	0.12	0.21	---
TOTAL	0.00	0.00	0.01	0.00	27.75	7.54	6.98	5.82	4.88	4.18	4.92	5.72
MEAN	0.000	0.000	0.000	0.000	0.99	0.24	0.23	0.19	0.16	0.13	0.16	0.19
MAX	0.00	0.00	0.01	0.00	18	1.5	0.25	0.22	0.20	0.17	0.23	0.23
MIN	0.00	0.00	0.00	0.00	0.00	0.16	0.20	0.15	0.13	0.11	0.10	0.14
AC-FT	0.00	0.00	0.02	0.00	55	15	14	12	9.7	8.3	9.8	11

e Estimated.

10263665 PALLETT CREEK AT BIG ROCK CREEK, NEAR VALYERMO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.000	0.000	0.32	0.31	0.75	0.37	0.34	0.25	0.14	0.068	0.079	0.095
MAX	0.000	0.000	0.65	0.63	0.99	0.50	0.44	0.31	0.16	0.13	0.16	0.19
(WY)	2003	2003	2002	2002	2003	2002	2002	2002	2003	2003	2003	2003
MIN	0.000	0.000	0.000	0.000	0.52	0.24	0.23	0.19	0.11	0.002	0.000	0.000
(WY)	2003	2003	2003	2003	2002	2003	2003	2003	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2002 - 2003	
ANNUAL TOTAL	75.42		67.80			
ANNUAL MEAN	0.21		0.19		0.19	
HIGHEST ANNUAL MEAN					0.19 2003	
LOWEST ANNUAL MEAN					0.19 2003	
HIGHEST DAILY MEAN	0.72	Jan 1	18	Feb 12	18	Feb 12 2003
LOWEST DAILY MEAN	0.00	Jul 5	0.00	Oct 1	0.00	Jul 5 2002
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 5	0.00	Oct 1	0.00	Jul 5 2002
MAXIMUM PEAK FLOW			65	Feb 12	65	Feb 12 2003
MAXIMUM PEAK STAGE			4.80	Feb 12	4.80	Feb 12 2003
ANNUAL RUNOFF (AC-FT)	150		134		135	
10 PERCENT EXCEEDS	0.53		0.23		0.23	
50 PERCENT EXCEEDS	0.01		0.14		0.14	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 10264000 LITTLE ROCK CREEK ABOVE LITTLE ROCK RESERVOIR, NEAR LITTLEROCK, CA

LOCATION.—Lat 34° 27' 50", long 118° 01' 05", in SW 1/4 NE 1/4 sec.3, T.4 N., R.11 W., Los Angeles County, Hydrologic Unit 18090206, on right bank, 0.3 mi upstream from Santiago Canyon Creek, 0.4 mi upstream from Little Rock Reservoir, and 4.6 mi south of Littlerock.

DRAINAGE AREA.—49.0 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1930 to February 1938, May to September 1938, April 1939 to September 1977, October 1978 to September 1979, January 2002 to current year. Prior to January 2002, published as "Little Rock Creek near Little Rock".

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 3,310 ft above NAVD of 1988, from topographic map. Prior to May 1943, at site 400 ft downstream at different datum. From May 1943 to September 1977 and October 1978 to September 1979, at site 100 ft upstream at different datum. Records prior to January 2002 were furnished by the Los Angeles County Department of Public Works and reviewed by the U.S. Geological Survey.

REMARKS.—Records good. No regulation or diversion upstream from station. This station is designated by the Los Angeles County Department of Public Works as station L1-R.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,900 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 14.40 ft, site and datum then in use, from rating curve extended above 750 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; maximum gage height, 15.62 ft, Feb. 12, 2003; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 17,000 ft<sup>3</sup>/s, estimated, Mar. 2, 1938, gage height unknown.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended above 275 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	1415	3,720	15.62	Apr. 14	1930	139	11.14
Mar. 16	0345	533	12.69	May 3	1515	115	10.93

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	2.2	1.2	19	13	20	7.4	0.83	0.00	0.00
2	0.00	0.00	0.00	2.0	1.2	18	12	19	6.8	0.79	0.00	0.00
3	0.00	0.00	0.00	2.0	1.2	17	12	60	6.3	0.75	0.00	0.00
4	0.00	0.00	0.00	2.1	1.1	16	11	67	6.0	0.72	0.00	0.00
5	0.00	0.00	0.00	2.5	1.1	16	11	54	5.6	0.69	0.00	0.00
6	0.00	0.00	0.00	2.8	1.1	15	11	47	5.1	0.66	0.00	0.00
7	0.00	0.00	0.00	2.7	1.1	15	10	43	4.7	0.63	0.00	0.00
8	0.00	0.00	0.00	2.7	1.2	15	9.6	38	4.3	0.61	0.00	0.00
9	0.00	0.00	0.00	2.6	1.3	15	9.2	34	4.0	0.58	0.00	0.00
10	0.00	0.00	0.00	2.4	1.3	15	8.7	30	3.8	0.55	0.00	0.00
11	0.00	0.00	0.00	2.1	2.2	14	8.3	28	3.7	0.54	0.00	0.00
12	0.00	0.00	0.00	2.0	1030	14	8.0	26	3.6	0.50	0.00	0.00
13	0.00	0.00	0.00	1.8	451	14	8.3	24	3.4	0.49	0.00	0.00
14	0.00	0.00	0.00	1.7	165	14	60	22	3.2	0.45	0.00	0.00
15	0.00	0.00	0.00	1.6	68	57	69	21	2.8	0.42	0.00	0.00
16	0.00	0.00	0.00	1.4	41	312	58	20	2.5	0.39	0.00	0.00
17	0.00	0.00	0.00	1.4	31	123	50	18	2.3	0.36	0.00	0.00
18	0.00	0.00	0.00	1.3	24	67	42	18	2.0	0.33	0.00	0.00
19	0.00	0.00	0.26	1.2	20	49	38	17	2.0	0.30	0.00	0.00
20	0.00	0.00	2.6	1.2	19	39	37	16	2.0	0.27	0.00	0.00
21	0.00	0.00	2.1	1.2	18	32	35	15	2.1	0.25	0.00	0.00
22	0.00	0.00	1.7	1.2	17	28	33	14	2.0	0.22	0.00	0.00
23	0.00	0.00	1.4	1.2	15	25	30	13	1.9	0.19	0.00	0.00
24	0.00	0.00	1.2	1.2	14	23	28	13	1.8	0.15	0.00	0.00
25	0.00	0.00	1.1	1.2	20	21	28	12	1.7	0.11	0.00	0.00
26	0.00	0.00	1.1	1.2	20	19	26	11	1.5	0.08	0.00	0.00
27	0.00	0.00	1.1	1.2	20	18	24	11	1.3	0.07	0.00	0.00
28	0.00	0.00	1.2	1.2	20	16	23	9.8	1.1	0.05	0.00	0.00
29	0.00	0.00	1.3	1.2	---	15	22	9.0	1.0	0.03	0.00	0.00
30	0.00	0.00	2.6	1.2	---	14	21	8.4	0.91	0.04	0.00	0.00
31	0.00	---	2.7	1.2	---	14	---	7.9	---	0.03	0.00	---
TOTAL	0.00	0.00	20.36	52.9	2007.0	1089	756.1	746.1	96.81	12.08	0.00	0.00
MEAN	0.000	0.000	0.66	1.71	71.7	35.1	25.2	24.1	3.23	0.39	0.000	0.000
MAX	0.00	0.00	2.7	2.8	1030	312	69	67	7.4	0.83	0.00	0.00
MIN	0.00	0.00	0.00	1.2	1.1	14	8.0	7.9	0.91	0.03	0.00	0.00
AC-FT	0.00	0.00	40	105	3980	2160	1500	1480	192	24	0.00	0.00

10264000 LITTLE ROCK CREEK ABOVE LITTLE ROCK RESERVOIR, NEAR LITTLEROCK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.59	7.84	16.5	20.3	41.8	39.4	38.3	19.4	4.63	1.14	0.41	0.89
MAX	4.91	172	132	192	267	253	179	105	22.4	6.51	3.89	23.5
(WY)	1935	1966	1947	1969	1941	1941	1958	1941	1944	1944	1969	1939
MIN	0.000	0.000	0.000	0.73	1.13	1.45	0.83	0.45	0.012	0.000	0.000	0.000
(WY)	1931	1932	1951	1951	1951	2002	2002	2002	2002	1934	1931	1931

SUMMARY STATISTICS

FOR 2003 WATER YEAR

WATER YEARS 1931 - 2003

ANNUAL TOTAL	4780.35		
ANNUAL MEAN	13.1		16.1
HIGHEST ANNUAL MEAN			71.3
LOWEST ANNUAL MEAN			0.60
HIGHEST DAILY MEAN	1030	Feb 12	2730
LOWEST DAILY MEAN	0.00	Oct 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 1	0.00
MAXIMUM PEAK FLOW	3720	Feb 12	5900
MAXIMUM PEAK STAGE	15.62	Feb 12	15.62
ANNUAL RUNOFF (AC-FT)	9480		11650
10 PERCENT EXCEEDS	26		35
50 PERCENT EXCEEDS	1.2		2.6
90 PERCENT EXCEEDS	0.00		0.00

## 10264100 SANTIAGO CANYON CREEK ABOVE LITTLE ROCK CREEK, NEAR LITTLE ROCK, CA

LOCATION.—Lat 34° 28' 02", long 118° 01' 17", in NE 1/4 NW 1/4 sec.3, T.4 N., R.11 W., Los Angeles County, Hydrologic Unit 18090206, on right bank, 750 ft upstream from mouth, and 4.3 mi south of Littlerock.

DRAINAGE AREA.—11.3 mi<sup>2</sup>.

PERIOD OF RECORD.—January 2002 to current year.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 3,300 ft above NAVD of 1988, from topographic map.

REMARKS.—Records good. No regulation or diversion upstream from station. This station is designated by the Los Angeles County Department of Public Works as station F125-R.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 52 ft<sup>3</sup>/s, Feb. 12, 2003, gage height, 2.84 ft, from rating curve extended above 12.8 ft<sup>3</sup>/s; no flow for several months in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 75 ft<sup>3</sup>/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	1915	52	2.84

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.25	0.48	0.53	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.20	0.45	0.50	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.21	0.42	1.5	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.21	0.43	1.7	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.19	0.41	1.2	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.19	0.40	1.0	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.20	0.37	0.91	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.17	0.33	0.82	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.17	0.35	0.74	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.18	0.33	0.67	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.18	0.29	0.60	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	13	0.17	0.28	0.53	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	9.4	0.15	0.30	0.49	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	3.1	0.15	2.2	0.46	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	1.2	1.3	3.8	0.42	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.62	11	2.7	0.34	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.36	5.9	2.0	0.31	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.20	3.5	1.6	0.28	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.14	2.5	1.3	0.22	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.14	1.9	1.2	0.16	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.12	1.5	1.0	0.09	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.11	1.3	0.95	0.05	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.10	1.2	0.85	0.01	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.09	1.0	0.79	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.35	0.88	0.71	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.39	0.82	0.66	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.32	0.78	0.59	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.28	0.61	0.57	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.51	0.56	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.50	0.53	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.52	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	29.92	38.34	26.85	13.53	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	1.07	1.24	0.90	0.44	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	13	11	3.8	1.7	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.15	0.28	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	59	76	53	27	0.00	0.00	0.00	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

MEAN	0.000	0.000	0.000	0.000	0.53	0.62	0.45	0.22	0.000	0.000	0.000	0.000
MAX	0.000	0.000	0.000	0.000	1.07	1.24	0.90	0.44	0.000	0.000	0.000	0.000
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2002	2002	2002	2002
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	2003	2003	2003	2003	2002	2002	2002	2002	2002	2002	2002	2002

## SUMMARY STATISTICS

## FOR 2003 WATER YEAR

## WATER YEARS 2002 - 2003

ANNUAL TOTAL	108.64	
ANNUAL MEAN	0.30	0.30
HIGHEST ANNUAL MEAN		0.30
LOWEST ANNUAL MEAN		0.30
HIGHEST DAILY MEAN	13	13
LOWEST DAILY MEAN	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00
MAXIMUM PEAK FLOW	52	52
MAXIMUM PEAK STAGE	2.84	2.84
ANNUAL RUNOFF (AC-FT)	215	216
10 PERCENT EXCEEDS	0.69	0.69
50 PERCENT EXCEEDS	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00



10264120 LITTLE ROCK RESERVOIR NEAR LITTLE ROCK, CA

LOCATION.—Lat 34° 29' 07", long 118° 01' 20", in SW 1/4 SW 1/4 sec.27, T.5 N., R.11 W., Los Angeles County, Hydrologic Unit 18090206, 2.9 mi southwest of Littlerock, and 8.2 mi southeast of Palmdale.

DRAINAGE AREA.—63.7 mi<sup>2</sup>.

PERIOD OF RECORD.—October 2001 to current year.

CHEMICAL DATA.—October 2001 to current year.

REMARKS.—Oct. 24, 2002, sample was a composite from 1.0, 3.0, and 5.0 meters in depth.

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

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	pH, unfltrd std (00400)	Specif. conduc-tance, uS/cm 25 degC (00095)	Temper-ature, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)
OCT											
24...	1311	7.90	.10	676	7.7	88	8.4	487	16.0		
24...	1312	7.90	1.0	676	6.9	79	8.4	487	15.5		
24...	1313	7.90	2.0	676	6.0	69	8.3	488	15.5		
24...	1314	7.90	3.0	676	5.8	64	8.3	488	15.0		
24...	1315	7.90	4.0	676	4.5	51	8.2	491	15.0		
24...	1316	7.90	5.0	676	5.0	56	8.3	488	15.0		
24...	1318	7.90	6.0	676	5.2	58	8.3	488	15.0		
24...	1319	7.90	7.0	676	5.0	55	8.2	489	14.5		
MAR											
20...	1020	18.5	.10	680	8.2	84	7.7	185	11.0		
20...	1021	18.5	1.0	680	7.8	78	7.6	185	10.5		
20...	1022	18.5	2.0	680	7.7	78	7.6	185	10.5		
20...	1023	18.5	3.0	680	7.6	77	7.6	185	10.5		
20...	1024	18.5	4.0	680	7.6	77	7.6	186	10.5		
20...	1025	18.5	5.0	680	6.3	61	7.4	186	8.5		
20...	1026	18.5	6.0	680	5.0	48	7.3	187	8.5		
20...	1027	18.5	7.0	680	4.5	43	7.2	188	8.5		
20...	1028	18.5	8.0	680	4.0	38	7.2	191	8.5		
20...	1029	18.5	9.0	680	3.7	35	7.2	193	8.0		
20...	1030	18.5	10.0	680	3.7	35	7.2	191	8.0		
20...	1031	18.5	11.0	680	3.6	34	7.2	194	8.0		
20...	1032	18.5	12.0	680	3.5	33	7.2	195	8.0		
20...	1033	18.5	13.0	680	3.2	31	7.2	197	8.0		
20...	1034	18.5	14.0	680	3.2	31	7.2	197	8.0		
20...	1035	18.5	15.0	680	2.8	27	7.1	198	8.0		
20...	1036	18.5	16.0	680	2.9	27	7.1	198	8.0		

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	pH, unfltrd std (00400)	Specif. conduc-tance, uS/cm 25 degC (00095)	Temper-ature, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium water, fltrd, mg/L (00925)	Potas-sium, water, fltrd, mg/L (00935)	
OCT												
24...	1330	7.90	--	676	5.8	64	8.3	488	15.0	35.2	19.6	7.35
MAR												
20...	1040	18.5	1.0	680	7.8	78	7.6	185	10.5	19.7	5.60	2.91
20...	1045	18.5	5.0	680	6.3	61	7.4	186	8.5	19.7	5.52	3.10
20...	1050	18.5	16.0	680	2.9	27	7.1	198	8.0	20.3	5.90	3.46

Date	Time	Chlor-ide, water, fltrd, mg/L (00930)	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)	Nitrite + nitrate, mg/L as N (00631)	Nitrite water, mg/L as N (00613)	Fecal coli-form, M-FC 0.7u MF 100 mL (31625)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Mangan-ese, water, fltrd, ug/L (01056)
OCT												
24...	39.8	10.6	.47	1.4	33.5	305	<.022	<.002	K2	100	15	e1.1
MAR												
20...	10.1	2.75	.17	11.9	13.2	137	.183	.004	K6	30	45	9.6
20...	10.1	2.86	.17	11.5	13.4	133	.216	.005	--	30	53	9.6
20...	10.8	4.12	.18	10.9	13.7	137	.159	.007	--	30	83	129

< Actual value is known to be less than the value shown.  
 K Results based on colony count outside the acceptance range.  
 e Estimated.

## 10264682 MESCAL CREEK NEAR PINON HILLS, CA

LOCATION.—Lat 34° 25' 32", long 117° 42' 43", in NE 1/4 NE 1/4 sec.21, T.4 N., R.8 W., Los Angeles County, Hydrologic Unit 18090206, on left bank, 75 ft east of Mescal Canyon Motorway, 2.7 mi south of Fort Tejon Road, and 3.8 mi southwest of Pinon Hills.

DRAINAGE AREA.—5.41 mi<sup>2</sup>.

PERIOD OF RECORD.—October 2001 to current year.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 4,800 ft above NAVD of 1988, from topographic map.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Slight regulation of low flow by Jackson Lake, managed by the U.S. Forest Service for recreational use. One small diversion upstream from station for domestic use. This station is designated by the Los Angeles County Department of Public Works as station F395-R.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 247 ft<sup>3</sup>/s, Sept. 3, 2003, gage height, 4.66 ft, from rating curve extended above 3.8 ft<sup>3</sup>/s on basis of slope-conveyance and critical depth studies; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 15 ft<sup>3</sup>/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Sept. 3	1315	247	4.66

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.22	0.00	e0.31	e0.17	0.04	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.22	0.00	e0.27	e0.17	0.04	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.24	0.00	e0.50	e0.15	0.03	0.00	20
4	0.00	0.00	0.00	0.00	0.00	0.21	0.00	e0.30	0.20	0.02	0.00	e0.15
5	0.00	0.00	0.00	0.00	0.00	0.20	0.00	e0.21	0.19	0.01	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.12	0.00	e0.15	0.18	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.12	0.00	e0.14	0.17	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.13	0.00	e0.15	0.16	0.03	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.16	0.00	e0.15	0.15	0.05	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.16	0.00	e0.16	0.15	0.07	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.14	0.00	e0.15	0.15	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	4.4	0.07	0.00	e0.15	0.15	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	3.9	0.08	0.00	e0.14	0.15	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	e1.4	0.12	0.00	e0.15	0.14	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	e0.85	1.2	0.00	e0.15	0.14	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	e0.40	6.6	0.00	e0.15	0.14	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	e0.30	e3.0	0.00	e0.16	0.14	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	e0.27	e2.3	0.13	e0.16	0.13	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.28	1.9	0.26	e0.16	0.13	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.31	1.2	0.17	e0.16	0.13	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.28	1.1	0.03	e0.15	0.13	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.24	1.1	0.00	e0.15	0.12	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.24	0.68	0.00	e0.15	0.12	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.24	0.00	0.00	e0.15	0.12	0.00	0.08	0.00
25	0.00	0.00	0.00	0.00	0.24	0.00	0.00	e0.14	0.09	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.24	0.00	0.15	e0.15	0.09	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.24	0.00	0.56	e0.15	0.08	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.36	0.00	0.70	e0.14	0.06	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	e0.45	e0.15	0.05	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	e0.36	e0.15	0.05	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	e0.16	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	14.19	21.27	2.81	5.51	4.00	0.29	0.08	20.15
MEAN	0.000	0.000	0.000	0.000	0.51	0.69	0.094	0.18	0.13	0.009	0.003	0.67
MAX	0.00	0.00	0.00	0.00	4.4	6.6	0.70	0.50	0.20	0.07	0.08	20
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	28	42	5.6	11	7.9	0.6	0.2	40

e Estimated.

10264682 MESCAL CREEK NEAR PINON HILLS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.000	0.009	0.000	0.000	0.25	0.34	0.047	0.089	0.067	0.005	0.001	0.34
MAX	0.000	0.017	0.000	0.000	0.51	0.69	0.094	0.18	0.13	0.009	0.003	0.67
(WY)	2003	2002	2002	2002	2003	2003	2003	2003	2003	2003	2003	2003
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	2003	2003	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 2002 - 2003
ANNUAL TOTAL	0.00	68.30	
ANNUAL MEAN	0.000	0.19	0.19
HIGHEST ANNUAL MEAN			0.19 2003
LOWEST ANNUAL MEAN			0.19 2003
HIGHEST DAILY MEAN	0.00 Jan 1	20 Sep 3	20 Sep 3 2003
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Oct 17 2001
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Oct 17 2001
MAXIMUM PEAK FLOW		247 Sep 3	247 Sep 3 2003
MAXIMUM PEAK STAGE		4.66 Sep 3	4.66 Sep 3 2003
ANNUAL RUNOFF (AC-FT)	0.00	135	136
10 PERCENT EXCEEDS	0.00	0.24	0.24
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

## 10265125 MAMMOTH CREEK AT TWIN LAKES, NEAR MAMMOTH LAKES, CA

LOCATION.—Lat 37° 37' 26", long 119° 00' 17", in SW 1/4 SW 1/4 sec.4, T.4 S., R.27 E., Mono County, Hydrologic Unit 18090102, 2.7 mi southwest of Mammoth Lakes, and 19.1 mi west of Tom's Place.

DRAINAGE AREA.—10.6 mi<sup>2</sup>.

PERIOD OF RECORD.—August 2001 to current year.

CHEMICAL DATA.—August 2001 to current year.

SEDIMENT DATA.—August 2001 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd, 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)
JAN									
08...	1510	5.5	<1.0	552	7.0	67	6.9	148	.5
APR									
22...	1630	8.6	1.3	544	9.5	95	6.9	147	1.5
JUL									
23...	1020	21	2.8	563	8.0	117	7.4	65	19.0
Date		Residue on Chloride, water, fltrd, mg/L (00940)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L (00665)	Suspended sediment concentration, mg/L (80154)	Suspended sediment load, tons/d (80155)
JAN									
08...	e.13	95	.14	<.022	<.008	<.007	.02	2	.03
APR									
22...	.21	106	.14	<.022	<.008	e.005	.034	1	.02
JUL									
23...	e.17	38	.16	<.022	<.008	<.007	.016	2	.11

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

## 10265130 MAMMOTH CREEK AT HIGHWAY 395, NEAR MAMMOTH LAKES, CA

LOCATION.—Lat 37° 38' 17", long 118° 54' 28", in SE 1/4 SE 1/4 sec.32, T.3 S., R.28 E., [Mono County](#), Hydrologic Unit 18090102, at Highway 395 southbound bridge.

DRAINAGE AREA.—33.8 mi<sup>2</sup>.

PERIOD OF RECORD.—August 2001 to current year. Water years 1987–93 published in U.S. Geological Survey Open-File Report 96-382. Water years 1994–96 published in U.S. Geological Survey Open-File Report 00-230. Unpublished data for water years 1997–2000 in the files of the U.S. Geological Survey.

CHEMICAL DATA.—August 2001 to current year.

SEDIMENT DATA.—August 2001 to current year.

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat 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)
JAN 08...	1320	7.3	<1.0	582	10.8	99	8.2	165	.5
APR 22...	1030	11	2.6	575	11.1	102	8.3	163	.5
JUL 23...	1215	23	3.7	591	7.8	104	7.6	73	16.5

Date	Chloride, fltrd, mg/L (00940)	Residue on evap. at 180degC, wat flt mg/L (70300)	Ammonia + org-N, unfltrd mg/L as N (00625)	Nitrite + nitrate, fltrd, mg/L as N (00631)	Nitrite, fltrd, mg/L as N (00613)	Orthophosphate, fltrd, mg/L as P (00671)	Phosphorus, unfltrd mg/L (00665)	Suspended sediment concentration, mg/L (80154)	Suspended sediment load, tons/d (80155)
JAN 08...	.20	114	.05	.036	<.002	.040	.048	1	.02
APR 22...	.36	119	.14	e.011	<.002	.040	.065	7	.22
JUL 23...	.22	50	.14	.026	<.002	.017	.038	8	.49

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

e Estimated.

## 10265150 HOT CREEK AT FLUME, NEAR MAMMOTH, CA

LOCATION.—Lat 37° 40'08", long 118° 49'00", in SW 1/4 SE 1/4 sec.19, T.3 S., R.29 E., Mono County, Hydrologic Unit 18090102, on right bank, 2.6 mi north of Whitmore Hot Springs, and 8.4 mi east of Mammoth.

DRAINAGE AREA.—68.3 mi<sup>2</sup>.

PERIOD OF RECORD.—November 1982 to current year. Daily discharges for 1986 published in WRIR 89-4033 as "Hot Creek Flume."

SPECIFIC CONDUCTANCE: Water years 1983–88.

WATER TEMPERATURE: Water years 1983–88.

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 6,950 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good. Minor diversions for domestic and agricultural use upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 433 ft<sup>3</sup>/s, Jan. 2, 1997, gage height, 4.38 ft; minimum daily, 29 ft<sup>3</sup>/s, several days in 1992.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 80 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)
Nov. 8	2215	128	2.12	June 5	0715	133	2.17

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	41	44	43	46	41	43	40	e127	69	60	46
2	40	42	43	43	44	41	43	40	e125	66	60	45
3	40	42	43	44	41	41	42	41	122	63	58	46
4	40	42	43	43	42	41	42	42	125	66	57	46
5	40	42	44	44	41	42	41	41	131	65	56	44
6	39	43	44	43	41	42	41	41	126	62	55	42
7	39	44	44	43	42	43	41	41	120	61	55	42
8	39	81	42	43	39	43	41	42	116	62	54	43
9	39	87	42	44	40	44	41	42	117	61	53	43
10	39	53	43	44	41	45	42	41	122	60	52	43
11	39	49	42	44	42	45	42	41	121	58	50	43
12	38	48	42	44	42	46	42	41	113	57	49	42
13	39	48	43	44	43	46	43	42	102	56	49	42
14	39	48	45	44	44	44	45	44	102	56	49	42
15	39	47	46	43	42	48	44	47	102	56	48	42
16	39	48	42	44	43	44	43	43	103	55	48	42
17	39	47	37	44	43	42	43	40	103	55	48	41
18	39	46	38	44	42	42	42	40	102	55	48	41
19	39	46	41	44	42	41	42	43	98	56	48	40
20	39	46	41	44	42	41	42	43	98	56	47	41
21	39	46	40	44	42	41	42	43	92	56	48	41
22	39	46	41	e44	42	41	43	45	90	55	49	41
23	40	46	41	e44	42	42	42	47	87	58	47	41
24	40	46	41	e44	42	42	41	54	82	63	46	41
25	40	45	41	e44	43	42	39	62	70	64	46	41
26	41	44	41	e44	42	43	39	85	65	63	47	41
27	41	44	42	e44	42	43	39	101	65	62	47	41
28	41	43	42	e44	42	42	40	101	68	60	47	41
29	40	44	42	44	---	42	40	110	68	61	47	41
30	41	44	42	44	---	42	40	e130	69	61	46	41
31	41	---	42	44	---	43	---	e129	---	61	46	---
TOTAL	1226	1438	1304	1357	1179	1325	1250	1742	3031	1859	1560	1266
MEAN	39.5	47.9	42.1	43.8	42.1	42.7	41.7	56.2	101	60.0	50.3	42.2
MAX	41	87	46	44	46	48	45	130	131	69	60	46
MIN	38	41	37	43	39	41	39	40	65	55	46	40
AC-FT	2430	2850	2590	2690	2340	2630	2480	3460	6010	3690	3090	2510

e Estimated.

## 10265150 HOT CREEK AT FLUME, NEAR MAMMOTH, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	45.7	45.3	42.6	45.6	43.4	44.6	47.3	68.8	96.1	82.4	60.8	51.5
MAX	68.3	64.6	57.7	94.7	58.2	55.2	60.4	113	159	214	135	92.7
(WY)	1999	1999	1996	1997	1997	1997	1996	1996	1995	1995	1995	1995
MIN	31.8	32.4	29.6	31.9	32.7	35.0	35.4	38.4	44.5	38.4	35.6	32.6
(WY)	1995	1995	1993	1993	1993	1992	1992	1991	1992	1990	1994	1994

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	16628		18537			
ANNUAL MEAN	45.6		50.8		56.2	
HIGHEST ANNUAL MEAN					79.1 1995	
LOWEST ANNUAL MEAN					37.5 1992	
HIGHEST DAILY MEAN	112	Jun 8	131	Jun 5	309	Jan 3 1997
LOWEST DAILY MEAN	37	Jan 23	37	Dec 17	29	Nov 23 1992
ANNUAL SEVEN-DAY MINIMUM	38	Jan 17	39	Oct 6	29	Dec 8 1992
MAXIMUM PEAK FLOW			133	Jun 5	433	Jan 2 1997
MAXIMUM PEAK STAGE			2.17	Jun 5	4.38	Jan 2 1997
ANNUAL RUNOFF (AC-FT)	32980		36770		40740	
10 PERCENT EXCEEDS	56		68		90	
50 PERCENT EXCEEDS	42		43		47	
90 PERCENT EXCEEDS	39		40		34	

## 10265360 HILTON CREEK AT LAKE CROWLEY, CA

LOCATION.—Lat 37° 34' 46", long 118° 44' 26", in SW 1/4 SE 1/4 sec.23, T.4 S., R.29 E., Mono County, Hydrologic Unit 18090102, 6.5 mi southeast of Tom's Place, and 10.7 mi east of Mammoth Lakes.

DRAINAGE AREA.—13.0 mi<sup>2</sup>.

PERIOD OF RECORD.—August 2001 to current year.

CHEMICAL DATA: August 2001 to current year.

SEDIMENT DATA: November 2001 to current year.

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

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)
JAN									
08...	1130	2.1	e1.1	594	11.4	103	7.5	34	1.0
APR									
23...	1420	3.2	3.1	592	9.6	120	7.2	36	14.0
JUL									
24...	1420	9.4	3.9	598	7.5	107	7.5	26	20.5
Date		Residue on Chloride, water, fltrd, mg/L (00940)	Ammonia + org-N, water, unfltrd, mg/L as N (70300)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L (00665)	Suspended sediment concentration, mg/L (80154)	Suspended sediment load, tons/d (80155)
JAN									
08...	<.20	23	e.10	.025	<.002	<.007	.004	2	.01
APR									
23...	e.14	41	.16	<.022	<.002	<.007	.019	12	.10
JUL									
24...	e.18	21	.17	<.022	<.002	<.007	.015	10	.25

e Estimated.

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



## 10265702 ROCK CREEK ABOVE DIVERSION, NEAR TOM'S PLACE, CA

LOCATION.—Lat 37° 33' 00", long 118° 41' 08", unsurveyed, T.5 S., R.30 E., Mono County, Hydrologic Unit 18090102, 0.8 mi southwest of Tom's Place and 16.5 mi southeast of Mammoth Lakes.

DRAINAGE AREA.—35.6 mi<sup>2</sup>.

PERIOD OF RECORD.—August 2001 to current year.

CHEMICAL DATA: August 2001 to current year.

SEDIMENT DATA: November 2001 to current year.

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

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 (00095)	Temperature, water, deg C (00010)
JAN									
08...	0935	11	1.7	582	11.2	104	7.8	51	1.5
APR									
23...	1315	11	1.7	575	9.6	102	7.0	49	6.0
JUL									
24...	1245	33	2.8	586	8.2	108	7.2	23	16.0
Date		Residue on Chloride, water, fltrd, mg/L (00940)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration, mg/L (80154)	Suspended sediment load, tons/d (80155)
JAN									
08...	.50	42	.10	.028	<.002	<.007	.006	<.5	<.01
APR									
23...	.32	47	.11	<.022	<.002	<.007	.008	2	.06
JUL									
24...	e.17	20	.08	<.022	<.002	<.007	.007	6	.53

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

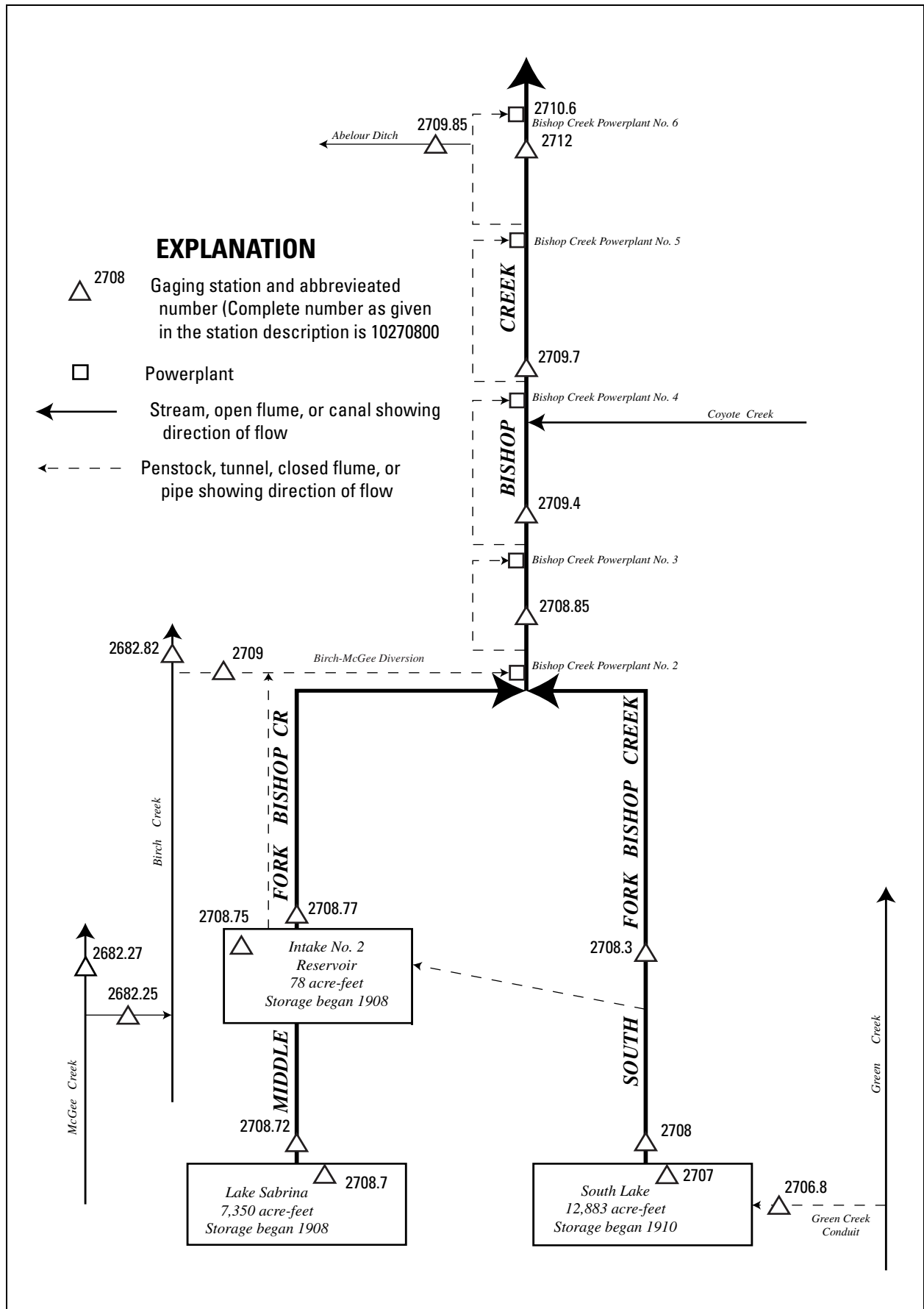


Figure 15. Diversions and storage in Bishop Creek Basin.

## 10268225 MCGEE CREEK DIVERSION NEAR BISHOP, CA

LOCATION.—Lat 37° 16'32", long 118° 37'09", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on left bank, 5 ft downstream from outlet of diversion pipe, 80 ft upstream from tributary to Birch Creek, and 13.5 mi southwest of Bishop.

PERIOD OF RECORD.—October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder and Cipolletti weir. Elevation of gage is 8,630 ft above NGVD of 1929, from topographic map.

REMARKS.—Records not computed for the winter months. Flow limited by size of diversion pipe from McGee Creek. Water flows down Birch Creek and then is diverted to Bishop Creek Powerplant No. 2 Conduit via Birch–McGee Creek Diversion (station 10270900). See schematic diagram of [Bishop Creek 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. 1394.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	4.8	---	---	---	---	---	---	9.6	10	6.5	2.4
2	1.4	4.4	---	---	---	---	---	---	9.5	9.6	5.8	2.5
3	1.4	3.7	---	---	---	---	---	---	9.8	9.4	5.4	2.7
4	1.4	2.8	---	---	---	---	---	---	11	9.5	5.1	2.7
5	1.4	---	---	---	---	---	---	---	11	9.8	5.0	2.5
6	1.3	---	---	---	---	---	---	---	11	10	4.6	2.4
7	1.3	---	---	---	---	---	---	---	10	10	4.2	2.1
8	1.3	---	---	---	---	---	---	---	10	9.9	3.9	1.9
9	1.3	---	---	---	---	---	---	---	11	9.6	3.8	1.7
10	1.2	---	---	---	---	---	---	---	13	9.7	3.9	1.5
11	1.2	---	---	---	---	---	---	---	13	9.8	4.2	1.4
12	1.2	---	---	---	---	---	---	---	13	9.4	4.2	1.5
13	1.2	---	---	---	---	---	---	---	13	9.2	3.9	1.5
14	1.1	---	---	---	---	---	---	---	13	9.0	3.7	1.5
15	1.1	---	---	---	---	---	---	---	13	8.8	3.8	1.4
16	1.1	---	---	---	---	---	---	---	13	8.6	4.1	1.2
17	1.1	---	---	---	---	---	---	---	9.5	8.3	4.0	1.1
18	1.0	---	---	---	---	---	---	---	9.2	8.6	3.8	1.0
19	0.95	---	---	---	---	---	---	---	14	7.9	3.6	0.95
20	0.95	---	---	---	---	---	---	---	14	7.5	3.3	0.89
21	0.95	---	---	---	---	---	---	1.8	13	7.8	3.4	0.84
22	0.95	---	---	---	---	---	---	2.4	13	7.9	3.3	0.80
23	0.95	---	---	---	---	---	---	3.0	11	9.4	3.0	0.78
24	0.87	---	---	---	---	---	---	3.8	9.8	9.6	2.7	4.2
25	0.84	---	---	---	---	---	---	4.5	9.1	9.3	2.7	8.0
26	0.91	---	---	---	---	---	---	5.4	9.1	8.1	2.9	7.9
27	0.84	---	---	---	---	---	---	6.5	9.5	7.8	2.8	7.9
28	0.81	---	---	---	---	---	---	7.8	10	7.1	2.8	7.6
29	0.74	---	---	---	---	---	---	9.0	11	6.7	2.7	7.2
30	2.6	---	---	---	---	---	---	9.5	11	6.8	2.6	6.9
31	5.4	---	---	---	---	---	---	9.6	---	7.6	2.5	---
TOTAL	40.16	---	---	---	---	---	---	---	337.1	272.7	118.2	86.96
MEAN	1.30	---	---	---	---	---	---	---	11.2	8.80	3.81	2.90
MAX	5.4	---	---	---	---	---	---	---	14	10	6.5	8.0
MIN	0.74	---	---	---	---	---	---	---	9.1	6.7	2.5	0.78
AC-FT	80	---	---	---	---	---	---	---	669	541	234	172





## 10270680 GREEN CREEK CONDUIT OUTLET NEAR BISHOP, CA

LOCATION.—Lat 37° 10' 14", long 118° 33' 50", unsurveyed, T.9 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on right bank, 75 ft downstream from outlet of diversion pipe, 0.1 mi upstream from South Lake, and 16.2 mi southwest of Bishop.

PERIOD OF RECORD.—October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 9,800 ft above NGVD of 1929, from topographic map. Prior to June 2001, at same site at different datum.

REMARKS.—Records not computed for the winter months. Flow limited by size of diversion pipe from Green Creek. Water is used for power development downstream from South Lake. See schematic diagram of [Bishop Creek 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. 1394.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	---	---	---	---	---	---	---	1.2	1.3	0.67	0.04
2	0.00	---	---	---	---	---	---	---	1.2	1.2	0.66	0.04
3	0.00	---	---	---	---	---	---	---	1.2	1.1	0.66	0.11
4	0.00	---	---	---	---	---	---	---	4.1	1.1	0.61	0.10
5	0.00	---	---	---	---	---	---	---	5.5	1.1	0.54	0.08
6	0.00	---	---	---	---	---	---	---	5.2	1.0	0.44	0.06
7	0.00	---	---	---	---	---	---	---	5.0	1.0	0.34	0.04
8	0.00	---	---	---	---	---	---	---	4.8	1.0	0.28	0.02
9	0.00	---	---	---	---	---	---	---	4.5	0.98	0.24	0.01
10	0.00	---	---	---	---	---	---	---	4.4	0.85	0.19	---
11	0.00	---	---	---	---	---	---	---	4.3	0.80	0.16	---
12	0.00	---	---	---	---	---	---	---	4.2	0.77	0.13	---
13	0.00	---	---	---	---	---	---	---	3.9	0.71	0.13	---
14	0.00	---	---	---	---	---	---	---	3.8	0.71	0.11	---
15	0.00	---	---	---	---	---	---	---	3.7	0.69	0.11	---
16	0.00	---	---	---	---	---	---	---	3.7	0.66	0.12	---
17	0.00	---	---	---	---	---	---	---	3.4	0.63	0.11	---
18	0.00	---	---	---	---	---	---	---	3.1	0.67	0.09	---
19	0.00	---	---	---	---	---	---	---	2.9	0.67	0.07	---
20	0.00	---	---	---	---	---	---	0.57	2.9	0.70	0.07	---
21	0.00	---	---	---	---	---	---	0.89	2.6	0.63	0.07	---
22	0.00	---	---	---	---	---	---	1.1	2.4	0.57	0.08	---
23	0.00	---	---	---	---	---	---	1.3	2.1	0.69	0.06	---
24	0.00	---	---	---	---	---	---	1.3	1.9	0.70	0.04	---
25	0.00	---	---	---	---	---	---	1.4	1.7	0.76	0.03	---
26	0.00	---	---	---	---	---	---	1.5	1.5	0.71	0.14	---
27	0.00	---	---	---	---	---	---	1.9	1.3	0.76	0.15	---
28	---	---	---	---	---	---	---	1.6	1.3	0.71	0.09	---
29	---	---	---	---	---	---	---	1.3	1.3	0.65	0.07	---
30	---	---	---	---	---	---	---	1.2	1.3	0.58	0.06	---
31	---	---	---	---	---	---	---	1.2	---	0.58	0.05	---
TOTAL	---	---	---	---	---	---	---	---	90.4	24.98	6.57	---
MEAN	---	---	---	---	---	---	---	---	3.01	0.81	0.21	---
MAX	---	---	---	---	---	---	---	---	5.5	1.3	0.67	---
MIN	---	---	---	---	---	---	---	---	1.2	0.57	0.03	---
AC-FT	---	---	---	---	---	---	---	---	179	50	13	---

## 10270700 SOUTH LAKE NEAR BISHOP, CA

LOCATION.—Lat 37° 10'21", long 118° 33'52", unsurveyed, T.9 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, near spillway, at right abutment of Hillside Dam, on South Fork Bishop Creek, and 16.0 mi southwest of Bishop.

DRAINAGE AREA.—12.9 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Reservoir is formed on natural lake by rock-fill dam completed in 1910. Usable capacity, 12,883 acre-ft, between elevations 9,621.20 ft, invert of outlet tunnel, and 9,751.31 ft, crest of spillway. Water is received from Green Creek via Green Creek Conduit (station 10270680). Figures given represent usable contents. Water is used for power development downstream. See schematic diagram of Bishop Creek 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. 1394.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 13,038 acre-ft, Aug. 4, 1993, elevation, 9,752.21 ft; minimum, 280 acre-ft, Apr. 18–25, 1993, elevation unknown.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 12,500 acre-ft, Aug. 7–12, maximum elevation, 9,748.94 ft, Aug. 11; minimum, 2,040 acre-ft, May 14, elevation, 9,658.92 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Southern California Edison Co., dated Aug. 5, 1981)

9,621.2	0	9,650	1,493	9,690	4,533	9,730	9,392
9,630	417	9,670	2,820	9,710	6,654	9,756	13,704

## RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7130	5660	5010	4330	3790	3280	2840	2340	4900	10100	12200	11800
2	7060	5640	4960	4320	3770	3260	2820	2310	5180	10100	12300	11700
3	7000	5600	4920	4310	3750	3250	2810	2280	5480	10200	12400	11700
4	6930	5600	4880	4290	3730	3230	2790	2260	5760	10300	12400	11700
5	6860	5570	4830	4280	3700	3220	2780	2230	6020	10400	12400	11700
6	6790	5550	4760	4270	3670	3200	2760	2200	6260	10500	12400	11700
7	6730	5520	4720	4250	3660	3180	2750	2170	6500	10600	12500	11700
8	6660	5520	4680	4240	3640	3160	2740	2140	6740	10700	12500	11700
9	6590	5510	4660	4230	3620	3150	2720	2120	6960	10700	12500	11600
10	6510	5490	4640	4210	3610	3130	2710	2090	7170	10800	12500	11600
11	6430	5490	4620	4200	3580	3110	2700	2070	7370	10900	12500	11600
12	6360	5470	4600	4190	3570	3100	2680	2050	7570	10900	12500	11600
13	6290	5460	4580	4180	3560	3080	2680	2050	7740	11000	12400	11600
14	6230	5430	4560	4160	3540	3060	2660	2040	7930	11100	12400	11600
15	6150	5410	4540	4150	3520	3050	2650	2050	8120	11100	12400	11500
16	6120	5400	4540	4130	3500	3040	2630	2070	8310	11200	12400	11500
17	6100	5360	4520	4110	3490	3020	2620	2100	8480	11200	12400	11500
18	6070	5350	4520	4080	3470	3010	2600	2140	8650	11300	12300	11500
19	6040	5320	4500	4070	3450	3000	2580	2200	8820	11300	12300	11400
20	6010	5300	4500	4040	3430	2990	2560	2270	8970	11400	12300	11400
21	5980	5280	4490	4020	3420	2970	2550	2370	9110	11400	12200	11400
22	5960	5260	4470	4000	3400	2960	2530	2480	9230	11500	12200	11400
23	5930	5230	4450	3980	3390	2940	2520	2630	9320	11600	12200	11400
24	5910	5210	4440	3960	3370	2930	2500	2810	9400	11700	12100	11400
25	5880	5170	4430	3940	3350	2920	2490	3000	9480	11800	12100	11300
26	5850	5150	4420	3920	3330	2910	2470	3200	9560	11900	12000	11300
27	5820	5130	4400	3900	3310	2890	2450	3440	9640	12000	12000	11300
28	5800	5100	4380	3880	3300	2880	2430	3710	9740	12000	12000	11300
29	5770	5080	4360	3860	---	2860	2400	4020	9840	12100	11900	11200
30	5740	5060	4360	3840	---	2860	2370	4320	9960	12100	11900	11200
31	5720	---	4340	3820	---	2850	---	4620	---	12200	11800	---
MAX	7130	5660	5010	4330	3790	3280	2840	4620	9960	12200	12500	11800
MIN	5720	5060	4340	3820	3300	2850	2370	2040	4900	10100	11800	11200
a	9701.54	9695.24	9688.00	9682.20	9675.99	9670.37	9663.91	9690.89	9733.63	9747.33	9745.01	9741.35
b	-1510	-660	-720	-520	-520	-450	-480	+2250	+5340	+2240	-400	-600

CAL YR 2002 MAX 9150 MIN 3020 b -2940  
WTR YR 2003 MAX 12500 MIN 2040 b +3970

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

## 10270800 SOUTH FORK BISHOP CREEK BELOW SOUTH LAKE, NEAR BISHOP, CA

LOCATION.—Lat 37° 10'38", long 118° 33'44", unsurveyed, T.9 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on right bank, near weir on Weir Lake, 0.3 mi downstream from South Lake, and 15.7 mi southwest of Bishop.

DRAINAGE AREA.—13.4 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder and sharp-crested weir. Elevation of gage is 9,580 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow regulated by South Lake (station 10270700). Green Creek Conduit (station 10270680) diverts water into basin at South Lake. Water is used for power development downstream. See schematic diagram of [Bishop Creek 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. 1394.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 142 ft<sup>3</sup>/s, July 31, 1995, gage height, 1.44 ft; minimum daily, 6.7 ft<sup>3</sup>/s, Apr. 4, 1994.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	17	26	15	16	14	14	26	17	16	18	33
2	44	17	27	15	16	14	14	26	17	16	18	30
3	42	17	26	15	16	15	15	26	17	16	18	28
4	42	17	26	15	16	15	16	26	16	16	18	25
5	42	18	26	15	16	15	16	26	15	16	18	e22
6	42	18	39	15	16	15	16	26	15	16	18	e22
7	42	18	27	15	16	15	16	26	15	16	18	e22
8	42	19	20	15	16	15	16	25	16	16	19	e22
9	42	18	15	15	16	14	16	25	16	16	19	e21
10	42	18	15	15	16	14	16	25	16	16	19	21
11	42	18	15	14	16	14	16	25	17	16	21	21
12	42	18	15	16	16	14	16	25	17	16	24	21
13	42	18	15	16	16	14	16	25	17	16	29	21
14	42	18	15	16	16	14	18	e22	17	16	28	21
15	42	18	15	16	15	14	18	22	18	16	28	19
16	21	18	15	16	14	14	18	22	17	16	29	18
17	19	18	14	16	14	14	18	20	16	16	32	18
18	20	18	14	16	14	14	18	18	16	16	32	18
19	20	18	14	16	14	14	18	18	16	17	32	19
20	20	18	14	16	14	14	18	16	15	17	32	19
21	20	18	14	16	14	14	18	16	16	17	32	19
22	19	18	15	16	14	14	18	17	16	17	32	19
23	19	17	15	16	14	14	18	18	16	17	33	19
24	19	17	15	16	14	14	18	18	16	e18	39	19
25	18	17	15	16	14	14	17	19	16	e18	39	19
26	17	17	15	16	14	14	18	19	16	e18	39	19
27	17	17	15	16	14	14	19	18	16	e18	39	19
28	17	17	15	16	14	14	19	17	16	e18	39	19
29	18	17	15	16	---	14	23	17	16	e19	39	18
30	18	17	15	16	---	14	26	17	16	18	39	18
31	18	---	15	16	---	14	---	17	---	18	39	---
TOTAL	941	529	557	484	421	440	523	663	486	518	879	629
MEAN	30.4	17.6	18.0	15.6	15.0	14.2	17.4	21.4	16.2	16.7	28.4	21.0
MAX	51	19	39	16	16	15	26	26	18	19	39	33
MIN	17	17	14	14	14	14	14	16	15	16	18	18
AC-FT	1870	1050	1100	960	835	873	1040	1320	964	1030	1740	1250

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	24.9	24.3	25.4	24.3	27.7	27.4	26.5	21.7	17.6	30.7	38.0	31.3	
MAX (WY)	41.6	41.1	44.1	40.0	54.2	61.6	57.4	36.7	28.8	61.4	87.7	47.6	
MIN (WY)	10.8	10.6	9.98	7.59	7.45	7.75	7.74	10.6	7.70	9.45	14.0	17.0	
	1991	1991	1991	1991	1991	1991	1992	1994	1991	1991	2002	2001	

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1991 - 2003	
ANNUAL TOTAL	8341		7070			
ANNUAL MEAN	22.9		19.4		26.7	
HIGHEST ANNUAL MEAN					38.7	
LOWEST ANNUAL MEAN					12.4	
HIGHEST DAILY MEAN	57		Sep 21		139	
LOWEST DAILY MEAN	13		Mar 13		6.7	
ANNUAL SEVEN-DAY MINIMUM	13		May 29		6.9	
MAXIMUM PEAK FLOW			56		142	
MAXIMUM PEAK STAGE			0.79		1.44	
ANNUAL RUNOFF (AC-FT)	16540		14020		19320	
10 PERCENT EXCEEDS	42		28		49	
50 PERCENT EXCEEDS	17		17		22	
90 PERCENT EXCEEDS	14		14		11	

e Estimated.



## 10270830 SOUTH FORK BISHOP CREEK BELOW SOUTH FORK DIVERSION DAM, NEAR BISHOP, CA

LOCATION.—Lat 37° 14'27", long 118° 33'52", in SE 1/4 NW 1/4 sec.22, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on left bank, at diversion dam and aqueduct, and 10.5 mi southwest of Bishop.

DRAINAGE AREA.—27.8 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1994 to September 2002 (low-flow records only), October 2002 to September 2003. Unpublished records prior to October 1994 available in files of Southern California Edison Co.

GAGE.—Acoustic-velocity meter. Elevation of gage is 7,130 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow regulated by South Lake (station 10270700). Most of the water is diverted by South Fork Diversion Dam to Intake No. 2 Reservoir (station 10270875) for power development downstream. South Fork Diversion Dam spill bypasses this station. See schematic diagram of Bishop Creek 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. 1394.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	7.8	7.5	7.6	7.7	7.5	7.5	11	11	11	11	11
2	11	7.6	7.5	7.6	7.7	7.6	7.5	11	11	11	11	11
3	11	7.5	7.5	7.6	7.7	7.5	7.5	11	11	11	11	11
4	11	7.6	7.5	7.6	7.7	7.6	7.5	11	11	11	11	11
5	11	7.6	7.5	7.5	7.6	7.6	7.5	11	11	11	11	10
6	11	7.6	7.6	7.5	7.9	7.6	7.4	11	11	11	11	10
7	11	7.6	7.5	7.5	7.8	7.6	7.4	11	11	11	11	10
8	11	7.6	7.6	7.5	7.6	7.6	7.4	11	11	11	11	11
9	11	7.6	7.7	7.5	7.6	7.6	7.4	11	11	11	11	11
10	11	7.6	7.7	7.5	7.5	7.6	7.5	11	11	11	11	11
11	11	7.5	7.6	7.5	7.6	7.6	7.5	11	11	11	11	11
12	11	7.6	7.6	7.5	7.6	7.6	7.5	11	11	11	11	11
13	11	7.6	7.5	7.5	7.6	7.6	7.4	11	11	11	11	11
14	11	7.6	7.6	7.5	7.6	7.6	7.5	11	11	11	10	11
15	11	7.6	7.5	7.5	7.6	7.5	7.4	11	11	11	10	11
16	11	7.6	7.2	7.6	7.6	7.5	7.5	11	11	11	10	11
17	11	7.6	7.6	7.7	7.6	7.5	7.4	11	11	11	10	11
18	11	7.6	7.6	7.6	7.6	7.6	7.5	11	11	11	10	11
19	11	7.6	7.6	7.6	7.6	7.6	7.4	11	11	11	10	11
20	11	7.6	7.6	7.5	7.6	7.7	7.4	11	11	11	10	11
21	11	7.6	7.6	7.5	7.6	7.7	7.5	11	11	11	10	11
22	11	e12	7.7	7.5	7.6	7.7	7.4	11	11	11	10	11
23	11	e25	7.6	7.5	7.6	7.7	7.5	11	11	11	10	11
24	11	e25	7.6	7.5	7.6	7.7	7.4	11	11	11	11	11
25	11	e12	7.6	7.5	7.6	7.6	9.6	11	11	11	11	11
26	11	7.6	7.6	7.5	7.6	7.6	11	11	11	11	11	11
27	11	7.6	7.6	7.5	7.6	7.6	11	11	11	11	11	11
28	11	7.6	7.6	7.5	7.6	7.6	11	11	11	11	11	11
29	11	7.5	7.6	7.6	---	7.6	11	11	11	11	11	11
30	11	7.5	7.6	7.7	---	7.6	11	11	11	11	11	11
31	11	---	7.5	7.7	---	7.6	---	11	---	11	11	---
TOTAL	341	271.4	234.6	233.9	213.6	235.6	243.5	341	330	341	331	327
MEAN	11.0	9.05	7.57	7.55	7.63	7.60	8.12	11.0	11.0	11.0	10.7	10.9
MAX	11	25	7.7	7.7	7.9	7.7	11	11	11	11	11	11
MIN	11	7.5	7.2	7.5	7.5	7.5	7.4	11	11	11	10	10
AC-FT	676	538	465	464	424	467	483	676	655	676	657	649

e Estimated.

## 10270870 LAKE SABRINA NEAR BISHOP, CA

LOCATION.—Lat 37° 12'44", long 118° 36'42", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, in valve house, at base of dam, on Middle Fork Bishop Creek, and 15.8 mi southwest of Bishop.

DRAINAGE AREA.—16.5 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Reservoir is formed on natural lake by rock-fill dam completed in 1908. Usable capacity, 7,350 acre-ft, between elevations 9,068.42 ft, invert of outlet, and 9,131.62 ft, crest of spillway. Figures given represent usable contents. Water is used for power development downstream. See schematic diagram of [Bishop Creek 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. 1394. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 7,598 acre-ft, July 10, 1995, elevation, 9,132.89 ft; no storage on several days in 1994 and 2000.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 7,450 acre-ft, June 19, elevation, 9,132.12; minimum, 979 acre-ft, May 13, elevation, 9,093.35 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Southern California Edison Co., dated Aug. 12, 1981)

9,068.42	0	9,080	15	9,100	1,926	9,120	5,196
9,070	1	9,090	558	9,110	3,501	9,135	7,912

## RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4450	4040	3900	3410	2890	2330	1870	1290	3860	7310	7370	6220
2	4440	4030	3880	3390	2870	2300	1860	1260	4160	7300	7360	6220
3	4440	4000	3840	3380	2850	2290	1850	1220	4490	7300	7340	6230
4	4440	3990	3810	3370	2830	2270	1820	1190	4790	7270	7310	6260
5	4430	3980	3790	3350	2810	2250	1800	1170	5060	7250	7270	6280
6	4410	3960	3730	3340	2790	2230	1770	1140	5310	7250	7200	6280
7	4400	3970	3700	3320	2760	2220	1750	1110	5540	7270	7140	6270
8	4390	4010	3670	3300	2740	2200	1740	1080	5780	7280	7080	6270
9	4380	4020	3660	3290	2720	2180	1710	1050	6010	7280	7030	6250
10	4370	4030	3640	3270	2700	2160	1700	1020	6200	7280	6970	6250
11	4370	4030	3620	3260	2680	2150	1700	998	6380	7280	6920	6230
12	4340	4040	3600	3250	2670	2130	1690	987	6580	7290	6860	6220
13	4330	4030	3590	3220	2660	2120	1680	979	6760	7290	6820	6190
14	4320	4030	3570	3200	2640	2100	1670	991	6930	7290	6760	6180
15	4310	4030	3560	3190	2620	2100	1660	1000	7110	7300	6720	6150
16	4290	4030	3570	3170	2610	2100	1650	1040	7270	7290	6680	6130
17	4290	4020	3560	3160	2580	2080	1630	1080	7390	7290	6650	6100
18	4260	4020	3550	3140	2560	2060	1600	1120	7440	7300	6610	6090
19	4250	4020	3550	3120	2530	2040	1590	1180	7450	7300	6580	6060
20	4230	4010	3540	3100	2510	2020	1560	1260	7440	7300	6540	6040
21	4220	4010	3540	3080	2490	2000	1540	1350	7410	7290	6520	6010
22	4210	3990	3540	3070	2470	1990	1520	1480	7390	7300	6490	5980
23	4190	3990	3510	3050	2440	1980	1490	1620	7350	7330	6470	5960
24	4170	3980	3500	3030	2420	1960	1470	1780	7310	7380	6430	5940
25	4160	3970	3480	3020	2400	1940	1450	1940	7260	7420	6400	5930
26	4140	3970	3460	3000	2380	1930	1430	2130	7260	7420	6380	5910
27	4120	3950	3450	2980	2360	1920	1410	2340	7280	7410	6370	5900
28	4110	3940	3440	2970	2340	1900	1390	2620	7290	7400	6340	5880
29	4100	3930	3440	2940	---	1890	1360	2940	7300	7380	6310	5870
30	4080	3930	3420	2930	---	1880	1320	3270	7320	7360	6270	5860
31	4060	---	3420	2910	---	1880	---	3580	---	7360	6240	---
MAX	4450	4040	3900	3410	2890	2330	1870	3580	7450	7420	7370	6280
MIN	4060	3930	3420	2910	2340	1880	1320	979	3860	7250	6240	5860
a	9113.34	9112.60	9109.48	9106.37	9102.72	9099.66	9095.83	9110.45	9131.47	9131.67	9125.80	9123.71
b	-400	-130	-510	-510	-570	-460	-560	+2260	+3740	+40	-1120	-380
CAL YR 2002	MAX 7000	MIN 509	b +1400									
WTR YR 2003	MAX 7450	MIN 979	b +1400									

a Elevation, in feet, at end of month.

b Change in contents, in acre feet.

## 10270872 MIDDLE FORK BISHOP CREEK BELOW LAKE SABRINA, NEAR BISHOP, CA

LOCATION.—Lat 37° 12' 50", long 118° 36' 34", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on right bank, 800 ft downstream from Lake Sabrina Dam, and 15.6 mi southwest of Bishop.

DRAINAGE AREA.—16.7 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder and sharp-crested weir. Elevation of gage is 9,050 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow regulated by Lake Sabrina (station 10270870). Water is used for power development downstream. See schematic diagram of Bishop Creek 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. 1394.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 270 ft<sup>3</sup>/s, July 10, 1995, gage height, 2.15 ft; minimum daily, 6.5 ft<sup>3</sup>/s, Mar. 19–27, 1991.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	12	17	15	15	15	14	27	18	68	60	27
2	15	12	19	15	16	15	14	27	18	71	60	23
3	14	12	21	15	16	15	17	27	19	72	60	22
4	13	11	27	15	16	15	19	27	20	72	59	20
5	13	10	20	15	18	15	19	27	21	72	59	25
6	13	10	34	15	19	15	19	27	22	67	58	29
7	13	9.9	21	15	16	15	19	27	24	62	56	29
8	13	10	17	15	16	15	19	27	25	62	54	29
9	13	10	15	15	16	15	19	27	27	62	53	24
10	13	10	15	15	16	15	19	27	38	61	52	23
11	13	10	15	15	16	15	19	27	33	58	52	24
12	13	10	15	15	16	15	19	24	22	54	51	26
13	13	10	15	15	16	15	19	24	24	53	50	26
14	13	10	14	15	16	15	19	19	26	53	49	26
15	13	10	15	15	17	15	19	19	28	53	47	25
16	13	10	15	15	17	15	19	19	35	53	46	24
17	13	10	15	15	17	15	22	18	60	52	45	24
18	13	10	15	15	18	15	22	17	85	52	43	24
19	13	10	15	15	19	18	22	17	109	52	41	24
20	13	10	15	15	19	19	22	15	108	52	40	24
21	13	10	15	15	18	17	22	14	100	52	40	24
22	13	10	15	15	18	15	22	14	93	52	39	24
23	13	10	15	15	18	15	22	14	89	49	39	24
24	13	10	16	15	18	15	22	15	86	52	39	23
25	13	10	15	15	18	15	22	15	80	66	39	19
26	13	10	15	15	19	15	22	15	57	73	36	18
27	13	10	15	15	18	14	22	15	49	69	32	18
28	13	10	15	15	15	14	22	16	61	65	37	18
29	13	10	15	15	---	14	25	16	70	61	38	18
30	12	10	15	15	---	14	27	17	69	61	38	18
31	12	---	15	15	---	14	---	17	---	60	38	---
TOTAL	404	306.9	521	465	477	469	608	637	1516	1861	1450	702
MEAN	13.0	10.2	16.8	15.0	17.0	15.1	20.3	20.5	50.5	60.0	46.8	23.4
MAX	15	12	34	15	19	19	27	27	109	73	60	29
MIN	12	9.9	14	15	15	14	14	14	18	49	32	18
AC-FT	801	609	1030	922	946	930	1210	1260	3010	3690	2880	1390

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	22.0	20.1	18.4	20.9	25.7	24.0	21.5	22.8	39.8	72.0	51.9	33.4	
MAX	40.9	36.4	30.3	35.2	46.1	43.1	41.1	43.4	91.1	147	107	49.4	
(WY)	1998	1999	1999	1994	1997	2000	1996	1996	1995	1995	1995	1995	
MIN	11.8	8.56	10.2	7.63	7.11	6.91	10.4	9.28	9.14	22.6	33.8	22.7	
(WY)	1991	1993	1993	1991	1991	1991	1993	1994	1994	2002	1992	1994	

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1991 - 2003

ANNUAL TOTAL	7085.2	9416.9		
ANNUAL MEAN	19.4	25.8	31.1	
HIGHEST ANNUAL MEAN			47.8	1995
LOWEST ANNUAL MEAN			18.4	1991
HIGHEST DAILY MEAN	48	Aug 22	109	Jun 19
LOWEST DAILY MEAN	8.8	Sep 25	9.9	Nov 7
ANNUAL SEVEN-DAY MINIMUM	8.8	Sep 24	10	Nov 5
MAXIMUM PEAK FLOW			114	Jun 19
MAXIMUM PEAK STAGE			1.21	Jun 19
ANNUAL RUNOFF (AC-FT)	14050	18680	22550	
10 PERCENT EXCEEDS	40	57	60	
50 PERCENT EXCEEDS	15	18	22	
90 PERCENT EXCEEDS	10	13	11	

## 10270875 INTAKE NO. 2 RESERVOIR NEAR BISHOP, CA

LOCATION.—Lat 38° 14' 53", long 118° 34' 53", in SE 1/4 SW 1/4 sec.16, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, in outlet structure, 50 ft upstream from Bishop Creek Dam, on Middle Fork Bishop Creek, and 13.0 mi southwest of Bishop.

DRAINAGE AREA.—31.6 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Reservoir is formed by rock-fill dam completed in 1908. Capacity, 78 acre-ft, between elevations 8,077 ft, invert of outlet, and 8,098.81 ft, crest of spillway, all of which are available for release. Water is received from South Fork Bishop Creek via conduit on right bank. Most of the water is diverted through conduit to Bishop Creek Powerplant No. 2 for power development on Bishop Creek. Figures given represent total contents at 2400 hours. See schematic diagram of [Bishop Creek 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. 1394.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 101 acre-ft, July 9, 1995, elevation, 8,100.67 ft; minimum, 0 acre-ft, Sept. 23–30, 2002.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 90 acre-ft, June 10, elevation, 8,099.83 ft; minimum, 4.2 acre-ft, many days.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Southern California Edison Co., dated Aug. 12, 1981)

8,077	0	8,086	5	8,094	32	8,102	120
8,082	1	8,090	12	8,098	68		

## RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5.0	e4.2	e4.2	72	73	75	73	75	79	71	71	67
2	e4.8	e4.2	16	73	75	75	72	74	80	72	74	73
3	e4.7	e4.2	37	74	76	73	76	73	81	72	70	77
4	e4.6	e4.2	79	74	74	73	74	71	80	71	67	72
5	e4.5	e4.2	77	73	75	72	72	70	79	73	66	68
6	e4.4	e4.2	85	72	73	72	74	71	78	71	68	72
7	e4.4	e4.2	75	71	66	70	75	73	78	71	71	74
8	e4.3	e4.3	71	71	66	70	75	74	72	73	69	76
9	e4.3	e4.3	72	70	70	70	74	74	75	74	69	74
10	e4.3	e4.3	73	69	74	74	75	73	90	72	66	72
11	e4.3	e4.3	75	67	76	76	76	74	81	70	65	72
12	e4.3	e4.3	75	67	75	75	72	75	73	71	65	75
13	e4.3	e4.3	72	69	72	74	68	77	81	72	70	75
14	e4.2	e4.3	72	72	70	72	69	72	82	73	72	72
15	e4.2	e4.2	71	74	70	75	71	71	83	71	71	69
16	e4.2	e4.2	70	72	72	75	70	75	83	72	71	70
17	e4.2	e4.2	76	72	72	71	72	74	82	70	75	72
18	e4.2	e4.2	74	73	71	66	75	69	84	71	74	72
19	e4.2	e4.2	75	73	75	69	76	71	86	72	74	73
20	e4.2	e4.2	74	74	76	74	76	70	85	71	74	71
21	e4.2	e4.2	71	74	75	76	74	75	83	70	73	69
22	e4.2	e4.2	71	74	74	75	73	74	82	71	71	71
23	e4.2	e4.2	75	75	72	75	74	77	82	74	68	73
24	e4.2	e4.2	71	75	72	74	75	69	81	78	74	77
25	e4.2	e4.2	68	73	72	74	71	70	79	80	77	73
26	e4.2	e4.2	68	73	73	75	72	74	66	79	73	73
27	e4.2	e4.2	70	73	73	76	75	74	74	77	68	73
28	e4.2	e4.2	71	73	73	76	72	68	73	73	71	72
29	e4.2	e4.2	72	72	---	75	68	79	73	69	73	70
30	e4.2	e4.2	74	72	---	76	73	80	74	70	70	67
31	e4.2	---	73	72	---	75	---	79	---	65	67	---
MAX	5.0	4.3	85	75	76	76	76	80	90	80	77	77
MIN	4.2	4.2	4.2	67	66	66	68	68	66	65	65	67
a			8098.45	8098.37	8098.45	8098.62	8098.49	8098.94	8098.58	8097.72	8097.93	8097.90
b	+4	0	+69	-1	+1	+2	-2	+6	-5	-9	+2	0
CAL YR 2002	MAX 85	MIN 0.00	b 0									
WTR YR 2003	MAX 90	MIN 4.2	b +67									

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

## 10270877 MIDDLE FORK BISHOP CREEK BELOW INTAKE NO. 2 RESERVOIR, NEAR BISHOP, CA

LOCATION.—Lat 37° 15' 16", long 118° 34' 39", unsurveyed, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on left bank, 0.1 mi upstream from bridge on South Lake Road, 0.7 mi downstream from Bishop Creek Dam, 0.9 mi upstream from confluence with South Fork Bishop Creek, and 12.6 mi southwest of Bishop.

DRAINAGE AREA.—31.9 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1990 to current year (low-flow records only). Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 7,830 ft above NGVD of 1929, from topographic map.

REMARKS.—No records computed above 30 ft<sup>3</sup>/s. Flow regulated by Intake No. 2 Reservoir (station 10270875), where most of the water is diverted to Bishop Creek Powerplant No. 2. Water is used for power development downstream. See schematic diagram of Bishop Creek 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. 1394.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	7.3	6.9	6.7	6.9	11	18	11	11	11
2	---	---	---	7.3	6.8	6.6	6.5	11	23	11	11	11
3	---	---	---	7.3	6.7	6.6	6.1	11	---	11	11	11
4	---	---	29	7.3	6.6	6.6	6.1	11	---	11	11	11
5	---	---	---	7.3	6.6	6.6	6.1	11	21	11	11	11
6	---	---	---	7.3	6.8	6.4	6.1	11	18	11	11	11
7	---	---	24	7.3	6.6	7.1	6.0	11	16	11	11	11
8	---	---	8.9	7.3	9.7	8.8	6.0	11	13	11	11	11
9	---	---	8.4	7.3	6.5	8.8	6.0	11	11	11	11	11
10	---	---	8.0	7.3	6.6	7.0	5.9	11	---	11	11	11
11	---	---	7.7	7.3	6.9	5.2	5.8	11	---	11	11	11
12	---	---	7.5	7.2	6.7	5.4	5.8	11	13	11	11	11
13	---	---	7.3	7.2	6.7	5.3	5.8	11	16	11	11	11
14	---	---	7.3	7.0	6.6	5.4	5.8	11	---	11	11	11
15	---	---	7.4	6.8	6.6	5.5	6.0	11	---	11	11	11
16	---	---	e7.4	6.9	6.7	5.3	6.0	11	---	11	11	11
17	---	---	e7.3	6.9	6.6	6.0	6.0	11	---	11	11	11
18	---	---	e7.3	6.9	6.6	6.7	5.9	11	---	11	11	11
19	---	---	e7.3	6.9	6.6	6.7	5.8	11	---	11	11	11
20	---	---	e7.3	6.9	6.8	6.8	5.8	11	---	11	11	11
21	---	---	e7.3	6.9	6.7	6.9	5.9	10	---	11	11	11
22	---	26	e7.3	6.9	6.6	6.9	5.9	11	---	11	11	11
23	---	18	e7.3	6.9	6.6	6.9	5.9	11	---	11	11	11
24	---	17	e7.2	6.9	6.6	6.9	6.5	11	---	12	11	11
25	---	23	e7.2	6.9	6.6	6.9	10	10	27	e17	11	11
26	---	---	7.2	6.9	6.6	7.7	11	10	18	e19	11	11
27	---	---	7.2	6.9	6.6	7.1	11	10	11	e15	11	11
28	---	---	7.3	6.9	6.6	7.0	12	10	11	e11	11	11
29	---	---	7.3	6.9	---	6.9	11	11	11	11	11	11
30	---	---	7.3	6.9	---	6.9	10	25	11	11	11	11
31	---	---	7.4	6.9	---	6.9	---	22	---	11	11	---
TOTAL	---	---	---	218.9	189.5	206.5	209.6	361	---	360	341	330
MEAN	---	---	---	7.06	6.77	6.66	6.99	11.6	---	11.6	11.0	11.0
MAX	---	---	---	7.3	9.7	8.8	12	25	---	19	11	11
MIN	---	---	---	6.8	6.5	5.2	5.8	10	---	11	11	11
AC-FT	---	---	---	434	376	410	416	716	---	714	676	655

e Estimated.

## 10270885 BISHOP CREEK BELOW INTAKE NO. 3 DIVERSION DAM, NEAR BISHOP, CA

LOCATION.—Lat 37° 16'27", long 118° 34'17", in NE 1/4 NE 1/4 sec.9, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on left bank, 125 ft downstream from dam, 0.7 mi downstream from confluence of South Fork and Middle Fork Bishop Creek, and 9.5 mi southwest of Bishop.

DRAINAGE AREA.—64.5 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1994 to current year (low-flow records only). Unpublished records prior to October 1994 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 7,130 ft above NGVD of 1929, from topographic map.

REMARKS.—No records computed above 20 ft<sup>3</sup>/s. Flow regulated by Intake No. 3 Reservoir, where most of the water is diverted to Bishop Creek Powerplant No. 3. Water is used for power development downstream. See schematic diagram of [Bishop Creek 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. 1394.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	15	15	14	14	14	14	14	15	16	15	14
2	14	15	15	14	14	14	14	14	15	16	15	14
3	14	15	15	15	14	14	14	14	15	16	15	14
4	14	15	14	15	14	14	14	14	15	16	14	14
5	14	15	14	15	14	14	14	14	15	16	15	14
6	14	15	15	15	14	14	14	14	15	16	14	14
7	14	14	15	15	14	14	14	14	15	15	14	14
8	14	15	14	14	14	14	14	14	15	15	14	14
9	14	---	15	14	14	14	14	14	15	15	14	14
10	14	---	14	14	14	14	14	14	16	15	14	15
11	14	---	14	14	14	14	14	14	---	16	14	15
12	14	---	14	14	14	14	14	14	17	16	14	15
13	14	---	14	14	14	14	14	14	16	15	14	14
14	13	15	14	14	14	14	14	14	16	15	14	15
15	14	15	14	14	14	14	14	15	16	14	14	15
16	14	15	14	14	14	14	14	15	19	14	14	15
17	14	15	14	14	14	14	14	15	---	14	14	15
18	14	14	14	14	15	14	14	14	---	14	14	15
19	14	14	14	14	14	14	14	14	---	14	14	15
20	14	14	16	14	14	14	14	14	---	15	15	15
21	14	14	14	14	14	14	14	14	---	16	14	15
22	14	15	14	14	14	14	14	14	---	16	14	15
23	14	15	14	14	14	14	14	14	---	16	15	15
24	14	14	14	14	14	14	14	15	17	15	14	15
25	14	16	14	14	14	14	14	14	14	14	14	15
26	14	15	14	14	14	14	14	18	17	14	14	15
27	14	14	14	14	14	14	14	---	14	14	14	15
28	14	14	14	14	14	e14	14	---	14	14	14	15
29	14	15	14	14	---	e14	14	17	15	14	14	15
30	14	15	14	14	---	e14	14	18	15	14	14	14
31	15	---	14	14	---	14	---	16	---	16	14	---
TOTAL	434	---	442	439	393	434	420	---	---	466	440	439
MEAN	14.0	---	14.3	14.2	14.0	14.0	14.0	---	---	15.0	14.2	14.6
MAX	15	---	16	15	15	14	14	---	---	16	15	15
MIN	13	---	14	14	14	14	14	---	---	14	14	14
AC-FT	861	---	877	871	780	861	833	---	---	924	873	871

e Estimated.

## 10270900 BIRCH-MCGEE DIVERSION TO BISHOP CREEK POWERPLANT NO. 2, NEAR BISHOP, CA

LOCATION.—Lat 37° 16'26", long 118° 34'45", in NW 1/4 NE 1/4 sec.9, T.8 S., R.31 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, in conduit, 100 ft upstream from penstock to Bishop Creek Powerplant No. 2, and 11.9 mi southwest of Bishop.

PERIOD OF RECORD.—October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Acoustic-velocity meter. Elevation of gage is 7,950 ft above NGVD of 1929, from topographic map.

REMARKS.—Conduit diverts water from Birch Creek and discharges into penstock to Bishop Creek Powerplant No. 2. Birch Creek receives water from McGee Creek via McGee Creek Diversion (station 10268225). See schematic diagram of [Bishop Creek 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. 1394.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.40	0.42	0.43	3.4	3.4	3.1	3.4	2.8	15	24	15	8.0
2	0.36	0.15	0.43	3.4	3.4	3.2	3.3	2.9	20	21	14	8.1
3	0.46	1.0	0.42	3.4	3.3	3.2	3.2	2.8	22	21	14	8.4
4	0.65	1.1	0.40	3.4	3.3	3.1	3.2	2.7	24	23	14	8.3
5	0.52	0.59	0.40	3.4	3.2	3.1	3.1	2.7	23	23	13	8.0
6	0.46	1.2	0.44	3.4	3.3	3.1	3.2	2.7	25	24	13	7.7
7	0.44	1.1	0.42	3.4	3.2	3.1	3.2	2.7	26	24	13	7.4
8	0.41	1.6	0.40	3.4	3.2	3.2	3.3	2.8	20	23	12	7.2
9	0.41	0.70	1.8	3.4	3.2	3.2	3.3	2.7	21	22	12	7.1
10	0.36	0.60	3.6	3.4	3.2	3.2	3.4	2.7	30	22	12	6.9
11	0.28	0.86	3.6	3.3	3.2	3.3	3.3	2.8	29	22	12	6.7
12	0.28	0.86	3.5	3.3	3.2	3.3	3.2	2.8	29	21	12	6.7
13	0.25	0.80	3.6	3.3	3.2	3.3	3.1	2.9	29	21	11	6.7
14	0.22	0.47	3.7	3.5	3.2	3.2	3.2	3.1	29	21	11	6.5
15	0.22	0.24	3.6	3.4	3.2	3.3	3.3	2.9	29	20	11	6.3
16	0.26	0.27	3.7	3.4	3.3	3.2	3.1	2.9	29	20	11	6.2
17	0.25	0.22	3.6	3.4	3.2	3.1	3.1	2.9	26	20	11	6.1
18	0.24	0.29	3.5	3.4	3.2	3.1	3.1	2.9	26	20	11	6.1
19	0.22	0.48	3.6	3.4	3.2	3.2	3.1	2.9	31	19	10	5.9
20	0.19	0.62	3.6	3.4	3.2	3.2	3.1	3.8	31	19	10	5.8
21	0.16	0.62	3.5	3.4	3.2	3.3	3.0	4.8	26	19	10	5.7
22	0.16	0.58	3.5	3.4	3.2	3.3	3.0	5.5	13	19	9.8	5.6
23	0.15	0.55	3.5	3.4	3.2	3.3	3.0	6.2	20	22	9.3	5.5
24	0.14	0.54	3.5	3.3	3.2	3.3	3.0	7.1	24	23	8.8	9.0
25	0.13	0.52	3.5	3.3	3.2	3.3	3.0	7.9	23	23	8.7	13
26	0.15	0.45	3.5	3.4	3.2	3.5	3.0	9.0	22	21	9.3	12
27	0.11	0.36	3.5	3.4	3.2	3.3	3.0	11	23	20	8.9	12
28	0.24	0.36	3.6	3.4	3.1	3.2	3.0	12	23	19	8.7	12
29	0.45	0.37	3.5	3.4	---	3.3	2.8	11	24	18	8.6	11
30	1.3	0.46	3.5	3.4	---	3.5	2.8	11	26	17	8.4	11
31	1.5	---	3.5	3.4	---	3.6	---	10	---	16	8.2	---
TOTAL	11.37	18.38	83.34	105.0	90.3	100.6	93.8	152.9	738	647	340.7	236.9
MEAN	0.37	0.61	2.69	3.39	3.23	3.25	3.13	4.93	24.6	20.9	11.0	7.90
MAX	1.5	1.6	3.7	3.5	3.4	3.6	3.4	12	31	24	15	13
MIN	0.11	0.15	0.40	3.3	3.1	3.1	2.8	2.7	13	16	8.2	5.5
AC-FT	23	36	165	208	179	200	186	303	1460	1280	676	470

## 10270940 BISHOP CREEK BELOW INTAKE NO. 4 DIVERSION DAM, NEAR BISHOP, CA

LOCATION.—Lat 37° 18' 10", long 118° 31' 45", in NW 1/4 NW 1/4 sec.36, T.7 S., R.32 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on left bank, 300 ft downstream from dam, 1.6 mi upstream from Coyote Creek, and 7.5 mi southwest of Bishop.

DRAINAGE AREA.—72.7 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1994 to current year (low-flow records only). Unpublished records prior to October 1994 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 6,310 ft above NGVD of 1929, from topographic map.

REMARKS.—No records computed above 20 ft<sup>3</sup>/s. Flow regulated by Intake No. 4 Reservoir, where most of the water is diverted to Bishop Creek Powerplant No. 4. Water is used for power development downstream. See schematic diagram of [Bishop Creek 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. 1394.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	6.1	6.0	6.3	6.4	5.3	5.4	5.3	18	18	7.2	6.2
2	6.1	e6.1	5.9	6.4	6.4	5.3	5.4	5.3	---	14	7.2	6.2
3	6.1	e6.1	9.2	6.4	6.0	5.3	5.3	5.3	---	11	7.2	6.2
4	6.1	e6.1	6.1	6.3	5.8	5.0	5.3	5.3	---	10	7.2	6.8
5	6.1	e6.1	13	6.4	5.7	5.0	5.7	5.3	---	10	7.2	6.4
6	6.1	e6.1	15	6.4	5.7	5.0	5.4	5.3	20	9.8	7.2	6.4
7	6.2	6.1	16	6.4	5.6	5.1	5.3	5.3	18	7.4	7.2	6.2
8	6.2	17	5.9	6.4	6.3	5.0	5.3	5.3	15	7.4	7.2	6.2
9	6.2	9.0	6.0	6.4	5.5	5.0	5.4	5.3	6.9	7.4	7.2	6.2
10	6.2	13	6.1	6.4	5.5	5.2	5.4	5.3	13	7.2	7.3	6.2
11	6.2	6.1	6.1	6.4	5.6	5.4	5.4	5.3	---	7.2	7.3	6.2
12	6.2	6.1	6.1	6.4	5.6	5.4	5.4	5.3	12	7.2	7.4	6.2
13	6.2	6.0	6.1	6.4	5.6	5.4	5.3	5.4	7.2	7.2	7.4	6.2
14	8.0	5.9	6.2	6.3	5.6	5.4	5.3	5.3	7.3	7.2	7.4	6.2
15	6.3	6.5	6.2	6.3	5.6	5.4	5.3	5.3	10	7.2	7.2	6.2
16	6.2	6.0	6.3	6.4	5.6	5.4	5.3	5.3	14	7.2	6.4	6.2
17	6.2	5.9	6.2	6.4	5.6	5.3	5.3	5.3	---	7.2	6.4	6.2
18	6.2	5.9	6.2	6.4	6.2	5.4	5.3	5.3	---	7.2	6.4	6.2
19	6.2	5.9	6.2	6.4	5.8	5.4	5.3	5.3	---	7.2	6.4	6.2
20	6.2	6.1	6.3	6.3	5.6	5.4	5.3	5.3	---	7.2	6.4	6.2
21	6.2	6.1	6.2	6.2	5.6	5.5	5.3	5.3	---	7.2	6.4	6.2
22	6.2	6.7	6.2	6.3	5.6	5.5	5.3	5.3	---	7.2	6.2	6.2
23	6.2	6.1	6.2	6.2	5.6	5.5	5.3	5.3	---	8.6	6.2	6.2
24	6.2	6.1	6.3	6.2	5.6	5.5	5.4	5.4	---	8.1	6.2	6.2
25	6.2	7.6	6.2	6.3	5.6	5.5	5.6	5.3	---	15	6.2	6.2
26	6.2	6.1	6.2	6.3	5.6	5.4	5.4	5.3	13	---	6.2	6.2
27	6.2	6.1	6.2	6.2	5.5	5.4	5.4	6.5	7.4	18	6.2	6.2
28	6.2	6.1	6.2	6.3	5.4	5.3	5.4	17	12	11	6.1	6.2
29	6.2	6.1	6.2	6.4	---	5.3	5.3	11	16	8.1	6.2	6.2
30	6.2	6.1	6.2	6.4	---	5.3	5.3	---	17	7.2	6.2	6.2
31	7.5	---	6.2	6.4	---	5.4	---	---	---	14	6.2	---
TOTAL	194.8	205.2	219.4	196.7	160.2	164.7	160.8	---	---	---	209.1	187.0
MEAN	6.28	6.84	7.08	6.35	5.72	5.31	5.36	---	---	---	6.75	6.23
MAX	8.0	17	16	6.4	6.4	5.5	5.7	---	---	---	7.4	6.8
MIN	6.1	5.9	5.9	6.2	5.4	5.0	5.3	---	---	---	6.1	6.2
AC-FT	386	407	435	390	318	327	319	---	---	---	415	371

e Estimated.



## 10270970 BISHOP CREEK BELOW INTAKE NO. 5 DIVERSION DAM, NEAR BISHOP, CA

LOCATION.—Lat 37° 19'27", long 118° 29'57", in NE 1/4 SE 1/4 sec.9, T.7 S., R.32 E., Inyo County, Hydrologic Unit 18090102, Inyo National Forest, on left bank, 400 ft downstream from dam, 1.0 mi downstream from Coyote Creek, and 6.0 mi southwest of Bishop.

DRAINAGE AREA.—100 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1994 to current year (low-flow records only). Unpublished records prior to October 1994 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 5,280 ft above NGVD of 1929, from topographic map.

REMARKS.—No records computed above 30 ft<sup>3</sup>/s. Flow regulated by Intake No. 5 Reservoir, where most of the water is diverted to Bishop Creek Powerplant No. 5. Water is used for power development downstream. See schematic diagram of [Bishop Creek 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. 1394.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	20	20	20	20	20	20	20	27	24	20	20
2	20	20	20	20	20	20	20	20	---	21	20	20
3	20	20	21	20	20	20	20	20	---	20	20	20
4	20	20	22	20	20	20	20	20	---	19	20	20
5	20	20	---	20	20	20	20	20	---	19	20	20
6	20	20	28	20	20	20	20	20	29	20	20	20
7	21	20	27	20	20	20	20	20	27	20	20	20
8	---	---	19	20	20	20	20	20	23	19	20	20
9	---	22	19	20	20	20	20	20	20	19	20	20
10	---	23	19	20	20	20	20	20	23	20	20	20
11	---	20	19	20	20	20	20	20	---	20	20	20
12	22	20	19	20	20	20	20	20	23	19	20	20
13	20	20	19	20	20	20	20	20	19	20	20	20
14	22	20	19	20	20	20	20	20	19	20	20	20
15	20	21	19	20	20	20	20	20	20	20	20	20
16	20	20	20	20	20	20	20	19	25	20	20	20
17	20	20	20	20	20	20	20	20	---	20	20	20
18	20	20	20	20	20	20	20	19	---	20	20	20
19	20	20	20	20	20	20	20	19	---	20	20	20
20	20	20	20	20	20	20	20	19	---	20	20	20
21	20	20	20	20	20	20	20	19	---	20	20	20
22	20	20	20	20	20	20	20	20	---	20	20	20
23	20	20	20	20	20	20	20	20	---	23	20	20
24	20	20	20	20	20	20	20	20	---	20	20	20
25	20	19	20	20	20	20	20	20	---	27	20	20
26	20	19	20	20	20	20	20	20	---	---	20	19
27	20	19	20	20	20	20	20	20	---	25	20	20
28	20	19	20	20	20	20	20	28	20	21	20	20
29	20	20	20	20	---	20	20	---	23	20	20	20
30	20	19	20	20	---	20	20	---	24	21	20	20
31	20	---	20	20	---	20	---	---	---	20	20	---
TOTAL	---	---	---	620	560	620	600	---	---	---	620	599
MEAN	---	---	---	20.0	20.0	20.0	20.0	---	---	---	20.0	20.0
MAX	---	---	---	20	20	20	20	---	---	---	20	20
MIN	---	---	---	20	20	20	20	---	---	---	20	19
AC-FT	---	---	---	1230	1110	1230	1190	---	---	---	1230	1190

## 10270985 ABELOUR DITCH NEAR BISHOP, CA

LOCATION.—Lat 37° 20' 30", long 118° 28' 41", in SE 1/4 NE 1/4 sec.17, T.7 S., R.32 E., Inyo County, Hydrologic Unit 18090102, on left bank, 400 ft upstream from Highway 168 road crossing, 0.6 mi downstream from outlet in penstock to Bishop Creek Powerplant No. 6, and 4.8 mi west of Bishop.

PERIOD OF RECORD.—October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 4,750 ft above NGVD of 1929, from topographic map.

REMARKS.—Ditch diverts water from Bishop Creek Powerplant No. 6 Penstock for irrigation and domestic use. See schematic diagram of Bishop Creek 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. 1394.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 3.3 ft<sup>3</sup>/s, May 7, 1995; no flow Nov. 3, 4, 1998, Nov. 2, 3, 1999, Nov. 6, 7, 2000, Oct. 30–Nov. 8, 2001.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	1.7	1.7	1.8	1.9	1.9	1.9	1.8	1.9	2.0	2.1	2.2
2	2.5	1.7	1.6	1.8	1.9	1.9	1.9	1.8	1.9	2.0	2.1	2.3
3	2.3	1.7	1.6	1.8	1.9	1.9	1.9	1.8	1.9	2.0	2.0	2.3
4	2.1	1.7	1.6	1.8	1.9	1.9	1.8	1.7	1.9	2.0	2.0	2.3
5	2.1	1.8	1.7	1.8	1.9	1.9	1.9	1.7	2.0	2.0	2.0	2.3
6	2.1	1.8	1.6	1.8	1.9	1.9	1.9	1.7	2.0	1.9	2.1	2.3
7	1.9	1.8	1.4	1.8	1.9	1.9	1.9	1.7	2.0	1.9	2.1	2.3
8	1.8	1.8	1.5	1.8	2.0	1.9	1.9	1.7	1.9	1.9	2.1	2.2
9	1.8	1.7	1.7	1.8	1.9	1.9	1.8	1.7	1.9	1.9	2.1	2.1
10	1.8	1.7	2.0	1.8	1.9	1.9	1.8	1.7	1.8	1.9	2.1	2.0
11	1.8	1.7	2.0	1.8	1.9	1.9	1.8	1.7	2.2	1.9	2.1	1.9
12	1.7	1.7	2.0	1.8	1.9	1.9	1.8	1.8	2.0	1.9	2.1	1.9
13	1.6	1.7	2.0	1.8	1.9	1.9	1.8	1.9	1.7	1.8	2.0	1.9
14	1.6	1.7	2.0	1.8	1.9	1.9	1.9	2.0	2.0	1.8	2.1	1.9
15	1.5	1.7	1.9	1.8	1.9	1.9	1.9	2.0	2.0	1.9	2.1	1.9
16	1.6	1.7	1.9	1.8	1.9	1.9	1.8	2.0	2.0	1.9	2.0	1.9
17	1.6	1.7	1.9	1.8	1.9	1.9	2.0	2.0	2.0	1.9	2.0	1.9
18	1.6	1.7	1.9	1.8	1.9	1.9	1.9	2.0	2.0	1.9	2.0	1.9
19	1.6	1.7	2.0	1.8	1.9	1.9	1.9	2.0	2.0	1.8	2.0	1.9
20	1.6	1.7	1.8	1.8	1.9	1.9	1.9	2.0	2.0	1.8	2.1	1.9
21	1.6	1.7	1.8	1.8	1.9	1.9	1.9	2.0	2.0	1.7	2.1	1.9
22	1.6	1.7	1.8	1.8	1.9	1.9	1.9	1.9	2.0	1.7	2.1	1.9
23	1.7	1.7	1.8	1.8	1.9	1.9	1.9	1.9	2.0	1.7	2.1	1.9
24	1.7	1.7	2.3	1.8	1.9	1.9	1.9	1.7	2.0	1.5	2.1	1.9
25	1.7	1.7	2.1	1.8	1.9	1.9	1.9	1.7	2.0	1.6	2.1	1.9
26	1.7	1.7	1.8	1.8	1.9	1.9	1.9	1.8	2.0	1.6	2.1	1.9
27	1.7	1.7	1.8	1.8	1.9	1.9	1.9	1.8	2.0	1.6	2.1	1.9
28	1.7	1.7	1.8	1.9	1.9	1.9	1.8	1.6	2.0	1.5	2.1	1.9
29	1.7	1.7	1.8	1.9	---	1.9	1.8	1.8	2.0	1.5	2.1	1.9
30	1.7	1.7	1.8	1.9	---	1.9	1.8	1.9	2.0	1.7	2.1	1.9
31	1.7	---	1.8	1.9	---	1.9	---	1.9	---	1.8	2.1	---
TOTAL	55.5	51.4	56.4	56.2	53.3	58.9	56.1	56.7	59.1	56.0	64.3	60.3
MEAN	1.79	1.71	1.82	1.81	1.90	1.90	1.87	1.83	1.97	1.81	2.07	2.01
MAX	2.5	1.8	2.3	1.9	2.0	1.9	2.0	2.0	2.2	2.0	2.1	2.3
MIN	1.5	1.7	1.4	1.8	1.9	1.9	1.8	1.6	1.7	1.5	2.0	1.9
AC-FT	110	102	112	111	106	117	111	112	117	111	128	120

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	1.98	1.72	1.85	1.92	1.91	1.91	1.98	2.03	2.11	2.13	2.18	2.16	
MAX	2.32	2.20	2.01	2.30	2.11	2.06	2.41	2.42	2.47	2.62	2.73	2.52	
(WY)	2000	1994	1998	1997	1997	1997	1996	1995	1993	1995	1996	1995	
MIN	1.45	1.04	1.64	1.75	1.70	1.70	1.83	1.80	1.84	1.81	1.85	1.89	
(WY)	2002	1997	2001	2000	2000	1991	1999	2001	2002	2003	1991	1991	

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1991 - 2003	
ANNUAL TOTAL	692.5		684.2			
ANNUAL MEAN	1.90		1.87		1.99	
HIGHEST ANNUAL MEAN					2.19	
LOWEST ANNUAL MEAN					1.85	
HIGHEST DAILY MEAN	2.5	Oct 2	2.5	Oct 2	3.3	May 7 1995
LOWEST DAILY MEAN	1.4	Dec 7	1.4	Dec 7	0.00	Nov 3 1998
ANNUAL SEVEN-DAY MINIMUM	1.6	Dec 2	1.6	Dec 2	0.00	Oct 30 2001
ANNUAL RUNOFF (AC-FT)	1370		1360		1440	
10 PERCENT EXCEEDS	2.1		2.1		2.3	
50 PERCENT EXCEEDS	1.9		1.9		2.0	
90 PERCENT EXCEEDS	1.7		1.7		1.7	

## 10271200 BISHOP CREEK ABOVE POWERPLANT NO. 6, NEAR BISHOP, CA

LOCATION.—Lat 37° 21'00", long 118° 27'42", in SE 1/4 SE 1/4 sec.9, T.7 S., R.32 E., Inyo County, Hydrologic Unit 18090102, on left bank, adjacent to Powerplant No. 6 tailrace, and 3.8 mi west of Bishop.

DRAINAGE AREA.—104 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1990 to current year. If records for Bishop Creek Powerplant No. 6 Conduit (station 10271060) are combined with this record, a record equivalent to that published since October 1936 as "Bishop Creek below Powerplant No. 6, near Bishop", discontinued September 1990, can be obtained. Monthly and yearly mean discharge prior to October 1969, published in WSP 2127.

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 4,510 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow regulated for power development by South Lake, Lake Sabrina, and Intake No. 2 Reservoir (stations 10270700, 10270870, and 10270875, respectively), combined capacity, 20,311 acre-ft, and five powerplants. Water is diverted into basin via Birch-McGee Diversion (station 10270900). Water is diverted out of basin via Abelour Ditch (station 10270985) for irrigation and domestic use. Diversion to Bishop Creek Powerplant No. 6 (station 10271060) bypasses this station and is published as a line item below. See schematic diagram of Bishop Creek 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. 1394.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 453 ft<sup>3</sup>/s, July 23, 1998, gage height, 3.77 ft; no flow on many days in July and August 1992.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	1.3	1.1	1.0	0.99	1.4	1.6	0.58	11	9.7	1.7	1.3
2	80	1.3	1.1	1.0	0.94	1.4	1.6	0.61	16	7.8	1.6	1.3
3	76	1.3	1.1	1.0	1.0	1.4	1.6	0.61	23	6.7	1.6	1.3
4	77	1.2	1.1	1.0	0.98	1.4	1.6	0.57	29	6.8	1.4	1.2
5	75	1.1	54	1.0	0.87	1.4	1.6	0.53	18	6.4	1.3	1.2
6	74	1.1	3.7	1.1	0.96	1.4	1.6	0.52	14	5.7	1.3	1.2
7	74	1.1	1.5	1.1	1.0	1.4	1.4	0.52	11	1.8	1.3	1.2
8	72	3.7	1.0	1.1	1.0	1.4	1.4	0.50	8.1	0.95	1.3	1.3
9	73	1.3	1.1	1.1	1.0	1.4	1.4	0.48	3.4	0.79	1.2	1.2
10	74	1.2	1.1	1.1	1.0	1.5	1.5	0.48	4.2	0.67	1.2	1.3
11	68	1.1	1.1	1.1	1.0	1.6	1.1	0.49	28	0.63	1.5	1.3
12	13	1.1	1.1	1.1	1.1	1.6	0.87	0.46	8.7	0.53	1.4	1.3
13	5.9	1.1	1.1	1.1	1.0	1.6	0.84	0.68	2.3	0.47	1.4	1.2
14	1.3	1.1	1.1	1.1	1.0	1.6	0.99	1.7	1.1	0.49	1.6	1.1
15	1.4	1.1	1.1	1.0	1.0	1.9	1.8	1.8	2.4	0.45	1.4	1.1
16	1.1	1.1	2.8	1.0	1.0	1.6	1.9	1.9	5.8	1.0	1.3	1.1
17	1.1	1.1	1.2	1.0	1.0	1.6	40	2.6	29	1.5	1.3	1.1
18	1.1	1.1	1.1	1.0	1.0	1.6	1.9	2.0	43	1.6	1.3	1.2
19	1.1	1.1	1.1	1.0	0.97	1.6	1.6	1.8	72	1.6	1.3	1.1
20	1.1	1.1	1.0	1.0	1.2	1.5	1.6	1.4	75	1.6	1.3	1.1
21	1.1	1.1	1.1	1.0	1.6	1.6	1.6	1.4	63	1.5	1.3	1.1
22	1.1	1.1	1.1	1.0	1.5	1.6	1.5	1.2	41	1.5	1.3	1.1
23	1.2	1.1	1.1	1.0	1.4	1.6	0.99	1.1	35	1.6	1.3	1.1
24	1.3	1.1	1.1	1.0	1.4	1.6	0.80	1.5	34	1.6	1.3	1.1
25	1.2	1.1	1.1	1.0	1.6	1.6	0.73	1.0	25	7.4	1.3	1.1
26	1.1	1.1	1.1	1.0	1.4	1.6	0.72	0.94	6.8	14	1.3	1.1
27	1.1	1.1	1.1	1.0	1.4	1.5	0.68	0.92	0.68	9.5	1.4	1.1
28	1.1	1.1	1.1	1.0	1.4	1.5	0.63	5.2	3.6	4.5	1.2	1.1
29	1.3	1.1	1.1	1.0	---	1.5	0.60	5.8	8.5	1.6	1.3	1.0
30	1.2	1.2	1.0	1.0	---	1.6	0.62	17	9.6	1.4	1.2	1.0
31	1.2	---	1.1	1.0	---	1.6	---	18	---	4.4	1.3	---
TOTAL	851.0	36.7	91.5	31.9	31.71	47.6	76.77	74.29	632.18	106.18	41.9	34.9
MEAN	27.5	1.22	2.95	1.03	1.13	1.54	2.56	2.40	21.1	3.43	1.35	1.16
MAX	80	3.7	54	1.1	1.6	1.9	40	18	75	14	1.7	1.3
MIN	1.1	1.1	1.0	1.0	0.87	1.4	0.60	0.46	0.68	0.45	1.2	1.0
AC-FT	1690	73	181	63	63	94	152	147	1250	211	83	69
a	2330	3380	3620	3490	3160	3320	3980	6220	8580	8200	6810	4290

a Diversion, in acre-feet, to Bishop Creek Powerplant No. 6 (station 10271060), provided by Southern California Edison Co.

## 10271200 BISHOP CREEK ABOVE POWERPLANT NO. 6, NEAR BISHOP, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.84	13.8	7.94	6.81	3.23	6.34	7.81	11.4	28.4	64.0	28.8	5.42
MAX	37.4	68.1	79.1	38.6	14.9	53.1	66.0	44.9	86.7	240	171	37.5
(WY)	1998	2002	2002	1997	2002	2002	2002	2002	1997	1995	1995	1998
MIN	0.11	0.19	0.19	0.17	0.21	0.19	0.18	0.12	0.064	0.035	0.048	0.082
(WY)	1993	1991	1993	1993	1993	1992	1992	1992	1992	1992	1992	1992

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1991 - 2003
ANNUAL TOTAL	7562.97	2056.63	
ANNUAL MEAN	20.7	5.63	16.3
HIGHEST ANNUAL MEAN			43.2 1995
LOWEST ANNUAL MEAN			0.35 1992
HIGHEST DAILY MEAN	93 May 5	80 Oct 2	420 Jul 24 1998
LOWEST DAILY MEAN	0.37 Jul 29	0.45 Jul 15	0.00 Jul 27 1992
ANNUAL SEVEN-DAY MINIMUM	0.65 Jun 20	0.49 May 6	0.00 Jul 27 1992
MAXIMUM PEAK FLOW		86 Oct 1	453 Jul 23 1998
MAXIMUM PEAK STAGE		1.51 Oct 1	3.77 Jul 23 1998
ANNUAL RUNOFF (AC-FT)	15000	4080	11790
ANNUAL DIVERSION (AC-FT) a	41940	57400	
10 PERCENT EXCEEDS	71	9.5	59
50 PERCENT EXCEEDS	1.3	1.2	1.5
90 PERCENT EXCEEDS	0.96	0.97	0.19

a Diversion, in acre-feet, to Bishop Creek Powerplant No. 6 (station 10271060), provided by Southern California Edison Co.

10287060 LUNDY LAKE NEAR LEE VINING, CA

LOCATION.—Lat 38° 01' 56", long 119° 13' 11", in NW 1/4 SE 1/4 sec.16, T.2 N., R.25 E., Mono County, Hydrologic Unit 18090101, near right abutment of spillway of Lundy Lake Dam, on Mill Creek, and 7.6 mi northwest of Lee Vining.

DRAINAGE AREA.—16.3 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Reservoir is formed on natural lake by rock-fill dam completed in 1910. Usable capacity, 4,113 acre-ft, between elevations 7,766.43 ft, invert of outlet, and 7,807.81 ft, crest of spillway. Figures given represent usable contents. Water is used for power development and irrigation downstream.

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. 1390.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 4,191 acre-ft, July 22, 1998, elevation, 7,808.40 ft; minimum, 327 acre-ft, estimated, Mar. 27, 28, 2002, elevation unknown.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 3,910 acre-ft, June 19, elevation, 7,806.26 ft; minimum, 345 acre-ft, estimated, Apr. 8, elevation unknown.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Southern California Edison Co., dated Aug. 17, 1981)

7,766.43	0	7,780	1,027	7,800	3,126	7,810	4,406
7,770	213	7,790	2,001				

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

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2300	2030	1770	1700	1570	1540	418	646	2470	3610	3490	2980
2	2290	2030	1760	1700	1570	1540	385	655	2620	3600	3480	2960
3	2280	2020	1750	1700	1570	1510	369	664	2770	3580	3480	2960
4	2280	2020	1720	1700	1570	1470	366	673	2930	3580	3460	2940
5	2280	2000	1800	1690	1570	1450	361	683	3070	3560	3450	2930
6	2270	1970	1780	1690	1560	1420	363	692	3180	3550	3430	2910
7	2260	1950	1780	1690	1560	1380	e355	704	3320	3540	3400	2900
8	2260	1970	1780	1690	1570	1340	e345	713	3440	3520	3380	2880
9	2250	1960	1760	1680	1570	1310	e375	725	3570	3500	3350	2860
10	2240	1950	1760	1680	1570	1270	e416	735	3630	3470	3320	2840
11	2220	1950	1760	1680	1560	1240	e433	744	3650	3450	3280	2830
12	2220	1950	1750	1670	1560	1190	e444	755	3680	3420	3250	2810
13	2220	1940	1750	1670	1570	1160	e467	767	3700	3390	3220	2790
14	2230	1940	1750	1660	1560	1110	e486	791	3730	3350	3200	2780
15	2210	1920	1740	1660	1560	1070	e498	798	3760	3320	3190	2750
16	2210	1930	1740	1640	1560	1040	e488	799	3800	3310	3180	2740
17	2190	1920	1750	1630	1560	992	498	807	3850	3320	3160	2720
18	2180	1930	1750	1630	1560	950	511	823	3890	3340	3150	2700
19	2180	1920	1750	1630	1560	910	521	843	3910	3360	3140	2680
20	2200	1920	1740	1620	1560	867	533	875	3900	3380	3130	2660
21	2180	1900	1720	1610	1550	872	543	925	3880	3400	3120	2640
22	2160	1900	1730	1620	1550	820	556	1010	3830	3410	3110	2620
23	2160	1890	1720	1610	1540	790	565	1130	3780	3430	3100	2600
24	2160	1890	1710	1600	1550	743	584	1280	3740	3450	3090	2580
25	2110	1890	1710	1600	1550	702	594	1400	3700	3460	3070	2560
26	2110	1860	1700	1600	1550	662	598	1460	3670	3460	3060	2540
27	2100	1850	1700	1600	1550	617	607	1550	3640	3460	3050	2510
28	2090	1830	1700	1590	1550	573	617	1700	3630	3480	3030	2490
29	2080	1810	1700	1590	---	528	627	1910	3630	3480	3020	2470
30	2060	1800	1700	1580	---	491	636	2130	3630	3490	3000	2440
31	2040	---	1640	1580	---	458	---	2320	---	3490	2990	---
MAX	2300	2030	1800	1700	1570	1540	636	2320	3910	3610	3490	2980
MIN	2040	1800	1640	1580	1540	458	345	646	2470	3310	2990	2440
a	7790.35	7788.04	7786.43	7785.90	7785.56	7773.30	7775.48	7792.93	7804.10	7802.94	7798.86	7794.10
b	-280	-240	-160	-60	-30	-1092	+178	+1684	+1310	-140	-500	-550
CAL YR 2002	MAX 3290	MIN 327	b -140									
WTR YR 2003	MAX 3910	MIN 345	b +120									

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

## 10287069 MILL CREEK FLUME BELOW LUNDY LAKE, NEAR LEE VINING, CA

LOCATION.—Lat 38° 01' 59", long 119° 12' 56", in SE 1/4 NE 1/4 sec.16, T.2 N., R.25 E., Mono County, Hydrologic Unit 18090101, on left bank, 20 ft upstream from Deer Creek, 70 ft downstream from road culvert, 1,400 ft downstream from Lundy Lake Dam, and 7.5 mi northwest of Lee Vining.

DRAINAGE AREA.—18.1 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1990 to current year (low flow records only). If records for Upper Conway Ditch and Lundy Powerplant Tailrace (stations 10287145 and 10287195) are combined with this record, a record equivalent to that published since October 1942 as "Mill Creek below Lundy Lake, near Mono Lake" can be obtained. Monthly and yearly mean discharges prior to October 1969, published in WSP 2127.

GAGE.—Water-stage recorder and 5-ft Cipolletti weir (since May 12, 1992) set in Parshall flume. Elevation of gage is 7,760 ft above NGVD of 1929, from topographic map.

REMARKS.—Records not computed above 15 ft<sup>3</sup>/s. Flow regulated by Lundy Lake (station 10287060). Most of the water is diverted at Lundy Lake via Lundy Powerplant to Upper Conway Ditch and Lundy Powerplant Tailrace for power development and irrigation.

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. 1390.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	0.61	0.05	e0.00	e0.00	0.00	0.00	e0.00	e0.35	6.5	5.4	4.4
2	1.4	0.56	0.05	e0.00	e0.00	0.00	0.00	e0.00	e0.45	6.3	5.2	4.4
3	1.4	0.53	0.05	e0.00	e0.00	0.00	0.00	e0.00	e0.60	6.3	5.2	4.4
4	1.3	0.53	0.02	e0.00	e0.00	0.00	0.00	e0.00	e0.90	6.3	5.5	4.3
5	1.3	0.53	0.02	e0.00	0.00	0.00	e1.5	e0.00	e1.2	6.3	6.0	4.2
6	1.3	0.47	0.02	e0.00	0.00	0.00	e3.0	e0.00	e1.7	6.3	6.0	4.2
7	1.3	0.39	0.02	e0.00	0.00	0.00	e3.0	e0.00	e2.1	6.1	6.0	4.1
8	1.2	0.56	0.02	e0.00	0.00	0.00	e3.0	e0.00	e2.8	6.0	6.0	3.9
9	1.2	0.49	0.00	e0.00	0.00	0.00	2.4	e0.00	e7.0	6.0	6.0	3.9
10	1.2	0.40	0.00	e0.00	0.00	0.00	1.6	e0.00	---	5.9	5.8	3.8
11	1.1	0.38	0.00	e0.00	0.00	0.00	0.00	e0.00	---	5.7	5.7	3.7
12	1.1	0.31	0.00	e0.00	0.00	0.00	0.00	e0.00	---	5.7	5.6	3.7
13	1.1	0.31	e0.00	e0.00	0.00	0.00	0.00	e0.00	---	5.6	5.4	3.7
14	0.99	0.31	e0.00	e0.00	0.00	0.00	0.00	e0.00	---	5.4	5.3	3.6
15	0.98	0.28	e0.00	e0.00	0.00	0.00	0.00	e0.00	---	5.3	5.2	3.5
16	0.98	0.25	e0.00	0.00	0.00	0.00	0.00	e0.00	---	5.2	5.2	3.5
17	0.98	0.25	e0.00	0.00	0.00	0.00	0.00	e0.00	---	5.2	5.2	3.5
18	0.98	0.23	e0.00	0.00	0.00	0.00	0.00	e0.00	---	5.2	5.2	3.4
19	0.98	0.19	e0.00	0.00	0.00	0.00	0.00	e0.00	---	5.2	5.1	3.3
20	0.98	0.19	e0.00	0.00	0.00	0.00	0.00	e0.00	---	5.2	4.9	3.2
21	1.9	0.15	e0.00	0.00	0.00	0.00	0.00	e0.00	---	5.2	5.0	3.0
22	2.4	0.14	e0.00	0.00	0.00	0.00	0.00	e0.00	---	5.2	5.1	3.0
23	0.79	0.14	e0.00	0.00	0.00	0.00	0.00	e0.00	---	5.2	4.9	3.0
24	0.79	0.12	e0.00	0.00	0.00	0.00	0.00	e0.00	---	5.2	4.9	3.0
25	0.79	0.09	e0.00	0.00	0.00	0.00	0.00	e0.00	6.9	5.3	4.9	3.0
26	0.79	0.09	e0.00	0.00	0.00	0.00	0.00	e0.00	6.7	5.4	4.9	3.0
27	0.75	0.09	e0.00	0.00	0.00	0.00	0.00	e0.00	6.5	5.4	4.8	3.0
28	0.70	0.09	e0.00	0.00	0.00	0.00	0.00	e0.00	6.5	5.6	4.7	3.0
29	0.70	0.07	e0.00	e0.00	---	0.00	0.00	e0.00	6.5	5.7	4.6	2.8
30	0.70	0.05	e0.00	e0.00	---	0.00	0.00	e0.00	6.5	5.7	4.4	2.8
31	0.63	---	e0.00	e0.00	---	0.00	---	e0.25	---	5.7	4.4	---
TOTAL	34.11	8.80	0.25	0.00	0.00	0.00	14.50	0.25	---	175.3	162.5	106.3
MEAN	1.10	0.29	0.008	0.000	0.000	0.000	0.48	0.008	---	5.65	5.24	3.54
MAX	2.4	0.61	0.05	0.00	0.00	0.00	3.0	0.25	---	6.5	6.0	4.4
MIN	0.63	0.05	0.00	0.00	0.00	0.00	0.00	0.00	---	5.2	4.4	2.8
AC-FT	68	17	0.5	0.00	0.00	0.00	29	0.5	---	348	322	211
a	0	0	0	0	0	0	0	311	470	280	0	0
b	653	655	653	662	336	1680	529	1040	3330	2280	1300	972

CAL YR 2002 a 801 b 12850

WTR YR 2003 a 1060 b 14090

e Estimated.

a Diversion, in acre-feet, to Upper Conway Ditch (station 10287145), provided by Southern California Edison Co.

b Diversion, in acre-feet, to Lundy Powerplant Tailrace (station 10287195), provided by Southern California Edison Co.

10287260 WAUGH LAKE NEAR JUNE LAKE, CA

LOCATION.—Lat 37° 45' 04", long 119° 10' 52", unsurveyed, T.2 S., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, near outlet, at base of Rush Creek Meadows Dam, on Rush Creek, and 6.0 mi southwest of town of June Lake.

DRAINAGE AREA.—15.3 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—No records computed during the winter months. Reservoir is formed by concrete dam completed in 1925. Total capacity, 5,277 acre-ft, between elevations 9,368.60 ft, invert of outlet, and 9,415.61 ft, crest of spillway, all of which are available for release. Figures given represent total contents at 2400 hours. Water is used for power development downstream.

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. 1389.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Southern California Edison Co., dated Aug. 18, 1981)

9,375	0	9,390	1,283	9,400	2,670	9,410	4,277
9,380	148	9,395	1,948	9,405	3,447	9,418	5,727
9,385	681						

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

DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1700	---	---	---	---	---	---	---	5500	5450	5310	4840
2	1500	---	---	---	---	---	---	---	5520	5440	5300	4820
3	1300	---	---	---	---	---	---	---	5520	5430	5290	4820
4	1110	---	---	---	---	---	---	---	5490	5410	5280	4700
5	938	---	---	---	---	---	---	---	5460	5370	5270	4460
6	771	---	---	---	---	---	---	---	5480	5370	5240	4230
7	612	---	---	---	---	---	---	---	5530	5340	5230	4010
8	454	---	---	---	---	---	---	---	5500	5360	5210	3760
9	308	---	---	---	---	---	---	---	5500	5360	5210	3530
10	167	---	---	---	---	---	---	---	5480	5350	5190	3280
11	24	---	---	---	---	---	---	---	5460	5320	5160	2910
12	---	---	---	---	---	---	---	---	5420	5320	5140	2470
13	---	---	---	---	---	---	---	---	5420	5310	5120	2050
14	---	---	---	---	---	---	---	---	5450	5310	5110	1670
15	---	---	---	---	---	---	---	2	5430	5310	5090	1300
16	---	---	---	---	---	---	---	3	5430	5310	5080	968
17	---	---	---	---	---	---	---	2	5420	5310	5060	658
18	---	---	---	---	---	---	---	9	5420	5310	5050	374
19	---	---	---	---	---	---	---	97	5370	5330	5030	105
20	---	---	---	---	---	---	---	220	5310	5340	5020	---
21	---	---	---	---	---	---	---	551	5240	5320	5030	---
22	---	---	---	---	---	---	---	960	5140	5330	5020	---
23	---	---	---	---	---	---	---	1440	5000	5320	5000	---
24	---	---	---	---	---	---	---	1960	5010	5310	4980	---
25	---	---	---	---	---	---	---	2470	5110	5320	4960	---
26	---	---	---	---	---	---	---	3000	5290	5320	4950	---
27	---	---	---	---	---	---	---	3610	5430	5310	4930	---
28	---	---	---	---	---	---	---	4410	5520	5340	4910	---
29	---	---	---	---	---	---	---	5050	5490	5320	4890	---
30	---	---	---	---	---	---	---	5440	5480	5310	4870	---
31	---	---	---	---	---	---	---	5500	---	5320	4860	---
MAX	---	---	---	---	---	---	---	---	5530	5450	5310	---
MIN	---	---	---	---	---	---	---	---	5000	5310	4860	---
a								9416.83	9416.67	9415.84	9413.30	
b									-20	-160	-460	

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





## 10287280 GEM LAKE NEAR JUNE LAKE, CA

LOCATION.—Lat 37° 45'07", long 119° 08'25", unsurveyed, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, in valve house, 100 ft downstream from left abutment of dam, on Rush Creek, and 4.0 mi southwest of town of June Lake.

DRAINAGE AREA.—22.0 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Reservoir is formed on natural lake by concrete dam completed in 1916. Usable capacity, 17,798 acre-ft, between elevations 8,964.33 ft, invert of outlet, and 9,053.64 ft, crest of upper spillway. Figures given represent usable contents. Water is used for power development downstream.

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. 1389.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 17,763 acre-ft, June 19, 2000, elevation, 9,053.51 ft; minimum, 128 acre-ft, several days in 2000, elevation, 8,970.38 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 17,600 acre-ft, June 17–19, maximum elevation, 9,052.92 ft, June 18; minimum, 2,540 acre-ft, Apr. 8, 9, minimum elevation, 8,991.22 ft, Apr. 8.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Southern California Edison Co., dated Sept. 1, 1981)

8,980	441	8,990	2,300	9,010	6,547	9,040	14,023
8,985	1,348	9,000	4,345	9,025	10,121	9,055	18,187

## RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16800	14100	10900	8770	6560	4540	2660	3010	9180	17100	16700	15400
2	16800	14000	10800	8700	6500	4460	2640	3020	10000	17000	16700	15200
3	16800	13800	10700	8630	6430	4390	2620	3020	10900	17000	16700	15100
4	16800	13600	10700	8550	6360	4310	2600	3020	11800	17000	16700	15000
5	16800	13500	10600	8480	6280	4230	2580	3040	12500	17000	16600	15100
6	16800	13300	10500	8400	6220	4150	2560	3050	13200	16900	16600	15200
7	16800	13200	10400	8340	6140	4080	2550	3060	13900	16900	16600	15200
8	16800	13100	10400	8260	6080	4000	2540	3060	14600	16800	16600	15300
9	16700	13100	10300	8190	6000	3930	2540	3070	15200	16800	16500	15300
10	16700	12800	10200	8120	5930	3850	2580	3080	15700	16700	16500	15300
11	16600	12600	10100	8060	5850	3780	2620	3090	16100	16700	16500	15500
12	16500	12500	10100	7980	5790	3710	2680	3130	16400	16700	16500	15700
13	16300	12300	9980	7910	5720	3670	2750	3200	16700	16600	16500	15900
14	16200	12200	9940	7840	5650	3610	2810	3300	17100	16600	16400	16100
15	16000	12100	9850	7770	5580	3610	2830	3400	17400	16500	16400	16200
16	15900	12000	9840	7690	5510	3610	2870	3560	17500	16500	16400	16300
17	15800	11900	9780	7620	5430	3440	2890	3770	17600	16600	16400	16400
18	15700	11900	9700	7540	5360	3370	2900	4010	17600	16600	16400	16500
19	15600	11800	9640	7470	5280	3300	2910	4270	17600	16600	16400	16500
20	15500	11700	9580	7400	5210	3240	2910	4590	17500	16600	16400	16500
21	15400	11700	9500	7320	5130	3170	2930	4820	17500	16600	16300	16300
22	15300	11600	9430	7250	5060	3110	2940	5010	17500	16600	16300	16100
23	15200	11500	9370	7190	4980	3060	2950	5230	17500	16600	16200	16100
24	15100	11400	9300	7110	4900	2990	2980	5460	17400	16600	16200	16000
25	15000	11300	9230	7040	4840	2940	2980	5680	17200	16600	16100	16000
26	14900	11300	9160	6960	4760	2890	2980	5910	17100	16700	16100	15900
27	14800	11200	9100	6900	4690	2840	2980	6170	17000	16700	16000	15800
28	14800	11100	9040	6830	4610	2780	2990	6480	17000	16700	15900	15800
29	14600	11000	8970	6760	---	2730	3000	6950	17000	16700	15800	15700
30	14500	11000	8920	6700	---	2690	3000	7560	17100	16700	15600	15600
31	14300	---	8840	6640	---	2680	---	8360	---	16700	15500	---
MAX	16800	14100	10900	8770	6560	4540	3000	8360	17600	17100	16700	16500
MIN	14300	11000	8840	6640	4610	2680	2540	3010	9180	16500	15500	15000
a	9041.07	9028.32	9019.77	9010.39	9001.24	8991.93	8993.55	9017.79	9051.05	9049.88	9045.44	9045.77
b	-2500	-3300	-2160	-2200	-2030	-1930	+320	+5360	+8740	-400	-1200	+100
CAL YR 2002	MAX 16800	MIN 2440	b -2460									
WTR YR 2003	MAX 17600	MIN 2540	b -1200									

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

## 10287281 RUSH CREEK BELOW GEM LAKE, NEAR JUNE LAKE, CA

LOCATION.—Lat 37° 45'05", long 119° 08'26", unsurveyed, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, in valve house, 100 ft downstream from left abutment of dam on Rush Creek, and 4.0 mi southwest of town of June Lake.

DRAINAGE AREA.—22.0 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1999 to current year. Unpublished records prior to October 1999 available in files of Southern California Edison Co.

GAGE.—Acoustic-velocity meter. Elevation of gage is 8,979 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow regulated by Gem Lake (station 10287280) 100 ft upstream.

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. 1389.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7.1 ft<sup>3</sup>/s, June 16–22, 2003; no flow for several days in April 2000.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3
2	1.3	1.3	1.2	1.3	1.2	1.2	1.2	1.3	1.3	1.3	1.2	1.3
3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.2	1.3
4	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.2	1.3	1.2	1.3
5	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.2	1.3	1.2	1.3
6	1.3	1.2	1.2	1.2	1.4	1.2	1.2	1.3	1.3	1.3	1.2	1.3
7	1.3	1.2	1.2	1.2	1.3	1.2	1.2	1.3	1.3	1.3	1.2	1.3
8	1.3	1.2	1.2	1.2	1.3	1.2	1.2	1.3	1.2	1.3	1.2	1.3
9	1.3	1.2	1.2	1.2	1.3	1.2	1.2	1.3	5.2	1.3	1.2	1.3
10	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.3	6.7	1.2	1.2	1.3
11	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	6.8	1.2	1.2	1.2
12	1.3	1.2	1.3	1.3	1.2	1.2	1.3	1.3	6.8	1.2	1.2	1.3
13	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	6.9	1.2	1.2	1.3
14	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	7.0	1.2	1.2	1.3
15	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	7.0	1.2	1.2	1.3
16	1.3	1.2	1.2	1.2	1.2	1.3	1.3	1.3	7.1	1.2	1.2	1.3
17	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	7.1	1.2	1.2	1.3
18	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	7.1	1.2	1.2	1.3
19	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	7.1	1.2	1.2	1.3
20	1.2	1.2	1.2	1.3	1.2	1.2	1.3	1.3	7.1	1.2	1.2	1.3
21	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	7.1	1.2	1.2	1.3
22	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	7.1	1.2	1.2	1.2
23	1.2	1.3	1.3	1.2	1.2	1.2	1.3	1.3	2.8	1.2	1.2	1.2
24	1.2	1.3	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.2	1.2	1.2
25	1.2	1.3	1.2	1.2	1.3	1.2	1.3	1.3	1.3	1.2	1.2	1.3
26	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.2	1.2	1.2
27	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.2	1.2	1.2
28	1.2	1.2	1.2	1.3	1.3	1.2	1.3	1.3	1.3	1.2	1.2	1.2
29	1.2	1.2	1.2	1.3	---	1.2	1.3	1.3	1.3	1.3	1.2	1.2
30	1.2	1.2	1.2	1.2	---	1.2	1.3	1.3	1.3	1.2	1.2	1.2
31	1.2	---	1.2	1.2	---	1.2	---	1.3	---	1.3	1.3	---
TOTAL	38.8	36.6	37.4	37.7	34.3	37.3	38.0	40.3	118.1	38.3	37.4	38.1
MEAN	1.25	1.22	1.21	1.22	1.23	1.20	1.27	1.30	3.94	1.24	1.21	1.27
MAX	1.3	1.3	1.3	1.3	1.4	1.3	1.3	1.3	7.1	1.3	1.3	1.3
MIN	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.2	1.2	1.2	1.2
AC-FT	77	73	74	75	68	74	75	80	234	76	74	76

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

	2000	2001	2002	2003	2000	2001	2002	2003	2000	2001	2002	2003
MEAN	1.25	1.20	1.21	1.21	1.21	1.20	1.07	1.52	2.56	1.24	1.24	1.25
MAX	1.30	1.24	1.22	1.22	1.23	1.21	1.30	2.23	3.94	1.30	1.30	1.27
(WY)	2002	2002	2002	2003	2003	2001	2001	2001	2003	2002	2002	2002
MIN	1.20	1.15	1.20	1.20	1.20	1.19	0.43	1.27	1.24	1.20	1.20	1.20
(WY)	2001	2000	2001	2001	2001	2000	2000	2000	2000	2000	2000	2000

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL TOTAL	532.8		532.3			
ANNUAL MEAN	1.46		1.46		1.41	
HIGHEST ANNUAL MEAN					1.47 2002	
LOWEST ANNUAL MEAN					1.31 2001	
HIGHEST DAILY MEAN	6.2	Jun 17	7.1	Jun 16	7.1	Jun 16 2003
LOWEST DAILY MEAN	1.2	Jan 1	1.2	Oct 17	0.00	Apr 5 2000
ANNUAL SEVEN-DAY MINIMUM	1.2	Jan 5	1.2	Oct 17	0.00	Apr 5 2000
MAXIMUM PEAK FLOW			7.1		7.1 Jun 17 2003	
ANNUAL RUNOFF (AC-FT)	1060		1060		1020	
10 PERCENT EXCEEDS	1.3		1.3		1.3	
50 PERCENT EXCEEDS	1.3		1.2		1.2	
90 PERCENT EXCEEDS	1.2		1.2		1.2	

10287285 AGNEW LAKE NEAR JUNE LAKE, CA

LOCATION.—Lat 37° 45' 30", long 119° 07' 52", unsurveyed, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, in boat house, at left abutment of dam on Rush Creek, and 3.3 mi southwest of town of June Lake.

DRAINAGE AREA.—23.3 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Reservoir is formed on natural lake by concrete dam completed in 1916. Usable capacity, 810 acre-ft, between elevations 8,470.00 ft, invert of outlet, and 8,495.88 ft, crest of spillway. Figures given represent usable contents. Water is used for power development downstream.

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. 1389.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 913 acre-ft, estimated, June 3–10, 2003, elevation unknown; minimum, 22 acre-ft, Feb. 28, 1991, elevation, 8,470.97 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 913 acre-ft, estimated, June 3–10, elevation unknown; minimum, 134 acre-ft, Mar. 11, 12, minimum elevation, 8,475.47 ft, Mar.11.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Southern California Edison Co., dated Aug. 25, 1981)

8,470	0	8,480	260	8,490	587	8,498	896
8,475	122	8,485	415				

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	790	160	167	167	151	141	147	192	e645	801	806	785
2	789	159	166	166	150	140	149	195	e709	799	805	783
3	789	159	166	166	150	139	149	197	e913	800	805	786
4	790	158	165	165	149	138	150	198	e913	802	803	784
5	791	158	164	164	149	138	150	199	e913	803	802	785
6	791	158	164	164	149	137	151	200	e913	804	800	783
7	792	162	163	163	148	137	151	202	e913	804	799	782
8	792	176	163	163	148	136	153	204	e913	805	797	781
9	793	177	162	162	147	135	154	205	e913	804	795	780
10	793	176	161	162	146	135	155	206	e913	803	794	779
11	793	176	160	162	146	134	157	208	e816	801	793	779
12	793	176	160	161	146	134	160	211	e815	803	792	778
13	793	175	160	160	146	136	164	216	e816	802	791	778
14	793	175	162	160	146	135	168	223	e819	801	790	778
15	793	175	161	159	145	139	169	229	820	799	789	777
16	752	174	167	159	145	139	171	236	834	800	789	775
17	684	174	168	158	145	139	172	246	839	798	791	775
18	616	173	166	158	144	139	172	252	838	799	791	775
19	550	173	169	157	144	139	174	264	835	801	789	774
20	486	172	169	157	143	139	175	276	833	802	790	774
21	423	172	168	156	142	139	177	291	831	802	790	773
22	361	171	167	156	141	140	178	313	829	803	789	773
23	301	171	167	155	141	141	179	335	828	803	789	773
24	241	171	167	154	141	140	182	362	821	803	789	772
25	206	170	166	154	142	141	183	388	813	804	787	772
26	188	169	165	154	141	142	184	420	811	803	789	771
27	178	168	165	153	141	142	185	457	811	805	788	772
28	167	168	167	153	141	142	188	501	810	805	785	771
29	163	167	167	152	---	143	189	537	805	805	785	771
30	161	167	167	152	---	143	191	577	805	807	786	769
31	160	---	167	151	---	144	---	615	---	806	786	---
MAX	793	177	169	167	151	144	191	615	913	807	806	786
MIN	160	158	160	151	141	134	147	192	645	798	785	769
a	8476.46	8476.71	8476.71	8476.13	8475.72	8475.85	8477.57	8490.78	8495.76	8495.77	8495.27	8494.84
b	-627	+7	0	-16	-10	+3	+47	+424	+190	+1	-20	-17

CAL YR 2002 MAX 811 MIN 30 b +131  
WTR YR 2003 MAX 913 MIN 134 b -18

e Estimated.  
a Elevation, in feet, at end of month.  
b Change in contents, in acre-feet.

## 10287289 RUSH CREEK FLUME BELOW AGNEW LAKE, NEAR JUNE LAKE, CA

LOCATION.—Lat 37° 45' 33", long 119° 07' 47", in NE 1/4 SW 1/4 sec.20, T.2 S., R.26 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, on left bank, 600 ft downstream from Agnew Lake Dam, and 3.4 mi southwest of town of June Lake.

DRAINAGE AREA.—23.3 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1990 to current year. If records for Rush Creek Powerplant Tailrace (station 10287300) are combined with this record, a record equivalent to that published since October 1951 as "Rush Creek below Agnew Lake" (station 10287290) can be obtained. Monthly and yearly mean discharges prior to October 1969, published in WSP 2127.

GAGE.—Water-stage recorder and Parshall flume. A 4-ft Cippolletti weir is set in the Parshall flume at times. Elevation of gage is 8,440 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow regulated for power development by Waugh, Gem, and Agnew Lakes (stations 10287260, 10287280, and 10287285, respectively). Most of the water is diverted at either Gem or Agnew Lakes to Rush Creek Powerplant Tailrace via Rush Creek Powerplant. Interruption in record (Dec. 14 to Apr. 2) due to equipment malfunction.

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. 1389.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 441 ft<sup>3</sup>/s, July 30, 1995, gage height, 4.90 ft; no flow for many days in some years.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	2.3	2.0	---	---	---	---	1.6	1.8	6.1	2.4	1.8
2	1.6	2.3	2.0	---	---	---	---	1.6	1.8	4.6	2.9	1.8
3	1.6	2.3	2.0	---	---	---	1.7	1.6	1.8	2.8	2.4	1.9
4	1.6	2.3	2.0	---	---	---	1.8	1.6	1.8	2.3	3.0	2.0
5	1.6	2.3	2.0	---	---	---	1.8	1.6	1.8	3.1	2.8	1.8
6	1.6	2.1	2.0	---	---	---	1.8	1.7	2.0	2.9	3.1	1.8
7	1.6	1.7	2.0	---	---	---	1.8	1.6	2.0	3.0	2.7	1.9
8	1.6	2.8	2.0	---	---	---	1.8	1.6	2.0	2.5	3.3	2.0
9	1.6	2.0	1.9	---	---	---	1.8	1.6	2.5	3.1	2.6	1.9
10	1.7	1.7	2.0	---	---	---	1.8	1.6	12	3.3	2.9	2.0
11	1.7	2.0	2.0	---	---	---	1.8	1.8	18	3.1	2.5	2.0
12	1.6	2.0	2.0	---	---	---	1.7	1.8	18	2.8	2.7	2.0
13	1.6	2.0	1.8	---	---	---	1.8	1.8	17	2.7	2.3	2.0
14	1.6	2.0	---	---	---	---	1.8	2.0	17	2.8	2.2	2.0
15	1.6	2.0	---	---	---	---	1.8	2.1	19	2.7	2.0	2.0
16	3.8	1.9	---	---	---	---	1.8	2.0	88	2.5	2.0	2.3
17	4.4	1.9	---	---	---	---	1.8	2.0	150	2.6	2.0	2.2
18	4.1	1.9	---	---	---	---	1.8	2.0	166	2.4	2.0	2.0
19	3.6	2.0	---	---	---	---	1.8	2.0	158	2.2	2.1	2.0
20	3.4	2.0	---	---	---	---	1.8	2.0	128	2.3	2.3	2.0
21	3.0	2.0	---	---	---	---	1.8	1.9	107	2.3	2.3	2.0
22	2.9	2.0	---	---	---	---	1.8	1.8	95	2.2	2.3	2.0
23	2.7	2.0	---	---	---	---	1.8	1.8	84	2.4	2.1	2.0
24	2.6	2.0	---	---	---	---	1.4	1.8	63	2.5	2.0	2.0
25	2.3	1.9	---	---	---	---	1.2	1.8	21	2.3	2.0	2.0
26	2.3	1.9	---	---	---	---	1.7	1.8	6.0	2.4	2.2	2.0
27	2.3	2.0	---	---	---	---	1.8	1.8	5.4	2.3	2.2	2.0
28	2.3	2.0	---	---	---	---	1.8	1.8	5.5	2.5	1.9	2.0
29	2.1	2.0	---	---	---	---	1.8	1.9	6.9	2.3	1.8	2.0
30	2.2	2.0	---	---	---	---	1.8	1.7	4.6	2.5	1.8	2.3
31	2.3	---	---	---	---	---	---	1.8	---	3.3	1.8	---
TOTAL	70.5	61.3	---	---	---	---	---	55.5	1206.9	86.8	72.6	59.7
MEAN	2.27	2.04	---	---	---	---	---	1.79	40.2	2.80	2.34	1.99
MAX	4.4	2.8	---	---	---	---	---	2.1	166	6.1	3.3	2.3
MIN	1.6	1.7	---	---	---	---	---	1.6	1.8	2.2	1.8	1.8
AC-FT	140	122	---	---	---	---	---	110	2390	172	144	118
a	4380	3210	2180	2280	2050	2260	984	891	4100	3730	2280	4340

a Diversion, in acre-feet, to Rush Creek Powerplant Tailrace (station 10287300), provided by Southern California Edison Co.

10287289 RUSH CREEK FLUME BELOW AGNEW LAKE, NEAR JUNE LAKE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.93	2.02	1.10	1.28	1.07	1.17	1.53	1.69	20.7	37.7	8.59	1.23
MAX	3.06	4.89	2.31	4.72	2.18	2.45	2.99	3.89	81.8	218	89.8	2.47
(WY)	1996	1999	2000	1997	2002	2002	1996	1998	1995	1995	1995	2000
MIN	0.085	0.39	0.23	0.27	0.19	0.13	0.040	0.045	0.049	0.031	0.005	0.015
(WY)	1995	1994	1991	1991	1991	1995	1994	1994	1992	1994	1994	1994

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1991 - 2003
ANNUAL MEAN			6.86
HIGHEST ANNUAL MEAN			33.6 1995
LOWEST ANNUAL MEAN			0.41 1994
HIGHEST DAILY MEAN			397 Jul 30 1995
LOWEST DAILY MEAN			0.00 Oct 27 1990
ANNUAL SEVEN-DAY MINIMUM			0.00 Mar 12 1991
MAXIMUM PEAK FLOW			441 Jul 30 1995
MAXIMUM PEAK STAGE			4.90 Jul 30 1995
ANNUAL RUNOFF (AC-FT)			4970
ANNUAL DIVERSION (AC-FT) a	28830	32670	
10 PERCENT EXCEEDS			4.2
50 PERCENT EXCEEDS			1.4
90 PERCENT EXCEEDS			0.10

a Diversion, in acre-feet, to Rush Creek Powerplant Tailrace (station 10287300), provided by Southern California Edison Co.

## 10287650 SADDLEBAG LAKE NEAR LEE VINING, CA

LOCATION.—Lat 37° 57' 56", long 119° 16' 18", unsurveyed, T.1 N., R.24 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, near left abutment of dam, on Lee Vining Creek, and 8.2 mi west of Lee Vining.

DRAINAGE AREA.—4.55 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

REVISED RECORDS.—WDR CA-98-1: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Reservoir is formed on natural lake by rock-fill dam completed in 1921. Usable capacity, 9,789 acre-ft, between elevations 10,048.80 ft, invert of outlet, and 10,090.40 ft, crest of spillway. At times, a cofferdam 600 ft upstream affects the storage below about 800 acre-ft, due to the constriction of flow past the cofferdam. Figures given represent usable contents. Water is used for power development downstream.

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. 1388.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 9,454 acre-ft, Aug. 24, 25, 1995, elevation, 10,089.26 ft; minimum, 558 acre-ft, Apr. 5, 23, 24, 27, 1995, elevation, 10,051.84 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 6,540 acre-ft, Aug. 4–7, maximum elevation, 10,078.67 ft, Aug. 5; minimum, 1,740 acre-ft, Apr. 9–11, minimum elevation, 10,057.88 ft, Apr. 10.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Southern California Edison Co., dated Feb. 8, 1985)

10,050	217	10,060	2,172	10,080	6,890	10,091	9,970
10,055	1,163	10,070	4,392				

## RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5080	4610	4320	3880	3060	2440	1850	1780	3320	5660	6480	6450
2	5060	4600	4300	3880	3040	2410	1850	1780	3450	5690	6500	6440
3	5040	4580	4280	3880	3010	2390	1830	1780	3580	5720	6520	6460
4	5030	4570	4260	3880	2990	2370	1820	1790	3710	5750	6540	6460
5	5020	4550	4240	3880	2960	2340	1810	1790	3820	5780	6540	6460
6	5000	4550	4220	3720	2940	2320	1790	1780	3920	5820	6540	6440
7	4990	4520	4200	3700	2910	2300	1770	1780	4040	5850	6540	6420
8	4980	4680	4190	3670	2890	2280	1760	1800	4150	5870	6520	6400
9	4960	4680	4170	3650	2860	2250	1740	1800	4270	5890	6520	6380
10	4940	4680	4150	3630	2840	2230	1740	1800	4370	5920	6520	6370
11	4930	4680	4130	3600	2820	2210	1740	1800	4460	5940	6510	6350
12	4910	4680	4100	3580	2800	2190	1750	1800	4550	5970	6500	6330
13	4900	4680	4090	3560	2780	2170	1780	1800	4630	5980	6500	6310
14	4890	4620	4090	3530	2760	2150	1790	1820	4730	6010	6500	6290
15	4870	4610	4080	3500	2730	2160	1790	1820	4820	6030	6490	6260
16	4860	4590	4120	3480	2720	2140	1790	1830	4930	6060	6490	6250
17	4840	4580	4130	3450	2700	2120	1790	1850	5030	6080	6490	6220
18	4820	4570	4100	3420	2670	2100	1800	1870	5120	6110	6490	6200
19	4810	4550	4100	3400	2670	2080	1790	1900	5190	6140	6480	6180
20	4790	4540	4080	3370	2630	2060	1790	1930	5250	6170	6490	6160
21	4780	4520	4050	3340	2610	2040	1790	2000	5290	6200	6490	6140
22	4770	4500	4030	3320	2580	2030	1790	2060	5330	6230	6480	6130
23	4750	4480	4000	3290	2560	2000	1780	2140	5370	6260	6480	6120
24	4740	4460	3980	3260	2540	1980	1790	2220	5400	6280	6470	6120
25	4720	4440	3950	3240	2520	1960	1790	2320	5420	6300	6460	6120
26	4710	4410	3930	3220	2500	1950	1780	2410	5460	6320	6460	6120
27	4690	4390	3900	3190	2480	1930	1790	2530	5500	6350	6460	6110
28	4670	4380	3900	3160	2460	1910	1790	2680	5530	6390	6460	6110
29	4660	4350	3890	3140	---	1890	1790	2880	5590	6410	6450	6110
30	4650	4340	3880	3120	---	1880	1790	3060	5640	6430	6450	6100
31	4630	---	3880	3080	---	1860	---	3200	---	6460	6450	---
MAX	5080	4680	4320	3880	3060	2440	1850	3200	5640	6460	6540	6460
MIN	4630	4340	3880	3080	2460	1860	1740	1780	3320	5660	6450	6100
a	10070.99	10069.77	10067.78	10064.25	10061.35	10058.48	10058.13	10064.78	10075.11	10078.35	10078.31	10076.94
b	-460	-290	-460	-800	-620	-600	-70	+1410	+2440	+820	-10	-350

CAL YR 2002 MAX 5640 MIN 1460 b +710  
WTR YR 2003 MAX 6540 MIN 1740 b +1010

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

10287655 LEE VINING CREEK BELOW SADDLEBAG LAKE, NEAR LEE VINING, CA

LOCATION.—Lat 37° 57' 52", long 119° 16' 20", in SE 1/4 SE 1/4 sec.12, T.1 N., R.24 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, on left bank, 500 ft downstream from Saddlebag Lake Dam, and 8.1 mi west of Lee Vining.

DRAINAGE AREA.—4.43 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1997 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 10,050 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow regulated by Saddlebag Lake (station 10287650) 500 ft upstream.

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. 1388.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 33 ft<sup>3</sup>/s, Mar. 23, 1998, gage height, 2.99 ft; minimum daily, 3.0 ft<sup>3</sup>/s, May 31, 2001, July 15–17, 2003.

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

Table with 13 columns (DAY, OCT, NOV, DEC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP) and 31 rows of daily mean discharge values. Includes a summary row for totals and means.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2003, BY WATER YEAR (WY)

Table with 12 columns representing months and 4 rows representing statistical measures: MEAN, MAX, MIN, and WY (Water Year).

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1998 - 2003

Summary statistics table with 4 columns corresponding to the periods above and rows for various metrics like ANNUAL TOTAL, ANNUAL MEAN, HIGHEST ANNUAL MEAN, etc.

e Estimated.

## 10287700 TIOGA LAKE NEAR LEE VINING, CA

LOCATION.—Lat 37° 55' 41", long 119° 15' 01", in SE 1/4 SE 1/4 sec.19, T.1 N., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, at left abutment of dam, on Glacier Creek, and 7.4 mi west of Lee Vining.

DRAINAGE AREA.—3.67 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—No records computed during the winter months. Reservoir is formed on natural lake by rock-fill dam completed in 1928. Usable capacity, 1,254 acre-ft, between elevations 9,626.72 ft, invert of outlet, and 9,650.28 ft, crest of spillway. Figures given represent usable contents. Water is used for power development downstream.

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. 1388.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Southern California Edison Co., dated Aug. 19, 1981)

9,626.72	0	9,635	356	9,646	962	9,652	1,383
9,630	131	9,640	609				

## RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1130	571	---	---	---	---	---	---	1060	1250	1260	1240
2	1130	554	---	---	---	---	---	---	1110	1250	1260	1240
3	1130	538	---	---	---	---	---	---	1160	1250	1260	1240
4	1120	521	---	---	---	---	---	---	1210	1240	1260	1240
5	1090	505	---	---	---	---	---	---	1230	1240	1260	1240
6	1070	488	---	---	---	---	---	---	1250	1240	1260	1240
7	1050	480	---	---	---	---	---	---	1270	1230	1260	1240
8	1030	484	---	---	---	---	---	---	1270	1230	1260	1240
9	1010	484	---	---	---	---	---	---	1270	1220	1260	1230
10	986	484	---	---	---	---	---	---	1270	1220	1260	1230
11	965	484	---	---	---	---	---	111	1260	1210	1260	1230
12	944	484	---	---	---	---	---	112	1260	1210	1260	1230
13	924	484	---	---	---	---	---	114	1250	1200	1260	1220
14	904	405	---	---	---	---	---	118	1260	1200	1260	1220
15	885	392	---	---	---	---	---	119	1270	1210	1260	1220
16	866	378	---	---	---	---	---	122	1270	1210	1260	1210
17	846	364	---	---	---	---	---	126	1260	1220	1260	1210
18	828	351	---	---	---	---	---	131	1260	1220	1260	1210
19	808	311	---	---	---	---	---	141	1260	1230	1260	1210
20	789	256	---	---	---	---	---	157	1260	1240	1260	1200
21	770	206	---	---	---	---	---	184	1260	1250	1260	1200
22	751	166	---	---	---	---	---	231	1260	1250	1260	1200
23	732	138	---	---	---	---	---	293	1260	1260	1260	1200
24	713	125	---	---	---	---	---	364	1260	1260	1260	1190
25	695	119	---	---	---	---	---	445	1260	1260	1250	1190
26	677	116	---	---	---	---	---	530	1260	1260	1250	1180
27	660	114	---	---	---	---	---	627	1260	1260	1250	1180
28	642	113	---	---	---	---	---	751	1260	1260	1250	1180
29	625	113	---	---	---	---	---	874	1260	1260	1250	1170
30	606	113	---	---	---	---	---	961	1260	1260	1250	1170
31	588	---	---	---	---	---	---	1010	---	1260	1250	---
MAX	1130	571	---	---	---	---	---	---	1270	1260	1260	1240
MIN	588	113	---	---	---	---	---	---	1060	1200	1250	1170
a	9639.61	9629.54						9646.78	9650.32	9650.42	9650.18	9649.14
b	-542	-475							+250	0	-10	-80

WTR YR 2003 b +40

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



## 10287720 GLACIER CREEK BELOW TIOGA LAKE, NEAR LEE VINING, CA

LOCATION.—Lat 37° 55' 41", long 119° 15' 01", in SE 1/4 SE 1/4 sec.19, T.1 N., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, on left bank, 300 ft downstream from Tioga Lake Dam, and 7.3 mi west of Lee Vining.

DRAINAGE AREA.—3.67 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1997 to current year. Unpublished records prior to October 1997 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 9,620 ft above NGVD of 1929, from topographic map.

REMARKS.—Records not computed for the winter months. Flow regulated by Tioga Lake (station 10287700) 300 ft upstream.

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. 1388. Contents not rounded to U.S. Geological Survey standards.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	10	---	---	---	---	---	---	31	8.2	8.4	3.5
2	2.1	9.9	---	---	---	---	---	---	32	7.8	8.2	3.5
3	2.1	9.7	---	---	---	---	---	---	33	7.8	7.3	3.5
4	7.8	9.6	---	---	---	---	---	---	33	7.8	6.9	3.5
5	13	9.5	---	---	---	---	---	---	33	7.8	6.3	3.5
6	13	9.3	---	---	---	---	---	1.4	33	7.8	5.7	3.5
7	13	9.2	---	---	---	---	---	1.4	34	7.8	5.3	3.5
8	13	9.2	---	---	---	---	---	1.8	41	7.7	5.1	3.6
9	13	9.1	---	---	---	---	---	1.7	42	7.8	4.5	3.5
10	13	9.0	---	---	---	---	---	1.5	39	7.8	4.2	3.6
11	12	8.9	---	---	---	---	---	1.5	36	7.8	4.2	3.6
12	12	8.7	---	---	---	---	---	1.6	33	7.7	4.2	3.6
13	12	8.7	---	---	---	---	---	2.0	27	7.8	3.9	3.7
14	12	8.5	---	---	---	---	---	3.1	22	5.5	3.8	3.6
15	12	8.3	---	---	---	---	---	3.5	25	3.5	3.6	3.7
16	12	8.2	---	---	---	---	---	4.2	26	3.5	3.5	3.7
17	12	8.0	---	---	---	---	---	5.4	24	3.5	3.5	3.7
18	12	7.9	---	---	---	---	---	6.7	21	3.5	3.5	3.7
19	12	22	---	---	---	---	---	7.5	15	3.5	3.5	3.7
20	12	30	---	---	---	---	---	8.4	13	3.5	3.4	3.7
21	11	26	---	---	---	---	---	9.1	13	3.5	3.6	3.8
22	11	22	---	---	---	---	---	5.6	12	3.5	3.9	3.7
23	11	14	---	---	---	---	---	3.3	11	4.0	3.4	3.7
24	11	7.7	---	---	---	---	---	3.6	10	6.3	3.3	3.8
25	11	4.5	---	---	---	---	---	4.1	9.1	8.1	3.4	3.7
26	11	2.9	---	---	---	---	---	4.4	8.6	7.3	3.4	3.8
27	11	2.1	---	---	---	---	---	4.9	8.6	7.7	3.3	3.8
28	11	1.7	---	---	---	---	---	5.5	8.8	9.3	3.3	3.8
29	11	1.4	---	---	---	---	---	5.8	9.0	8.4	3.3	3.8
30	10	1.3	---	---	---	---	---	20	8.6	7.5	3.4	3.7
31	10	---	---	---	---	---	---	31	---	7.9	3.5	---
TOTAL	331.0	297.3	---	---	---	---	---	---	691.7	201.6	136.8	109.5
MEAN	10.7	9.91	---	---	---	---	---	---	23.1	6.50	4.41	3.65
MAX	13	30	---	---	---	---	---	---	42	9.3	8.4	3.8
MIN	2.0	1.3	---	---	---	---	---	---	8.6	3.5	3.3	3.5
AC-FT	657	590	---	---	---	---	---	---	1370	400	271	217

## 10287760 ELLERY LAKE NEAR LEE VINING, CA

LOCATION.—Lat 37° 56'08", long 119° 13'50", in SW 1/4 NW 1/4 sec.21, T.1 N., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, in valve house, at base of Rhinedollar Dam, on Lee Vining Creek, and 6.3 mi west of town of Lee Vining.

DRAINAGE AREA.—16.7 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by Southern California Edison Co.).

REMARKS.—Reservoir is formed on natural lake by rock-fill dam completed in 1927. Usable capacity, 493 acre-ft, between elevations 9,478.53 ft, invert of outlet, and 9,492.53 ft, crest of spillway. Radial gates are occasionally closed, which increases elevation to 9,496.53 ft and capacity to 749 acre-ft. Lake receives water from Saddlebag and Tioga Lakes (stations 10287650 and 10287700) and releases it via Poole Powerplant Conduit (station 10287762) to Poole Powerplant. Figures given represent usable contents.

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. 1388.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 677 acre-ft, Jan. 2, 1997, elevation, 9,495.43 ft; minimum, 161 acre-ft, Oct. 22, 2001, elevation, 9,486.46 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 588 acre-ft, May 29, 30, elevation, 9,494.04 ft; minimum, 350 acre-ft, Nov. 28, Apr. 23, elevation, 9,490.09 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by Southern California Edison Co., dated Aug. 18, 1981)

	9,485	96	9,489	290	9,493	522	9,497	780				
RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003												
DAILY OBSERVATION AT 2400 HOURS												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	444	480	369	440	437	468	483	375	572	421	460	434
2	445	474	374	440	441	466	480	377	578	418	452	435
3	446	470	380	440	451	464	476	378	576	435	462	444
4	455	465	372	440	460	462	472	381	574	445	427	453
5	476	460	376	440	468	458	468	382	565	459	419	454
6	496	458	378	435	476	454	462	386	561	477	424	458
7	504	465	381	434	480	452	455	390	567	470	437	458
8	505	e465	383	435	480	449	451	393	576	450	446	456
9	505	e465	388	440	480	446	451	400	565	432	451	453
10	505	e465	386	447	473	445	459	407	555	422	448	450
11	505	e465	386	449	462	442	474	419	549	409	449	448
12	505	e465	393	449	456	446	481	432	539	389	451	443
13	505	e465	404	451	452	455	476	458	524	361	446	441
14	505	e465	415	451	445	465	468	473	528	376	442	438
15	505	472	425	453	440	468	455	447	531	421	441	437
16	505	455	440	458	434	468	441	442	531	468	445	431
17	504	442	459	462	427	471	422	455	527	485	448	424
18	505	441	481	467	424	474	402	470	520	479	451	425
19	504	454	485	470	433	474	381	481	506	460	450	426
20	504	468	469	475	444	470	366	467	490	458	454	427
21	502	486	454	476	455	471	352	449	469	452	458	428
22	503	500	444	470	463	471	352	478	435	447	463	430
23	503	482	442	465	473	471	350	513	400	437	463	432
24	503	455	442	459	477	473	353	536	403	439	462	433
25	502	422	442	453	476	469	359	535	420	437	452	432
26	503	386	444	448	474	471	359	536	459	425	452	434
27	503	355	444	444	473	469	361	549	494	439	451	434
28	504	350	442	438	471	470	366	575	489	437	446	433
29	504	358	440	433	---	470	369	588	480	425	442	435
30	505	365	440	432	---	476	370	588	449	440	435	440
31	496	---	440	435	---	476	---	573	---	463	437	---
MAX	505	500	485	476	480	476	483	588	578	485	463	458
MIN	444	350	369	432	424	442	350	375	400	361	419	424
a	9492.57	9490.34	9491.64	9491.55	9492.17	9492.24	9490.43	9493.80	9491.80	9492.03	9491.58	9491.64
b	+54	-131	+75	-5	+36	+5	-106	+203	-124	+14	-26	+3
CAL YR 2002	MAX 576	MIN 350	b -37									
WTR YR 2003	MAX 588	MIN 350	b -2									

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

## 10287770 LEE VINING CREEK BELOW RHINEDOLLAR DAM, NEAR LEE VINING, CA

LOCATION.—Lat 37° 56' 10", long 119° 13' 48", in SW 1/4 NW 1/4 sec.21, T.1 N., R.25 E., Mono County, Hydrologic Unit 18090101, Inyo National Forest, on left bank, 100 ft downstream from Rhinedollar Dam Spillway, and 6.3 mi west of Lee Vining.

DRAINAGE AREA.—16.7 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1990 to current year. Unpublished records prior to October 1990 available in files of Southern California Edison Co.

GAGE.—Water-stage recorder and Parshall flume. Elevation of gage is 9,450 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1994, at datum 1.00 ft lower.

REMARKS.—Flow regulated for power development by Saddlebag, Tioga, and Ellery Lakes (stations 10287650, 10287700, and 10287760, respectively). Most of the water is diverted at Ellery Lake to Poole Powerplant via Poole Powerplant Conduit intake (station 10287762).

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. 1388.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 310 ft<sup>3</sup>/s, July 9, 1995, gage height, 4.63 ft, maximum gage height, 5.52 ft, Mar. 22, 1993 (backwater from snow); no flow for many days each year.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	105	e0.00	e0.00	e0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	105	e0.00	e0.00	e0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	116	e0.00	e0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	116	e0.00	e0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100	e0.00	e0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	83	e0.00	e0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	88	e0.00	e0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	103	e0.00	e0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	107	e0.00	e0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	86	e0.00	e0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	68	e0.00	e0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	59	e0.00	e0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	45	e0.00	e0.00	0.00
14	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.00	39	e0.00	e0.00	0.00
15	2.4	0.01	0.00	0.00	0.00	0.00	0.00	0.00	49	e0.00	e0.00	0.00
16	6.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56	e0.00	e0.00	0.00
17	6.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	50	e0.00	e0.00	0.00
18	6.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36	e0.00	e0.00	0.00
19	6.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25	e0.00	e0.00	0.00
20	6.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.7	e0.00	e0.00	0.00
21	5.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	e0.00	e0.00	0.00
22	6.4	1.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	0.00
23	6.9	0.88	0.00	0.00	0.00	0.00	0.00	2.7	0.00	e0.00	e0.00	0.00
24	6.8	0.00	0.00	0.00	0.00	0.00	0.00	20	0.00	e0.00	e0.00	0.00
25	6.6	0.00	0.00	0.00	0.00	0.00	0.00	40	0.00	e0.00	e0.00	0.00
26	6.5	0.00	0.00	0.00	0.00	0.00	0.00	37	0.00	e0.00	e0.00	0.00
27	6.8	0.00	0.00	0.00	0.00	0.00	0.00	45	0.11	e0.00	e0.00	0.00
28	6.6	0.00	0.00	0.00	0.00	0.00	0.00	79	4.2	e0.00	e0.00	0.00
29	6.5	0.00	0.00	0.00	---	0.00	0.00	118	0.18	e0.00	e0.00	0.00
30	6.3	0.00	0.00	0.00	---	0.00	0.00	136	0.00	e0.00	e0.00	0.00
31	6.3	---	0.00	0.00	---	0.00	---	122	---	e0.00	e0.00	---
TOTAL	105.50	3.17	0.00	0.00	0.00	0.00	0.00	599.70	1447.47	0.00	0.00	0.00
MEAN	3.40	0.11	0.000	0.000	0.000	0.000	0.000	19.3	48.2	0.000	0.000	0.000
MAX	6.9	1.6	0.00	0.00	0.00	0.00	0.00	136	116	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	209	6.3	0.00	0.00	0.00	0.00	0.00	1190	2870	0.00	0.00	0.00
a	735	1420	1060	1230	1030	1190	1170	3400	5460	3040	1100	845

e Estimated.

a Diversion, in acre-feet, to Poole Powerplant (station 10287762), provided by Southern California Edison Co.

## 10287770 LEE VINING CREEK BELOW RHINEDOLLAR DAM, NEAR LEE VINING, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.47	0.21	0.000	1.48	0.46	0.39	1.16	9.09	29.2	19.2	1.10	0.83
MAX	5.65	1.49	0.000	19.3	5.40	2.62	14.1	41.1	58.1	130	9.89	5.53
(WY)	1995	2000	1991	1997	1996	1992	1996	1997	1995	1995	1995	2000
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1992	1991	1991	1991	1992	1991	1991	1994	1992	1991	1991	1991

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1991 - 2003	
ANNUAL TOTAL	688.02		2155.84			
ANNUAL MEAN	1.88		5.91		5.39	
HIGHEST ANNUAL MEAN					17.3	
LOWEST ANNUAL MEAN					0.27	
HIGHEST DAILY MEAN	68	Jun 7	136	May 30	271	Jul 9 1995
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1990
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1990
MAXIMUM PEAK FLOW			178	May 30	310	Jul 9 1995
MAXIMUM PEAK STAGE			3.82	May 30	5.52	Mar 22 1993
ANNUAL RUNOFF (AC-FT)	1360		4280		3910	
ANNUAL DIVERSION (AC-FT) a	20570		21680			
10 PERCENT EXCEEDS	3.3		6.4		8.0	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

a Diversion, in acre-feet, to Poole Powerplant (station 10287762), provided by Southern California Edison Co.

TIJUANA RIVER BASIN

11012000 COTTONWOOD CREEK ABOVE TECATE CREEK, NEAR DULZURA, CA

LOCATION.—Lat 32° 34' 30", long 116° 45' 11", in NW 1/4 SW 1/4 sec.26, T.18 S., R.2 E., San Diego County, Hydrologic Unit 18070305, on right bank, 0.8 mi upstream from confluence with Tecate Creek, 5.1 mi south of Dulzura, and 11.3 mi downstream from Barrett Lake.

DRAINAGE AREA.—310 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1936 to current year.

REVISED RECORDS.—WSP 1245: 1937–1938. WSP 1928: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 569.40 ft above NGVD of 1929 (levels by International Boundary and Water Commission).

REMARKS.—Records fair. Flow regulated by Morena Reservoir, capacity, 50,210 acre-ft, and Barrett Lake (station 11011000), capacity, 44,760 acre-ft. Water diverted from Barrett Lake through San Diego and Dulzura Conduits to Lower Otay Lake (station 11014550).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,700 ft<sup>3</sup>/s, Feb. 21, 1980, gage height, 11.15 ft, from rating curve extended above 8,700 ft<sup>3</sup>/s; no flow for part of each year.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	3.0	0.22	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	2.0	0.24	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	1.5	0.21	0.08	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	1.4	0.21	0.05	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	1.3	0.21	0.03	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	1.0	0.16	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.86	0.11	0.03	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.75	0.06	0.11	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.62	0.05	0.08	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.48	0.02	0.03	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.39	0.01	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	1.8	0.14	0.09	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.94	1.2	0.44	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.44	14	0.53	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.31	12	0.44	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.15	7.6	0.39	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.04	4.9	0.28	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.01	3.5	0.21	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	2.7	0.18	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	2.2	0.18	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	1.8	0.17	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	1.6	0.09	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.25	1.4	0.05	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	1.6	1.2	0.01	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	3.3	1.1	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	4.8	0.69	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.44	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.32	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.25	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	13.64	70.81	4.56	0.41	0.00	0.00	0.00	0.00
MEAN	0.0000	0.0000	0.0000	0.0000	0.49	2.28	0.15	0.013	0.0000	0.0000	0.0000	0.0000
MAX	0.00	0.00	0.00	0.00	4.8	14	0.53	0.11	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	27	140	9.0	0.8	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2003, BY WATER YEAR (WY)

	1937	1937	1950	1951	1951	1951	1955	1947	1940	1939	1938	1937
MEAN	1.10	0.72	2.32	17.9	49.7	66.9	34.0	12.0	4.34	1.34	1.04	1.05
MAX	66.0	18.8	40.5	605	1200	1443	676	296	99.5	47.5	24.4	57.4
(WY)	1994	1984	1984	1993	1980	1983	1941	1983	1980	1980	1980	1993
MIN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
(WY)	1937	1937	1950	1951	1951	1951	1955	1947	1940	1939	1938	1937

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1937 - 2003

ANNUAL TOTAL	0.00	89.42		
ANNUAL MEAN	0.0000	0.24	15.9	
HIGHEST ANNUAL MEAN			243	1983
LOWEST ANNUAL MEAN			0.000	1956
HIGHEST DAILY MEAN	0.00	Jan 1	14	Mar 16
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1
MAXIMUM PEAK FLOW			21	Mar 16
MAXIMUM PEAK STAGE			2.88	Mar 16
ANNUAL RUNOFF (AC-FT)	0.00	177	11480	11.15
10 PERCENT EXCEEDS	0.00	0.35	9.2	
50 PERCENT EXCEEDS	0.00	0.00	0.00	
90 PERCENT EXCEEDS	0.00	0.00	0.00	

## 11012500 CAMPO CREEK NEAR CAMPO, CA

LOCATION.—Lat 32° 35'28", long 116° 31'29", in NE 1/4 SE 1/4 sec.24, T.18 S., R.4 E., San Diego County, Hydrologic Unit 18070305, on left bank, just upstream from bridge on State Highway 94, and 3.5 mi southwest of Campo.

DRAINAGE AREA.—85.0 mi<sup>2</sup>, of which 3 mi<sup>2</sup> are in Mexico.

PERIOD OF RECORD.—October 1936 to current year.

REVISED RECORDS.—WSP 1635: 1937–38(M), 1940(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 2,178.92 ft above NGVD of 1929. Prior to Dec. 1, 1954, at datum 1 ft higher.

REMARKS.—Records good. Peaks are attenuated by small conservation reservoir 1 mi upstream since August 1956. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,580 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 6.86 ft, from rating curve extended above 340 ft<sup>3</sup>/s; no flow for part of some years.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.07	0.18	0.07	0.08	0.04	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.07	0.16	0.09	0.08	0.03	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.07	0.16	0.09	0.14	0.03	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.07	0.16	0.10	0.13	0.03	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.07	0.15	0.11	0.12	0.03	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.06	0.14	0.10	0.12	0.02	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.08	0.14	0.10	0.13	0.02	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.07	0.13	0.08	0.14	0.02	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.07	0.13	0.08	0.15	0.01	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.07	0.13	0.08	0.12	0.01	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.08	0.12	0.08	0.11	0.01	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.27	0.12	0.09	0.09	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.25	0.12	0.09	0.08	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.25	0.12	0.12	0.09	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.18	0.26	0.19	0.09	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.17	0.30	0.11	0.07	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.17	0.16	0.11	0.07	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.16	0.13	0.11	0.07	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.16	0.13	0.10	0.06	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.17	0.12	0.09	0.06	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.14	0.11	0.09	0.05	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.04	0.14	0.11	0.10	0.05	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.09	0.14	0.11	0.10	0.05	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.09	0.14	0.11	0.10	0.05	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.09	0.26	0.10	0.09	0.05	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.08	0.23	0.09	0.09	0.05	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.08	0.23	0.10	0.09	0.05	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.07	0.20	0.09	0.08	0.05	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.06	---	0.08	0.08	0.05	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.06	---	0.07	0.09	0.04	0.00	1.5	0.00	0.00
31	0.00	---	0.00	0.07	---	0.08	---	0.04	---	0.09	0.00	---
TOTAL	0.00	0.00	0.00	0.73	4.04	4.11	2.90	2.53	0.25	1.59	0.00	0.00
MEAN	0.000	0.000	0.000	0.024	0.14	0.13	0.097	0.082	0.008	0.051	0.000	0.000
MAX	0.00	0.00	0.00	0.09	0.27	0.30	0.19	0.15	0.04	1.5	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.06	0.07	0.07	0.04	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	1.4	8.0	8.2	5.8	5.0	0.5	3.2	0.00	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2003, BY WATER YEAR (WY)

	0.76	1.40	2.50	5.42	7.74	11.2	7.17	3.39	1.72	0.90	0.82	0.63
MEAN	0.76	1.40	2.50	5.42	7.74	11.2	7.17	3.39	1.72	0.90	0.82	0.63
MAX	14.3	20.7	25.7	140	74.5	153	121	52.2	30.4	20.1	26.5	16.5
(WY)	1984	1984	1984	1993	1980	1983	1983	1983	1983	1983	1983	1983
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1937	1949	1949	1957	1957	1956	1957	1957	1950	1947	1946	1947

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1937 - 2003

ANNUAL TOTAL	21.64	16.15	
ANNUAL MEAN	0.059	0.044	3.62
HIGHEST ANNUAL MEAN			39.6
LOWEST ANNUAL MEAN			0.000
HIGHEST DAILY MEAN	0.27 Feb 12	1.5 Jul 30	745 Jan 16 1993
LOWEST DAILY MEAN	0.00 Jun 2	0.00 Oct 1	0.00 Oct 1 1936
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 2	0.00 Oct 1	0.00 Oct 1 1936
MAXIMUM PEAK FLOW		21 Jul 30	1580 Jan 16 1993
MAXIMUM PEAK STAGE		1.98 Jul 30	6.86 Jan 16 1993
ANNUAL RUNOFF (AC-FT)	43	32	2620
10 PERCENT EXCEEDS	0.17	0.13	8.7
50 PERCENT EXCEEDS	0.00	0.00	0.10
90 PERCENT EXCEEDS	0.00	0.00	0.00

11014000 JAMUL CREEK NEAR JAMUL, CA

LOCATION.—Lat 32° 38' 15", long 116° 53' 00", in NW 1/4 NE 1/4 sec.4, T.18 S., R.1 E., San Diego County, Hydrologic Unit 18070304, on right bank, 300 ft upstream from Otay Road crossing, at upper end of Lower Otay Lake, 1.4 mi downstream from Dulzura Creek, and 5.5 mi south of Jamul.

DRAINAGE AREA.—70.1 mi<sup>2</sup>.

PERIOD OF RECORD.—April 1940 to December 1940, April 1941 to September 1978, October 1985 to current year.

REVISED RECORDS.—WSP 1565: 1952, 1954. WSP 1715: 1944, 1946. WDR CA-93-1: Drainage area. WDR CA-94-1: Datum of gage.

GAGE.—Water-stage recorder and broad-crested weir control with low-water venturi-type flume. Datum of gage is 511.89 ft above NGVD of 1929. Prior to Oct. 1, 1951, at datum 1.00 ft higher.

REMARKS.—Records poor. No regulation upstream from station. Water is diverted from Cottonwood Creek at Barrett Lake (station 11011000) via San Diego and Dulzura Conduit into Dulzura Creek, a tributary to Jamul Creek, and is included in discharge for this station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,870 ft<sup>3</sup>/s, Mar. 5, 1995, gage height, 7.59 ft, present datum, from rating curve extended above 1,200 ft<sup>3</sup>/s, on basis of critical-depth computations; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended above 1,200 ft<sup>3</sup>/s on basis of critical-depth computations:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 16	1045	31	2.09

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.18	0.01	1.6	1.1	0.41	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.11	0.01	1.2	1.1	0.31	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.10	0.00	1.0	1.0	0.50	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.08	0.00	0.99	1.0	0.61	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.06	0.00	0.96	0.92	0.53	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.06	0.00	0.82	0.85	0.48	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.01	0.00	0.75	0.80	0.49	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.70	0.71	0.56	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.07	0.00	0.62	0.69	0.53	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.08	0.00	0.43	0.62	0.44	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.09	0.05	0.44	0.53	0.36	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.10	0.54	0.51	0.52	0.28	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.11	1.3	0.64	0.59	0.26	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.11	2.2	0.64	0.84	0.30	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.10	1.1	1.0	1.9	0.29	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.04	0.68	1.3	1.1	0.24	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.01	0.55	6.8	0.92	0.21	0.00	0.00	0.00	0.00
18	0.00	0.00	0.29	0.03	0.48	3.3	0.88	0.14	0.00	0.00	0.00	0.00
19	0.00	0.00	0.01	0.00	0.48	2.2	0.71	0.06	0.00	0.00	0.00	0.00
20	0.00	0.00	0.26	0.02	0.48	1.9	0.62	0.02	0.00	0.00	0.00	0.00
21	0.00	0.00	0.54	0.04	0.38	1.9	0.56	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.25	0.02	0.36	1.8	0.56	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.17	0.05	0.35	1.6	0.59	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.06	0.06	0.39	1.6	0.62	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.07	0.06	1.2	1.6	0.54	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.05	0.04	1.5	1.5	0.48	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.07	0.01	1.9	1.5	0.50	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.10	0.00	2.8	1.4	0.48	0.00	0.00	0.00	0.00	0.00
29	0.00	0.62	0.31	0.00	---	1.3	0.48	0.00	0.00	0.00	0.00	0.00
30	0.00	3.3	0.31	0.04	---	1.2	0.48	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.24	0.02	---	1.2	---	0.00	---	0.00	0.00	---
TOTAL	0.00	3.92	2.73	1.70	16.76	56.10	22.69	7.02	0.00	0.00	0.00	0.00
MEAN	0.000	0.13	0.088	0.055	0.60	1.81	0.76	0.23	0.000	0.000	0.000	0.000
MAX	0.00	3.3	0.54	0.18	2.8	13	1.9	0.61	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.43	0.48	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	7.8	5.4	3.4	33	111	45	14	0.00	0.00	0.00	0.00

## OTAY RIVER BASIN

## 11014000 JAMUL CREEK NEAR JAMUL, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.21	9.23	9.83	17.5	19.6	28.5	19.0	15.1	14.9	12.6	10.9	8.68
MAX	40.2	45.6	62.5	415	188	254	101	49.1	49.6	51.7	44.4	37.4
(WY)	1948	1946	1946	1993	1998	1995	1958	1954	1952	1995	1995	1947
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1950	1951	1951	1958	1961	1959	1955	1956	1953	1950	1949	1949

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	15.57		110.92			
ANNUAL MEAN	0.043		0.30		14.2	
HIGHEST ANNUAL MEAN					55.2 1995	
LOWEST ANNUAL MEAN					0.000 1961	
HIGHEST DAILY MEAN	3.3	Nov 30	13	Mar 16	2320	Jan 16 1993
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Jul 17 1949
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Jul 17 1949
MAXIMUM PEAK FLOW			31	Mar 16	5870	Mar 5 1995
MAXIMUM PEAK STAGE			2.09	Mar 16	7.59	Mar 5 1995
ANNUAL RUNOFF (AC-FT)	31		220		10310	
10 PERCENT EXCEEDS	0.18		0.94		38	
50 PERCENT EXCEEDS	0.00		0.00		0.30	
90 PERCENT EXCEEDS	0.00		0.00		0.00	



## 11015000 SWEETWATER RIVER NEAR DESCANSO, CA

LOCATION.—Lat 32° 50'05", long 116° 37'20", in NW 1/4 SE 1/4 sec.25, T.15 S., R.3 E., San Diego County, Hydrologic Unit 18070304, near right bank, at Los Terrenitos Road Bridge, 0.7 mi downstream from unnamed tributary, and 1.3 mi south of Descanso.

DRAINAGE AREA.—45.4 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1905 to September 1927 (monthly discharge only for some months, published in WSP 1315-B), October 1956 to current year. Prior to October 1927, records unadjusted for diversion. October 1956 to September 1977, both unadjusted records and combined records of river plus diversion (station 11015001) were published. No diversion since November 1976.

REVISED RECORD.—WSP 1315-B: 1922(M). WDR CA-73-1: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 3,269.24 ft above NGVD of 1929. Prior to June 25, 1927, nonrecording gages at several sites and datums, upstream about 0.1 mi. Diversion gage at site 0.3 mi upstream, October 1956 to September 1984, at different datum.

REMARKS.—Records fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,200 ft<sup>3</sup>/s, Feb. 16, 1927, gage height, 13.2 ft, from floodmarks, site and datum then in use, on basis of slope-area measurement of peak flow; no flow many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended above 1,150 ft<sup>3</sup>/s, on basis of slope area measurement of peak flow:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 27	1645	20	5.29

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.08	0.91	0.73	1.1	0.37	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.09	0.67	0.74	1.1	0.36	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.08	0.58	0.74	1.6	0.38	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.10	0.66	0.74	1.9	0.36	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.10	0.54	0.74	1.6	0.37	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.10	0.47	0.73	1.4	0.35	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.10	0.47	0.70	1.5	0.35	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.10	0.43	0.68	1.7	0.34	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.10	0.43	0.67	1.6	0.34	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.10	0.46	0.70	1.4	0.33	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.17	0.47	0.69	1.3	0.33	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.31	0.47	0.72	1.1	0.34	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.32	0.47	0.70	1.1	0.34	0.00	0.00	0.00
14	0.00	0.00	0.00	0.01	0.32	0.47	1.8	1.1	0.32	0.00	0.00	0.00
15	0.00	0.00	0.00	0.01	0.23	1.0	3.5	1.1	0.31	0.00	0.00	0.00
16	0.00	0.00	0.00	0.01	0.20	2.8	2.6	1.0	0.30	0.00	0.00	0.00
17	0.00	0.00	0.00	0.02	0.19	3.1	2.3	0.94	0.29	0.00	0.00	0.00
18	0.00	0.00	0.00	0.03	0.18	1.3	2.1	0.85	0.28	0.00	0.00	0.00
19	0.00	0.00	0.00	0.03	0.20	1.1	1.7	0.80	0.30	0.00	0.00	0.00
20	0.00	0.00	0.00	0.07	0.21	1.0	1.6	0.75	0.37	0.00	0.00	0.00
21	0.00	0.00	0.00	0.06	0.20	0.97	1.5	0.69	0.36	0.00	0.00	0.00
22	0.00	0.00	0.00	0.07	0.20	0.96	1.9	0.57	0.36	0.00	0.00	0.00
23	0.00	0.00	0.00	0.07	0.20	0.92	1.7	0.53	0.35	0.00	0.00	0.00
24	0.00	0.00	0.00	0.07	0.20	0.90	1.5	0.53	0.32	0.00	0.01	0.00
25	0.00	0.00	0.00	0.06	0.50	0.86	1.4	0.51	0.24	0.00	0.00	0.00
26	0.00	0.00	0.00	0.07	1.8	0.78	1.3	0.49	0.13	0.00	0.00	0.00
27	0.00	0.00	0.00	0.07	4.7	0.74	1.3	0.46	0.03	0.00	0.00	0.00
28	0.00	0.00	0.00	0.07	1.5	0.74	1.2	0.40	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.07	---	0.74	1.2	0.41	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.08	---	0.73	1.1	0.43	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.08	---	0.73	---	0.39	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.95	12.58	26.87	38.98	30.35	8.52	0.00	0.01	0.00
MEAN	0.000	0.000	0.000	0.031	0.45	0.87	1.30	0.98	0.28	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.08	4.7	3.1	3.5	1.9	0.38	0.00	0.01	0.00
MIN	0.00	0.00	0.00	0.00	0.08	0.43	0.67	0.39	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	1.9	25	53	77	60	17	0.00	0.02	0.00

## SWEETWATER RIVER BASIN

## 11015000 SWEETWATER RIVER NEAR DESCANSO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.19	1.39	4.35	11.9	27.0	35.8	18.8	7.51	2.89	0.81	0.43	0.29
MAX	3.53	24.0	83.5	304	336	382	138	68.5	25.5	8.68	8.45	6.16
(WY)	1984	1966	1967	1993	1980	1983	1983	1983	1983	1980	1983	1978
MIN	0.000	0.000	0.000	0.000	0.000	0.042	0.010	0.000	0.000	0.000	0.000	0.000
(WY)	1957	1957	1957	1961	1961	1961	1961	1961	1959	1957	1957	1957

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1957 - 2003
ANNUAL TOTAL	9.27	118.26	
ANNUAL MEAN	0.025	0.32	9.18
HIGHEST ANNUAL MEAN			71.2 1983
LOWEST ANNUAL MEAN			0.004 1961
HIGHEST DAILY MEAN	0.23 Mar 18	4.7 Feb 27	2500 Feb 20 1980
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1956
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1956
MAXIMUM PEAK FLOW		20 Feb 27	8600 Mar 5 1995
MAXIMUM PEAK STAGE		5.29 Feb 27	13.22 Mar 5 1995
ANNUAL RUNOFF (AC-FT)	18	235	6650
10 PERCENT EXCEEDS	0.14	1.1	11
50 PERCENT EXCEEDS	0.00	0.00	0.27
90 PERCENT EXCEEDS	0.00	0.00	0.00

## 11022200 LOS COCHES CREEK NEAR LAKESIDE, CA

LOCATION.—Lat 32° 50' 10", long 116° 53' 58", in Mission San Diego Grant, [San Diego County](#), Hydrologic Unit 18070304, on upstream right bank side of bridge, on Old Highway 8, 2.7 mi upstream from mouth, and 1.9 mi southeast of Lakeside.

DRAINAGE AREA.—12.2 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1983 to current year.

REVISED RECORDS.—WDR CA-86-1: Drainage area.

GAGE.—Water-stage recorder, concrete control, and crest-stage gage. Elevation of gage is 560 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,090 ft<sup>3</sup>/s, Mar. 5, 1995, gage height, 9.74 ft, from rating curve extended above 209 ft<sup>3</sup>/s, on basis of critical-depth computations; minimum daily, 0.04 ft<sup>3</sup>/s, several days in 1997.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 75 ft<sup>3</sup>/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 25	0815	102	4.42	Apr. 14	1930	80	4.12

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.16	0.19	0.36	e0.50	0.43	1.5	0.76	0.61	0.39	e0.29	0.32	0.25
2	0.15	0.19	0.33	e0.49	0.44	1.1	0.72	0.61	0.38	0.28	0.30	0.41
3	0.14	0.19	0.32	0.48	0.42	1.1	0.71	e1.5	0.40	0.26	0.35	0.24
4	0.13	0.19	0.31	0.47	0.43	2.2	0.70	e0.82	0.41	0.28	0.31	0.22
5	0.13	0.19	0.31	0.46	0.44	1.1	0.69	e0.70	0.40	0.25	0.22	0.22
6	0.13	0.18	0.30	0.45	0.42	0.91	0.68	0.69	0.41	0.26	0.20	0.22
7	0.12	0.19	0.33	0.41	0.40	0.84	0.66	1.3	0.47	0.27	0.21	0.23
8	0.12	4.8	0.34	0.47	0.41	0.79	0.62	0.93	0.53	0.27	0.21	0.22
9	0.13	12	0.35	0.46	0.40	0.77	0.60	0.74	0.51	0.26	0.20	0.23
10	0.14	3.4	0.33	0.46	0.40	0.74	e0.60	0.69	0.46	0.26	0.20	0.23
11	0.14	0.44	0.32	0.48	2.8	0.74	e0.60	0.63	0.42	0.25	0.18	0.22
12	0.15	0.39	0.31	0.46	e8.9	0.72	0.60	0.58	0.40	0.27	0.19	0.23
13	0.15	0.35	0.31	0.46	e5.6	0.69	0.66	0.58	0.39	0.33	0.19	0.24
14	0.15	0.31	0.31	0.46	e0.80	0.68	16	0.61	0.40	0.26	0.21	0.23
15	0.16	0.30	0.31	0.46	e0.63	11	11	0.57	0.38	0.27	0.21	0.27
16	0.17	0.29	5.8	0.45	e0.61	17	1.1	0.54	0.37	0.26	0.22	0.28
17	0.17	0.29	4.3	0.45	e0.60	8.8	3.6	0.64	0.36	0.27	0.21	0.28
18	0.17	0.28	0.76	e0.49	e0.60	1.3	1.2	0.50	0.36	0.29	0.23	0.29
19	0.18	0.27	0.50	e0.46	e0.58	1.1	0.87	0.47	0.38	0.26	0.24	0.25
20	0.17	0.27	e8.5	e0.45	e0.58	0.98	0.79	0.46	0.65	0.26	0.34	0.25
21	0.17	0.27	e0.88	e0.45	e1.8	0.89	0.78	0.43	0.45	0.26	0.23	0.25
22	0.17	0.27	e0.52	e0.45	0.57	0.73	0.77	0.42	0.44	0.31	0.24	0.24
23	0.26	0.28	e0.49	e0.45	0.57	0.75	0.72	0.42	0.42	0.31	0.23	0.25
24	0.35	0.29	e0.48	e0.45	0.59	0.72	0.71	0.45	0.38	0.37	0.20	0.25
25	0.19	0.30	e0.47	e0.45	20	0.75	0.70	0.45	0.37	0.40	0.22	0.27
26	0.24	0.33	e0.47	e0.45	7.1	0.66	0.69	0.44	0.34	0.41	0.22	0.27
27	0.20	0.38	e0.47	e0.47	13	0.74	0.68	0.43	0.33	0.41	0.22	0.28
28	0.19	0.45	e0.47	e0.47	2.4	0.73	0.66	0.40	0.33	0.41	0.27	0.28
29	0.20	6.6	e0.85	0.49	---	0.71	0.64	0.42	0.31	0.38	0.27	0.26
30	0.20	0.95	e0.52	0.45	---	0.71	0.62	0.42	e0.30	0.38	0.28	0.28
31	0.20	---	e0.52	0.44	---	0.71	---	0.38	---	0.34	0.27	---
TOTAL	5.33	34.83	30.84	14.29	71.92	62.16	50.13	18.83	12.14	9.38	7.39	7.64
MEAN	0.17	1.16	0.99	0.46	2.57	2.01	1.67	0.61	0.40	0.30	0.24	0.25
MAX	0.35	12	8.5	0.50	20	17	16	1.5	0.65	0.41	0.35	0.41
MIN	0.12	0.18	0.30	0.41	0.40	0.66	0.60	0.38	0.30	0.25	0.18	0.22
AC-FT	11	69	61	28	143	123	99	37	24	19	15	15

e Estimated.

## SAN DIEGO RIVER BASIN

## 11022200 LOS COCHES CREEK NEAR LAKESIDE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.42	1.11	1.67	4.26	5.49	5.32	2.69	1.28	0.74	0.37	0.25	0.26
MAX	1.37	4.58	6.09	40.2	28.3	31.1	13.5	6.25	3.67	1.31	0.69	0.64
(WY)	1988	1984	1985	1993	1998	1995	1998	1998	1995	1995	1998	1998
MIN	0.066	0.17	0.32	0.46	0.50	0.55	0.45	0.25	0.16	0.096	0.079	0.077
(WY)	1998	1993	1990	2003	2002	2002	1989	1984	1996	1996	1996	1996

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1984 - 2003	
ANNUAL TOTAL	164.21		324.88			
ANNUAL MEAN	0.45		0.89		1.97	
HIGHEST ANNUAL MEAN					6.77 1993	
LOWEST ANNUAL MEAN					0.37 2002	
HIGHEST DAILY MEAN	12	Nov 9	20	Feb 25	248	Mar 5 1995
LOWEST DAILY MEAN	0.11	Aug 8	0.12	Oct 7	0.04	Oct 26 1997
ANNUAL SEVEN-DAY MINIMUM	0.12	Sep 21	0.13	Oct 3	0.04	Oct 31 1997
MAXIMUM PEAK FLOW			102	Feb 25	1090	Mar 5 1995
MAXIMUM PEAK STAGE			4.42	Feb 25	9.74	Mar 5 1995
ANNUAL RUNOFF (AC-FT)	326		644		1430	
10 PERCENT EXCEEDS	0.53		0.90		3.1	
50 PERCENT EXCEEDS	0.29		0.41		0.50	
90 PERCENT EXCEEDS	0.14		0.20		0.16	

## 11022480 SAN DIEGO RIVER AT MAST ROAD, NEAR SANTEE, CA

LOCATION.—Lat 32° 50'25", long 117° 01'30", in Mission San Diego Grant, San Diego County, Hydrologic Unit 18070304, near right bank, at Mast Road Bridge, 0.7 mi upstream from Old Mission Dam, 2.8 mi west of Santee, and 14.2 mi downstream from El Capitan Reservoir.

DRAINAGE AREA.—368 mi<sup>2</sup>.

PERIOD OF RECORD.—May 1912 to December 1915, April 1916 to current year. Monthly discharge only for some periods and yearly estimates only for 1924–25, published in WSP-1315-B. Prior to September 1981 published as "near Santee" (station 11022500).

REVISED RECORDS.—WSP 1565: 1955–56. WSP 1635: 1922, 1926(M), 1927. WSP 1928: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 300 ft above NGVD of 1929, from topographic map. Prior to Nov. 10, 1920, nonrecording gage at site 0.7 mi downstream at different datum. Nov. 10, 1920, to Jan. 19, 1982, at site 2.6 mi downstream at different datum.

REMARKS.—Records fair. Flow regulated by Cuyamaca Reservoir, capacity, 11,740 acre-ft, El Capitan Reservoir (station 11020600), and San Vicente Reservoir (station 11022100). Diversions by city of San Diego for municipal supply and by Helix Irrigation District.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 45,400 ft<sup>3</sup>/s, Feb. 16, 1927, gage height, 18.1 ft, site and datum then in use, from floodmarks, on basis of slope-area measurement of peak flow; no flow for many days some years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 70,200 ft<sup>3</sup>/s, Jan. 27, 1916, gage height, 25.1 ft, site and datum in use prior to Nov. 10, 1920, from floodmarks, based on slope-conveyance computation of peak flow.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.82	1.1	14	9.7	6.0	29	9.0	9.3	3.9	2.9	1.5	1.5
2	0.83	1.2	11	9.6	5.8	25	8.5	8.3	4.1	2.8	1.4	5.4
3	0.76	1.4	9.3	9.6	5.4	23	9.0	58	3.8	2.6	1.4	3.4
4	0.61	1.4	8.9	9.8	5.3	50	9.0	15	3.9	2.3	1.8	2.0
5	0.61	1.3	7.6	9.3	5.4	27	8.3	13	4.1	2.3	2.5	1.7
6	0.61	1.6	7.3	8.1	5.7	20	8.1	11	4.1	2.2	2.8	1.6
7	0.63	1.7	6.9	6.8	5.5	16	7.9	11	4.6	2.2	2.4	1.5
8	0.65	95	6.5	7.6	5.8	15	7.8	12	5.0	2.2	2.2	1.5
9	0.93	157	6.3	9.7	5.9	14	7.4	10	4.7	2.3	2.4	1.6
10	0.78	59	6.9	9.0	5.5	13	7.4	10	4.5	2.3	2.8	1.6
11	0.83	12	6.4	8.0	41	12	7.4	9.8	4.0	2.2	2.6	1.9
12	0.85	9.8	4.8	7.2	226	11	7.4	9.8	3.9	2.1	2.9	1.6
13	0.90	8.5	5.2	7.0	179	11	11	9.1	3.6	2.0	2.2	1.6
14	0.90	7.5	4.9	7.1	135	10	241	9.2	3.6	2.1	2.2	1.5
15	0.98	6.5	4.7	7.1	32	165	107	8.8	3.4	2.1	1.7	1.6
16	1.0	5.9	101	7.0	24	267	28	8.3	3.4	2.1	1.7	1.5
17	1.2	4.9	169	6.9	21	112	55	9.2	3.2	2.0	1.6	1.5
18	1.2	4.6	36	7.3	18	41	27	8.3	3.2	2.1	1.5	1.5
19	1.3	4.6	21	7.1	16	35	21	7.9	3.3	2.2	1.6	1.4
20	1.3	3.4	126	7.0	15	29	18	7.5	5.2	1.9	1.5	1.4
21	1.2	3.3	58	6.3	13	24	16	7.2	4.3	1.8	2.3	1.4
22	1.2	3.7	28	6.0	12	20	17	6.7	4.3	1.9	1.7	1.4
23	1.2	3.8	19	6.1	11	17	14	7.3	4.3	1.9	1.7	1.5
24	1.2	3.0	17	6.3	11	15	12	7.1	4.1	1.7	1.6	1.6
25	1.3	3.0	15	6.1	362	14	11	5.7	4.1	1.7	1.6	1.5
26	2.8	2.9	14	6.0	133	13	10	5.3	4.0	1.6	1.6	1.5
27	1.7	2.6	13	6.5	186	12	9.8	5.5	4.0	1.6	1.5	1.5
28	1.2	3.3	12	6.4	43	11	9.5	5.2	4.2	1.9	1.5	1.5
29	1.3	148	62	6.1	---	9.7	9.2	5.0	3.7	1.9	1.5	1.5
30	1.2	34	13	5.8	---	9.6	8.6	4.7	3.3	1.6	1.5	1.5
31	1.1	---	12	5.9	---	9.5	---	4.2	---	1.5	1.5	---
TOTAL	33.09	596.0	826.7	228.4	1534.3	1079.8	722.3	309.4	119.8	64.0	58.7	52.2
MEAN	1.07	19.9	26.7	7.37	54.8	34.8	24.1	9.98	3.99	2.06	1.89	1.74
MAX	2.8	157	169	9.8	362	267	241	58	5.2	2.9	2.9	5.4
MIN	0.61	1.1	4.7	5.8	5.3	9.5	7.4	4.2	3.2	1.5	1.4	1.4
AC-FT	66	1180	1640	453	3040	2140	1430	614	238	127	116	104

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2003, BY WATER YEAR (WY)

MEAN	2.18	6.00	20.7	31.9	92.5	79.1	47.5	17.6	4.75	2.99	2.69	1.90
MAX	20.8	78.8	728	410	1871	683	1324	379	181	156	139	38.3
(WY)	1988	1986	1922	1993	1927	1941	1941	1915	1980	1980	1980	1980
MIN	0.000	0.000	0.000	0.000	0.000	0.019	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1913	1913	1913	1951	1951	1951	1951	1913	1913	1912	1913	1913

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1912 - 2003
ANNUAL TOTAL	2466.88	5624.69	
ANNUAL MEAN	6.76	15.4	25.4
HIGHEST ANNUAL MEAN			219
LOWEST ANNUAL MEAN			0.002
HIGHEST DAILY MEAN	169	Dec 17	362
LOWEST DAILY MEAN	0.32	Aug 25	0.61
ANNUAL SEVEN-DAY MINIMUM	0.36	Aug 22	0.67
MAXIMUM PEAK FLOW			1350
MAXIMUM PEAK STAGE			8.65
ANNUAL RUNOFF (AC-FT)	4890	11160	18380
10 PERCENT EXCEEDS	9.7	26	28
50 PERCENT EXCEEDS	2.8	5.4	1.7
90 PERCENT EXCEEDS	0.45	1.4	0.00

## 11023000 SAN DIEGO RIVER AT FASHION VALLEY, AT SAN DIEGO, CA

LOCATION.—Lat 32° 45' 54", long 117° 10' 04", in Mission San Diego Grant, San Diego County, Hydrologic Unit 18070304, on left bank, 2.6 mi upstream from mouth, 500 ft upstream from Fashion Valley Road crossing, 0.4 mi downstream from unnamed tributary, and 26.4 mi downstream from El Capitan Reservoir.

DRAINAGE AREA.—429 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1912 to January 1916 published as "San Diego River at San Diego" (monthly discharge only, published in WSP 1315-B), January 1982 to current year. Records for Oct. 1, 1981, to Jan. 17, 1982, published in WDR CA-82-1, are in error and should not be used.

WATER TEMPERATURE: Water year 1984.

SEDIMENT DATA: Water year 1984.

REVISED RECORDS.—See PERIOD OF RECORD.

GAGE.—Water-stage recorder. Elevation of gage is 20 ft above NGVD of 1929, from topographic map. See WSP 1315-B for history of changes for period October 1912 to January 1916.

REMARKS.—Records fair. Flow regulated by Cuyamaca Reservoir, capacity, 11,740 acre-ft; El Capitan Reservoir (station 11020600), and San Vicente Reservoir (station 11022100). Diversions by city of San Diego for municipal supply and by Helix Irrigation District.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 75,000 ft<sup>3</sup>/s, Jan. 27, 1916, gage height, 19.3 ft, site and datum then in use, estimated on basis of upstream station, San Diego River near Santee; no flow at times during some years. Maximum discharge recorded since storage began in El Capitan Reservoir and San Vicente Reservoir, 9,430 ft<sup>3</sup>/s, Mar. 6, 1995, gage height, 13.47 ft, from rating curve extended above 5,800 ft<sup>3</sup>/s.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	1.8	98	22	6.6	92	16	10	5.0	4.6	2.1	2.0
2	2.4	1.8	36	17	6.4	58	15	9.6	4.6	4.1	2.0	2.0
3	2.0	1.8	24	16	6.1	48	15	61	4.4	3.7	2.0	2.2
4	1.6	1.8	21	15	5.7	49	14	51	4.0	3.4	2.5	2.6
5	1.5	1.7	18	14	5.5	85	14	29	3.7	3.2	2.1	2.5
6	1.4	1.6	11	14	5.2	52	13	17	3.9	3.1	2.0	2.3
7	1.4	1.6	10	13	5.1	35	14	14	4.2	2.8	1.8	2.2
8	1.4	15	9.8	12	5.1	30	13	14	4.3	2.5	2.0	2.1
9	1.4	172	8.8	12	5.7	27	12	12	4.4	2.4	2.5	2.3
10	1.4	167	8.0	11	5.6	26	12	11	4.8	2.2	2.4	2.4
11	1.3	114	7.4	10	87	25	12	10	5.0	2.5	2.2	2.2
12	1.3	35	7.2	10	420	23	12	9.0	4.9	2.5	2.1	2.1
13	1.4	18	6.9	11	421	22	16	8.1	4.5	2.6	2.1	1.9
14	1.4	14	6.8	10	490	22	154	8.4	4.1	2.4	2.0	2.0
15	1.4	12	6.7	9.7	135	90	418	8.1	3.9	2.3	2.1	1.9
16	1.5	10	31	8.7	63	618	104	7.7	3.6	2.3	2.1	1.9
17	1.4	9.3	320	8.6	44	224	108	7.1	3.3	2.6	2.0	1.7
18	1.4	8.5	151	8.8	37	104	84	7.6	3.1	2.5	2.1	1.6
19	1.3	7.6	55	8.6	32	62	39	7.1	3.2	2.8	1.9	1.5
20	1.4	6.9	132	8.7	29	49	27	6.6	3.9	2.7	1.6	1.5
21	1.5	6.8	175	9.5	27	41	22	6.5	4.6	2.5	1.6	1.8
22	1.4	6.7	125	8.8	25	35	19	6.1	4.2	2.5	1.6	2.0
23	1.4	6.5	54	8.2	23	30	17	6.3	3.8	2.4	1.6	2.0
24	1.4	6.5	30	7.7	23	27	16	6.2	3.9	2.3	1.8	2.0
25	1.3	6.4	23	7.6	472	25	15	6.1	3.9	2.3	1.9	2.1
26	3.0	6.5	20	7.3	357	22	14	6.0	4.0	2.2	1.8	2.2
27	6.6	6.6	18	7.2	266	21	14	5.6	4.0	2.3	1.6	2.3
28	3.6	6.8	17	7.1	227	19	13	5.1	4.0	2.2	1.5	2.5
29	2.6	13	59	6.5	---	18	11	4.7	4.1	2.1	1.5	2.4
30	2.3	243	66	6.3	---	17	11	4.3	4.1	2.2	1.5	2.4
31	1.9	---	35	6.5	---	16	---	4.7	---	2.1	1.8	---
TOTAL	57.7	910.2	1590.6	322.8	3235.0	2012	1264	369.9	123.4	82.3	59.8	62.6
MEAN	1.86	30.3	51.3	10.4	116	64.9	42.1	11.9	4.11	2.65	1.93	2.09
MAX	6.6	243	320	22	490	618	418	61	5.0	4.6	2.5	2.6
MIN	1.3	1.6	6.7	6.3	5.1	16	11	4.3	3.1	2.1	1.5	1.5
AC-FT	114	1810	3150	640	6420	3990	2510	734	245	163	119	124

## 11023000 SAN DIEGO RIVER AT FASHION VALLEY, AT SAN DIEGO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6.01	25.9	40.4	89.9	114	132	45.8	16.6	6.53	2.97	2.37	3.26
MAX	31.2	144	143	683	668	777	242	135	21.3	8.93	9.47	20.0
(WY)	1987	1986	1985	1993	1998	1983	1983	1983	1983	1983	1983	1986
MIN	0.62	0.87	5.06	6.51	8.93	8.38	7.69	2.45	1.30	0.25	0.54	0.033
(WY)	1990	1990	2001	2000	2002	1984	1989	1996	1985	1985	1985	1984

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1982 - 2003	
ANNUAL TOTAL	4379.14		10090.3			
ANNUAL MEAN	12.0		27.6		39.9	
HIGHEST ANNUAL MEAN					125 1983	
LOWEST ANNUAL MEAN					7.39 2002	
HIGHEST DAILY MEAN	320	Dec 17	618	Mar 16	4760	Mar 3 1983
LOWEST DAILY MEAN	0.89	Sep 5	1.3	Oct 11	0.00	Sep 7 1984
ANNUAL SEVEN-DAY MINIMUM	0.96	Aug 30	1.4	Oct 6	0.00	Sep 13 1984
MAXIMUM PEAK FLOW			1300	Feb 12	9430	Mar 6 1995
MAXIMUM PEAK STAGE			9.67	Feb 12	13.47	Mar 6 1995
ANNUAL RUNOFF (AC-FT)	8690		20010		28890	
10 PERCENT EXCEEDS	19		56		71	
50 PERCENT EXCEEDS	4.4		6.5		6.7	
90 PERCENT EXCEEDS	1.6		1.7		0.86	

## 11023340 LOS PENASQUITOS CREEK NEAR POWAY, CA

LOCATION.—Lat 32° 56' 35", long 117° 07' 15", in Los Penasquitos Grant, San Diego County, Hydrologic Unit 18070304, on left bank, 1.0 mi downstream from Cypress Creek, and 5.5 mi southwest of Poway.

DRAINAGE AREA.—42.1 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1964 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 260 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair. Flow partly regulated by several conservation reservoirs upstream from station. Pumping from wells along stream for irrigation. Flow augmented by reclaimed water from Poway area.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,750 ft<sup>3</sup>/s, Feb. 21, 1980, gage height, 10.26 ft, from rating curve extended above 1,400 ft<sup>3</sup>/s; maximum gage height, 10.92 ft, Jan. 4, 1995; no flow at times in 1968, 1972, and 1977.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 800 ft<sup>3</sup>/s, or maximum, from rating curve extended above 2,130 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	2245	1,540	7.41	Mar. 16	0415	1,380	7.14
Feb. 12	1600	2,270	8.50	Apr. 14	2000	1,210	6.82
Feb. 25	0930	954	6.28				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	1.6	3.6	3.4	3.4	11	4.5	3.3	2.5	1.9	2.3	2.2
2	2.3	1.6	3.2	3.3	3.4	6.1	4.4	3.5	2.5	1.9	2.2	12
3	1.7	1.4	2.7	3.3	3.4	4.6	4.2	219	2.5	1.9	2.1	11
4	1.6	1.9	2.8	3.2	3.2	29	4.2	24	2.6	1.9	2.1	2.8
5	1.4	1.7	2.6	3.2	3.2	11	8.3	7.5	2.4	1.9	2.5	2.5
6	1.3	1.5	2.5	3.2	3.2	4.3	3.8	5.2	2.4	2.1	2.5	2.4
7	1.3	1.6	2.5	3.4	3.3	4.2	3.6	4.6	2.6	2.4	2.6	2.1
8	1.4	149	3.5	5.0	3.3	4.1	3.8	5.8	2.9	2.1	2.5	2.8
9	1.6	253	2.2	3.7	3.3	4.1	3.7	4.0	2.9	2.1	2.0	2.4
10	1.7	90	2.2	3.3	3.2	4.2	3.9	3.4	2.7	2.2	1.8	2.3
11	1.6	5.4	2.2	3.2	153	4.6	4.0	3.1	2.3	2.2	1.8	2.4
12	1.7	3.7	2.1	3.3	416	4.5	4.1	3.0	2.0	2.8	2.2	2.7
13	1.6	3.1	2.1	3.3	121	4.4	32	3.3	2.0	2.8	2.2	2.9
14	1.7	2.8	2.1	3.3	165	4.5	264	3.3	1.9	2.9	2.1	2.5
15	1.8	2.4	2.1	3.4	11	190	155	3.1	2.1	3.0	2.3	2.7
16	1.8	2.0	176	3.3	5.2	366	19	3.0	1.9	3.4	2.0	2.7
17	2.3	2.0	109	3.3	4.2	81	17	3.5	1.8	4.3	1.9	2.5
18	1.9	2.2	9.1	3.3	4.0	21	8.8	3.1	1.9	3.8	1.9	2.4
19	1.6	2.2	4.0	3.3	3.9	13	6.4	2.9	2.1	3.5	3.0	2.5
20	1.5	2.0	188	3.4	3.8	9.2	4.7	3.2	7.3	3.0	13	2.5
21	1.7	2.3	13	3.5	3.7	7.4	4.2	3.1	4.0	2.3	4.6	2.4
22	1.5	2.2	5.9	3.4	3.7	6.7	7.4	3.0	2.3	4.6	2.7	2.5
23	1.5	2.1	3.9	3.4	3.7	5.9	4.7	2.8	2.6	4.2	2.7	2.8
24	1.5	2.1	3.7	3.4	4.0	5.9	4.0	2.8	2.2	3.3	2.2	2.6
25	2.0	2.2	3.6	3.4	310	5.4	3.8	2.8	1.9	3.6	2.2	2.6
26	4.1	2.5	3.5	3.3	99	4.9	3.7	2.8	2.0	2.4	2.6	2.7
27	4.1	2.2	3.4	3.3	204	4.9	4.1	2.8	1.9	2.2	2.2	2.5
28	1.9	2.2	3.4	3.4	36	4.6	4.3	2.6	1.9	2.6	2.3	2.5
29	1.7	53	18	3.5	---	3.9	4.1	2.6	1.9	2.9	2.3	2.6
30	1.7	43	4.1	3.4	---	3.9	3.8	2.5	1.9	5.0	2.4	2.6
31	1.6	---	3.5	3.6	---	4.0	---	2.7	---	3.4	2.4	---
TOTAL	58.5	644.9	590.5	105.7	1584.1	838.3	603.5	342.3	73.9	88.6	83.6	94.1
MEAN	1.89	21.5	19.0	3.41	56.6	27.0	20.1	11.0	2.46	2.86	2.70	3.14
MAX	4.1	253	188	5.0	416	366	264	219	7.3	5.0	13	12
MIN	1.3	1.4	2.1	3.2	3.2	3.9	3.6	2.5	1.8	1.9	1.8	2.1
AC-FT	116	1280	1170	210	3140	1660	1200	679	147	176	166	187



## 11023340 LOS PENASQUITOS CREEK NEAR POWAY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.94	6.74	9.25	23.8	34.6	32.8	9.79	3.42	1.70	1.24	1.15	1.70
MAX	11.7	28.7	51.6	233	277	213	50.0	22.0	6.58	3.25	3.59	13.9
(WY)	2001	1986	1966	1993	1998	1983	1998	1998	1998	1999	1998	1997
MIN	0.030	0.10	0.23	0.23	0.41	0.75	0.27	0.14	0.056	0.009	0.020	0.028
(WY)	1976	1978	1974	1976	1965	1965	1977	1974	1974	1977	1975	1975

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1965 - 2003	
ANNUAL TOTAL	2497.1		5108.0			
ANNUAL MEAN	6.84		14.0		10.6	
HIGHEST ANNUAL MEAN					39.4 1998	
LOWEST ANNUAL MEAN					0.80 1965	
HIGHEST DAILY MEAN	253	Nov 9	416	Feb 12	1400	Mar 1 1978
LOWEST DAILY MEAN	1.2	Sep 1	1.3	Oct 6	0.00	May 16 1968
ANNUAL SEVEN-DAY MINIMUM	1.4	Aug 27	1.5	Oct 3	0.00	Jul 18 1977
MAXIMUM PEAK FLOW			2270	Feb 12	4750	Feb 21 1980
MAXIMUM PEAK STAGE			8.50	Feb 12	10.92	Jan 4 1995
ANNUAL RUNOFF (AC-FT)	4950		10130		7650	
10 PERCENT EXCEEDS	5.3		11		12	
50 PERCENT EXCEEDS	2.4		3.1		1.7	
90 PERCENT EXCEEDS	1.5		1.9		0.29	

## 11025500 SANTA YSABEL CREEK NEAR RAMONA, CA

LOCATION.—Lat 33° 06' 25", long 116° 51' 55", in NW 1/4 NE 1/4 sec.27, T.12 S., R.1 E., San Diego County, Hydrologic Unit 18070304, on left bank, 1.6 mi downstream from Temescal Creek, 4.5 mi north of Ramona, and 5.0 mi downstream from Sutherland Reservoir.

DRAINAGE AREA.—112 mi<sup>2</sup>.

PERIOD OF RECORD.—February 1912 to February 1923 (monthly discharge only for November and December 1919), October 1943 to current year.

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 847.88 ft above NGVD of 1929 (levels by city of San Diego Water Department). See WSP 1315-B for history of changes prior to Feb. 3, 1923.

REMARKS.—Records good. Flow regulated by Sutherland Reservoir, capacity, 29,680 acre-ft, since July 1954. Some small diversions upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 28,400 ft<sup>3</sup>/s, Jan. 27, 1916, gage height, 14.0 ft, datum then in use, from rating curve extended above 1,500 ft<sup>3</sup>/s, on basis of slope-conveyance study of peak flow; maximum gage height, 14.25 ft, Feb. 21, 1980; no flow at times in some years.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.03	0.03	5.6	0.90	2.5	0.04	0.00	0.00	0.00
2	0.00	0.00	0.00	0.02	0.03	4.1	0.85	2.5	0.04	0.00	0.00	0.00
3	0.00	0.00	0.00	0.01	0.03	3.3	0.98	6.7	0.03	0.00	0.00	0.00
4	0.00	0.00	0.00	0.01	0.03	2.7	1.00	8.3	0.03	0.00	0.00	0.00
5	0.00	0.00	0.00	0.01	0.04	2.5	1.2	6.3	0.02	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.04	2.4	1.2	3.7	0.01	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.05	2.1	1.0	2.7	0.02	0.00	0.00	0.00
8	0.00	0.00	0.00	0.01	0.06	1.7	0.75	2.6	0.02	0.00	0.00	0.00
9	0.00	0.00	0.00	0.02	0.06	1.5	0.57	2.9	0.02	0.00	0.00	0.00
10	0.00	0.00	0.00	0.02	0.05	1.2	0.55	2.6	0.04	0.00	0.00	0.00
11	0.00	0.00	0.00	0.02	0.14	0.94	0.58	1.9	0.03	0.00	0.00	0.00
12	0.00	0.00	0.00	0.02	0.95	0.79	0.60	1.3	0.01	0.00	0.00	0.00
13	0.00	0.00	0.00	0.02	1.9	0.67	0.98	1.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.02	1.6	0.57	6.2	1.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.02	0.47	6.3	22	0.88	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.01	0.33	32	13	0.65	0.00	0.00	0.00	0.00
17	0.00	0.00	1.9	0.01	0.26	32	7.5	0.54	0.00	0.00	0.00	0.00
18	0.00	0.00	0.21	0.01	0.21	17	5.7	0.47	0.00	0.00	0.00	0.00
19	0.00	0.00	0.08	0.02	0.21	12	4.7	0.38	0.00	0.00	0.00	0.00
20	0.00	0.00	1.2	0.02	0.90	9.0	3.9	0.29	0.00	0.00	0.00	0.00
21	0.00	0.00	0.16	0.02	0.20	7.1	3.3	0.20	0.00	0.00	0.00	0.00
22	0.00	0.00	0.10	0.02	0.18	5.7	3.1	0.14	0.00	0.00	0.00	0.00
23	0.00	0.00	0.06	0.02	0.18	4.6	3.6	0.12	0.00	0.00	0.00	0.00
24	0.00	0.00	0.06	0.02	0.18	4.1	3.6	0.15	0.00	0.00	0.00	0.00
25	0.00	0.00	0.05	0.02	5.5	3.5	3.4	0.14	0.00	0.00	0.00	0.00
26	0.00	0.00	0.04	0.02	5.4	2.8	2.9	0.10	0.00	0.00	0.00	0.00
27	0.00	0.00	0.04	0.02	11	2.4	2.8	0.08	0.00	0.00	0.00	0.00
28	0.00	0.00	0.04	0.02	10	1.9	2.7	0.06	0.00	0.00	0.00	0.00
29	0.00	0.00	0.04	0.02	---	1.4	2.5	0.06	0.00	0.00	0.00	0.00
30	0.00	0.00	0.03	0.03	---	1.2	2.5	0.05	0.00	0.00	0.00	0.00
31	0.00	---	0.03	0.03	---	1.0	---	0.04	---	0.00	0.00	---
TOTAL	0.00	0.00	4.04	0.54	40.03	174.07	104.56	50.35	0.31	0.00	0.00	0.00
MEAN	0.000	0.000	0.13	0.017	1.43	5.62	3.49	1.62	0.010	0.000	0.000	0.000
MAX	0.00	0.00	1.9	0.03	11	32	22	8.3	0.04	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.03	0.57	0.55	0.04	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	8.0	1.1	79	345	207	100	0.6	0.00	0.00	0.00

## 11025500 SANTA YSABEL CREEK NEAR RAMONA, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1954, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.76	4.16	28.3	106	70.6	72.7	38.9	27.8	9.07	2.83	1.53	.98
MAX	16.9	17.3	330	1690	345	249	153	221	47.0	15.6	10.5	8.63
(WY)	1917	1947	1922	1916	1916	1922	1922	1915	1915	1915	1916	1916
MIN	.000	.000	.000	1.70	3.54	6.37	4.75	1.10	.037	.000	.000	.000
(WY)	1948	1949	1951	1948	1912	1951	1951	1947	1951	1946	1921	1921

## SUMMARY STATISTICS

## WATER YEARS 1912 - 1954

ANNUAL MEAN	30.7
HIGHEST ANNUAL MEAN	206 1916
LOWEST ANNUAL MEAN	1.77 1951
HIGHEST DAILY MEAN	14100 Jan 27 1916
LOWEST DAILY MEAN	.00 Aug 16 1912
ANNUAL SEVEN-DAY MINIMUM	.00 Sep 17 1912
MAXIMUM PEAK FLOW	28400 Jan 27 1916
MAXIMUM PEAK STAGE	14.00 Jan 27 1916
ANNUAL RUNOFF (AC-FT)	22250
10 PERCENT EXCEEDS	50
50 PERCENT EXCEEDS	4.1
90 PERCENT EXCEEDS	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2003, BY WATER YEAR (WY)

MEAN	0.46	1.96	4.94	14.5	39.1	40.5	18.7	7.88	3.29	1.03	0.63	0.36
MAX	6.30	43.5	124	220	795	425	207	110	42.2	13.8	11.9	7.07
(WY)	1981	1966	1967	1993	1980	1980	1983	1983	1983	1980	1983	1980
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1955	1955	1955	1959	1961	1961	1961	1959	1956	1955	1955	1955

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1955 - 2003

ANNUAL TOTAL	25.60	373.90	
ANNUAL MEAN	0.070	1.02	10.9
HIGHEST ANNUAL MEAN			131 1980
LOWEST ANNUAL MEAN			0.000 1961
HIGHEST DAILY MEAN	1.9 Dec 17	32 Mar 16	6190 Feb 21 1980
LOWEST DAILY MEAN	0.00 May 14	0.00 Oct 1	0.00 Oct 1 1954
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 6	0.00 Oct 1	0.00 Oct 1 1954
MAXIMUM PEAK FLOW		50 Apr 15	10700 Feb 21 1980
MAXIMUM PEAK STAGE		2.96 Apr 15	14.25 Feb 21 1980
ANNUAL RUNOFF (AC-FT)	51	742	7930
10 PERCENT EXCEEDS	0.18	2.8	12
50 PERCENT EXCEEDS	0.00	0.00	0.10
90 PERCENT EXCEEDS	0.00	0.00	0.00

## 11028500 SANTA MARIA CREEK NEAR RAMONA, CA

LOCATION.—Lat 33° 03'08", long 116° 56'41", in SE 1/4 SE 1/4 sec.11, T.13 S., R.1 W., San Diego County, Hydrologic Unit 18070304, on left bank, 3.8 mi northwest of Ramona, and 4.6 mi upstream from mouth.

DRAINAGE AREA.—57.6 mi<sup>2</sup>.

PERIOD OF RECORD.—December 1912 to September 1920, October 1946 to current year.

REVISED RECORDS.—WSP 1285: 1952. WSP 1928: Drainage area.

GAGE.—Water-stage recorder. Concrete control since October 1946. Datum of gage is 1,294.44 ft above NGVD of 1929. Prior to Oct. 1, 1946, at same site, at datum 1.78 ft lower.

REMARKS.—Records good. No regulation upstream from station. Land application of treated sewage effluent upstream from the gage beginning December 1972 contributes to low flows.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,200 ft<sup>3</sup>/s, Feb. 21, 1980, gage height, 14.39 ft, from rating curve extended above 166 ft<sup>3</sup>/s, on basis of slope-area measurements at gage heights 4.56 ft and 14.39 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 250 ft<sup>3</sup>/s, or maximum, from rating curve extended above 955 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 14.39 ft:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 16	0745	99	2.41

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	2.2	0.18	0.01	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.68	0.14	0.02	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.44	0.13	1.5	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.48	0.13	2.4	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.45	0.14	0.75	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.28	0.13	0.26	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.22	0.10	0.25	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.20	0.05	0.30	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.17	0.02	0.18	e0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.16	0.02	0.08	e0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.16	0.03	0.04	e0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	1.2	0.12	0.03	0.02	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	5.0	0.07	0.06	0.01	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	4.6	0.07	2.3	0.02	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.53	2.4	15	0.02	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.16	46	2.9	0.01	0.05	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.07	17	1.0	0.00	0.16	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.02	5.2	0.79	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.01	1.6	0.46	0.00	0.15	0.00	0.00	0.00
20	0.00	0.00	0.05	0.00	0.01	0.89	0.31	0.00	0.38	0.00	0.00	0.00
21	0.00	0.00	0.29	0.00	0.01	0.72	0.27	0.00	0.06	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.01	0.58	0.27	0.00	0.01	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.01	0.51	0.24	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.01	0.52	0.15	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	7.6	0.47	0.09	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	13	0.37	0.07	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	15	0.48	0.06	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	8.1	0.24	0.04	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.11	0.03	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.09	0.02	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.10	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.34	0.00	55.34	82.98	25.16	5.87	0.81	0.00	0.00	0.00
MEAN	0.000	0.000	0.011	0.000	1.98	2.68	0.84	0.19	0.027	0.000	0.000	0.000
MAX	0.00	0.00	0.29	0.00	15	46	15	2.4	0.38	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.07	0.02	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.7	0.00	110	165	50	12	1.6	0.00	0.00	0.00

e Estimated.

## 11028500 SANTA MARIA CREEK NEAR RAMONA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.051	0.42	1.29	22.3	24.2	24.9	6.32	2.18	0.54	0.069	0.092	0.031
MAX	0.45	10.9	26.5	545	443	288	63.2	31.0	7.66	1.28	4.03	0.22
(WY)	1987	1966	1967	1916	1980	1983	1998	1915	1983	1983	1983	1983
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1914	1916	1920	1920	1951	1951	1950	1949	1920	1913	1913	1913

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1913 - 2003	
ANNUAL TOTAL	1.23		170.50			
ANNUAL MEAN	0.003		0.47		6.89	
HIGHEST ANNUAL MEAN					78.2	1993
LOWEST ANNUAL MEAN					0.000	1951
HIGHEST DAILY MEAN	0.29	Dec 21	46	Mar 16	4960	Jan 27 1916
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Dec 17 1912
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Dec 17 1912
MAXIMUM PEAK FLOW			99	Mar 16	15200	Feb 21 1980
MAXIMUM PEAK STAGE			2.41	Mar 16	14.39	Feb 21 1980
ANNUAL RUNOFF (AC-FT)	2.4		338		4990	
10 PERCENT EXCEEDS	0.01		0.33		2.8	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA

LOCATION.—Lat 33° 13'05", long 117° 21'34", in SE 1/4 SW 1/4 sec.13, T.11 S., R.5 W., San Diego County, Hydrologic Unit 18070303, on left bank, 1.9 mi upstream from bridge on Interstate Highway 5, 2.4 mi upstream from mouth, and 1.9 mi northeast of Oceanside.

DRAINAGE AREA.—557 mi<sup>2</sup>.

PERIOD OF RECORD.—April 1912 to September 1914 (published as "near Oceanside"), January 1916, October 1929 to January 1942,

October 1946 to current year. Discharge measurements only Oct. 1, 1992, to Aug. 16, 1993, and Nov. 10, 1997, to Apr. 28, 1998.

CHEMICAL DATA: Water years 1978–92.

SPECIFIC CONDUCTANCE: Water years 1978–81.

WATER TEMPERATURE: Water years 1971–81.

BIOLOGICAL DATA: Water years 1978–81.

SEDIMENT DATA: Water years 1969–93.

REVISED RECORDS.—WSP 2128: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 20 ft above NGVD of 1929, from topographic map. April 1912 to September 1914, nonrecording gage at site 0.4 mi downstream at different datum. January 1916, nonrecording gage 1.4 mi downstream at different datum. October 1929 to Nov. 9, 1981, at site 0.8 mi downstream at different datum.

REMARKS.—Records fair. Gage out of operation for channel work from Nov. 10, 1997, to Apr. 28, 1998. Flow regulated by Lake Henshaw, capacity, 194,300 acre-ft, since 1923. Several diversions for irrigation and domestic use upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 95,600 ft<sup>3</sup>/s, Jan. 27, 1916, from hydrograph based on discharge measurements; no flow for several months in some years. Since regulation by Lake Henshaw, maximum discharge, 25,700 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 21.70 ft, on basis of slope-area measurement of peak flow.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	1.6	2.5	13	9.9	242	64	46	19	12	4.5	1.2
2	2.4	1.6	2.5	13	9.9	176	60	43	18	12	4.3	1.1
3	2.2	1.6	2.2	13	9.2	141	57	46	17	12	4.3	0.98
4	2.1	1.5	2.0	13	8.7	123	55	49	18	11	4.2	0.83
5	1.9	1.5	2.0	13	9.0	113	52	49	19	10	4.1	0.75
6	1.8	1.5	2.0	13	8.9	104	50	49	18	10	4.0	0.60
7	1.8	1.6	1.9	12	8.7	96	48	48	19	9.6	3.9	0.54
8	1.9	5.7	1.9	12	8.9	89	46	48	20	9.4	3.7	0.59
9	1.9	13	1.8	12	8.6	84	44	49	20	9.1	3.5	0.56
10	2.1	6.3	1.8	11	9.1	80	43	47	20	9.0	3.2	0.50
11	2.0	4.6	1.8	11	26	77	41	44	20	8.8	3.0	0.44
12	1.8	3.7	1.6	10	72	75	38	43	19	8.4	3.2	0.44
13	1.9	3.1	1.5	10	176	72	38	41	19	8.0	3.2	0.57
14	2.0	2.9	1.5	11	183	69	98	40	17	7.9	3.2	0.49
15	1.9	2.7	1.5	11	138	77	270	38	17	7.7	3.9	0.51
16	1.9	2.4	1.9	11	120	237	321	37	16	7.7	3.2	0.49
17	1.9	2.3	8.7	11	101	525	195	41	16	7.3	2.9	0.35
18	1.8	2.2	6.8	11	87	340	137	39	16	7.0	2.6	0.28
19	1.8	2.0	4.9	11	77	234	112	37	15	6.8	2.3	0.25
20	1.9	1.9	18	12	71	189	95	36	15	6.5	2.1	0.29
21	1.9	1.7	26	12	67	152	85	35	15	6.3	2.1	0.35
22	1.8	1.6	30	11	65	131	78	33	15	6.3	2.0	0.36
23	1.7	1.7	29	11	61	118	73	31	16	6.2	1.8	0.45
24	1.7	1.7	25	11	59	107	68	26	16	5.9	1.6	0.36
25	1.8	1.9	20	11	286	99	61	24	17	5.7	1.6	0.24
26	1.9	1.8	16	10	475	94	57	24	15	5.5	1.5	0.25
27	1.6	1.7	15	10	354	89	53	24	14	5.3	1.4	0.32
28	1.5	1.8	13	10	293	81	52	24	13	5.3	1.3	0.63
29	1.6	1.8	15	10	---	75	51	23	13	5.2	1.3	0.84
30	1.6	2.2	15	9.6	---	e70	48	21	12	5.1	1.2	0.73
31	1.6	---	13	9.5	---	67	---	19	---	4.6	1.2	---
TOTAL	58.1	81.6	285.8	349.1	2801.9	4226	2490	1154	504	241.6	86.3	16.29
MEAN	1.87	2.72	9.22	11.3	100	136	83.0	37.2	16.8	7.79	2.78	0.54
MAX	2.4	13	30	13	475	525	321	49	20	12	4.5	1.2
MIN	1.5	1.5	1.5	9.5	8.6	67	38	19	12	4.6	1.2	0.24
AC-FT	115	162	567	692	5560	8380	4940	2290	1000	479	171	32

e Estimated.

## 11042000 SAN LUIS REY RIVER AT OCEANSIDE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.61	8.50	19.6	44.5	97.7	133	54.2	28.3	14.1	7.18	5.38	3.25
MAX	54.6	144	196	451	1858	1211	432	346	293	207	213	85.9
(WY)	1984	1984	1979	1980	1980	1995	1980	1980	1980	1980	1980	1980
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1930	1930	1930	1930	1930	1930	1930	1931	1931	1930	1930	1930

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1930 - 2003	
ANNUAL TOTAL	2285.5		12294.69			
ANNUAL MEAN	6.26		33.7		34.4	
HIGHEST ANNUAL MEAN					415	1980
LOWEST ANNUAL MEAN					0.000	1931
HIGHEST DAILY MEAN	30	Dec 22	525	Mar 17	11300	Mar 3 1938
LOWEST DAILY MEAN	1.5	Oct 28	0.24	Sep 25	0.00	Oct 1 1929
ANNUAL SEVEN-DAY MINIMUM	1.6	Oct 31	0.33	Sep 19	0.00	Oct 1 1929
MAXIMUM PEAK FLOW			607	Mar 18	25700	Jan 16 1993
MAXIMUM PEAK STAGE			11.14	Feb 25	21.70	Jan 16 1993
ANNUAL RUNOFF (AC-FT)	4530		24390		24890	
10 PERCENT EXCEEDS	12		88		55	
50 PERCENT EXCEEDS	4.4		10		1.8	
90 PERCENT EXCEEDS	1.9		1.5		0.00	

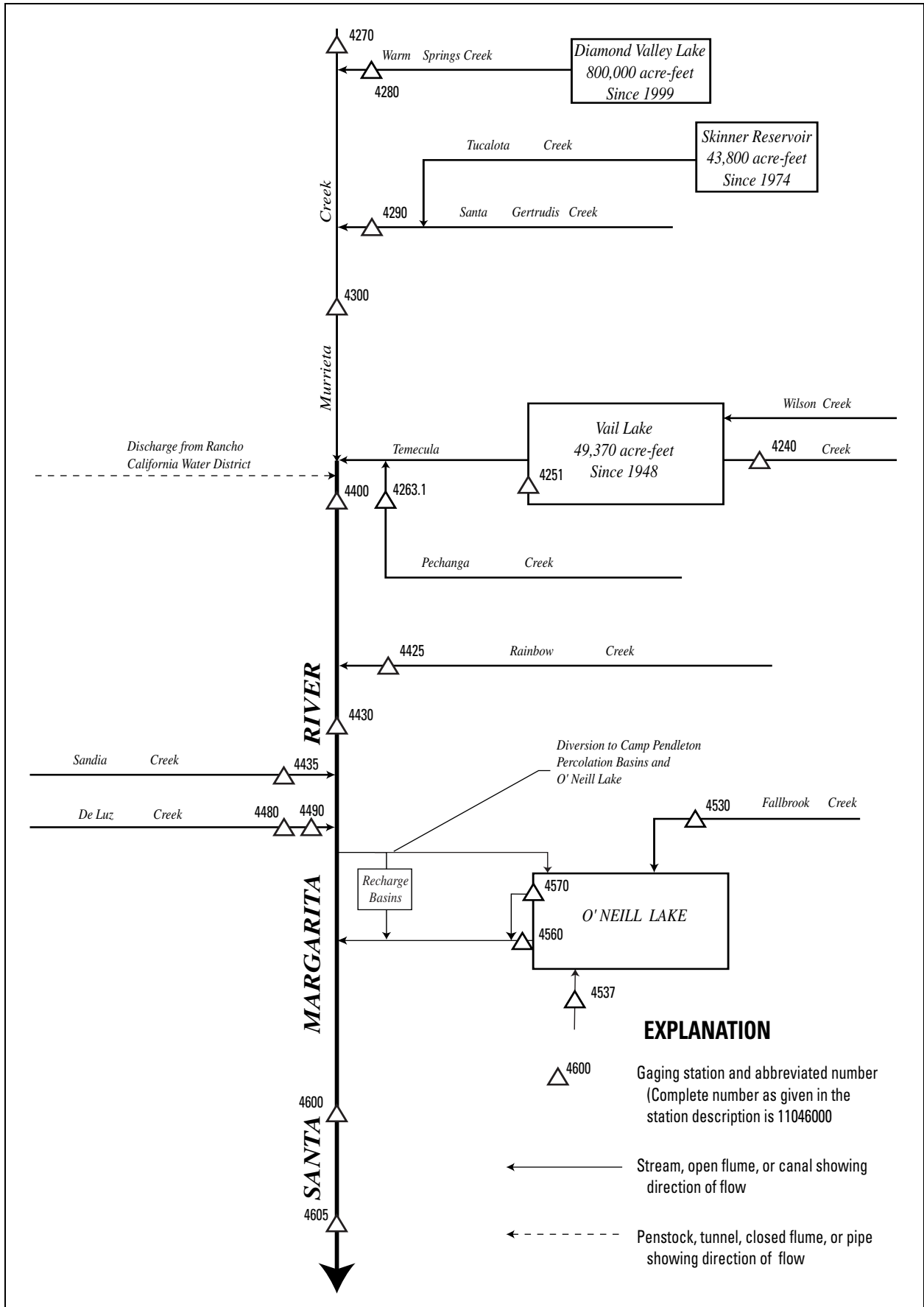


Figure 16. Diversions and storage in Santa Margarita River Basin.



## 11042400 TEMECULA CREEK NEAR AGUANGA, CA

LOCATION.—Lat 33° 27' 33", long 116° 55' 22", in SW 1/4 SW 1/4 sec.19, T.8 S., R.1 E., [Riverside County](#), Hydrologic Unit 18070302, on right bank, 1.6 mi downstream from Long Canyon, and 3.5 mi northwest of Aguanga.

DRAINAGE AREA.—131 mi<sup>2</sup>.

PERIOD OF RECORD.—August 1957 to current year.

REVISED RECORDS.—WDR CA-89-1: 1958(P), 1966(M), 1979(M), 1980(M), 1986(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 1,590 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good. No regulation upstream from station. Pumping upstream from station for irrigation of less than 1,000 acres. See schematic diagram of [Santa Margarita River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,100 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 14.6 ft, from floodmark, from rating curve extended above 1,200 ft<sup>3</sup>/s, on basis of critical depth computation; no flow for several days in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 15	2330	121	2.91

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.44	0.68	0.79	1.6	1.3	12	3.4	3.9	1.4	0.24	0.17	0.07
2	0.45	0.66	0.83	1.6	1.4	8.9	3.3	3.8	1.3	0.22	0.14	0.07
3	0.45	0.64	0.83	1.5	1.3	7.5	3.3	4.3	1.3	0.20	0.12	0.08
4	0.42	0.63	0.83	1.5	1.3	7.0	3.4	7.5	1.3	0.17	0.09	0.12
5	0.40	0.65	0.82	1.4	1.4	6.3	3.6	5.7	1.3	0.13	0.07	0.11
6	0.40	0.63	0.80	1.2	1.4	5.5	3.3	5.1	1.3	0.11	0.07	0.11
7	0.38	0.61	0.83	1.3	1.4	4.8	3.0	4.7	1.3	0.11	0.06	0.09
8	0.36	0.68	0.83	1.3	1.4	4.4	2.6	4.9	1.3	0.12	0.07	0.10
9	0.35	0.72	0.83	1.6	1.4	4.1	2.5	4.5	1.3	0.10	0.06	0.13
10	0.36	0.72	0.83	1.8	1.3	3.9	2.4	4.1	1.3	0.07	0.04	0.14
11	0.39	0.72	0.83	1.6	1.6	3.6	2.3	3.9	1.3	0.07	0.04	0.14
12	0.42	0.70	0.83	1.6	3.0	3.5	2.4	3.7	1.2	0.08	0.04	0.15
13	0.42	0.68	0.83	1.5	5.1	3.3	2.5	3.5	1.1	0.03	0.04	0.14
14	0.41	0.68	0.83	1.5	11	3.2	3.7	3.5	1.0	0.02	0.04	0.12
15	0.43	0.67	0.83	1.5	6.5	9.0	35	3.4	0.94	0.02	0.05	0.13
16	0.46	0.67	1.0	1.5	4.3	72	16	3.2	0.83	0.03	0.05	0.12
17	0.50	0.66	2.3	1.5	3.4	60	11	2.9	0.73	0.06	0.03	0.12
18	0.51	0.66	3.4	1.5	2.8	28	9.2	2.7	0.68	0.09	0.03	0.15
19	0.51	0.68	2.5	1.5	2.5	17	7.9	2.4	0.69	0.11	0.04	0.16
20	0.51	0.69	3.1	1.3	2.8	12	7.0	2.3	0.76	0.09	0.11	0.16
21	0.53	0.67	3.8	1.4	2.4	9.7	6.3	2.1	0.78	0.09	0.20	0.15
22	0.57	0.65	2.7	1.3	2.2	8.2	6.6	1.9	0.84	0.11	0.21	0.13
23	0.58	0.67	2.3	1.2	2.2	7.3	6.5	1.9	0.88	0.13	0.18	0.12
24	0.58	0.71	2.1	1.2	2.1	6.6	6.0	2.0	0.82	0.10	0.16	0.16
25	0.61	0.72	2.0	1.2	11	5.8	5.6	1.9	0.68	0.09	0.16	0.18
26	0.61	0.72	1.8	1.2	22	4.9	5.3	1.9	0.58	0.08	0.16	0.20
27	0.63	0.72	1.8	1.3	36	4.6	4.7	1.7	0.50	0.07	0.14	0.19
28	0.65	0.72	1.7	1.4	22	4.2	4.2	1.5	0.43	0.09	0.09	0.19
29	0.65	0.72	1.8	1.4	---	3.8	4.1	1.4	0.35	0.10	0.08	0.19
30	0.65	0.76	1.7	1.4	---	3.6	4.0	1.4	0.30	0.12	0.08	0.20
31	0.65	---	1.6	1.4	---	3.5	---	1.3	---	0.14	0.08	---
TOTAL	15.28	20.49	47.97	44.2	156.5	338.2	181.1	99.0	28.49	3.19	2.90	4.12
MEAN	0.49	0.68	1.55	1.43	5.59	10.9	6.04	3.19	0.95	0.10	0.094	0.14
MAX	0.65	0.76	3.8	1.8	36	72	35	7.5	1.4	0.24	0.21	0.20
MIN	0.35	0.61	0.79	1.2	1.3	3.2	2.3	1.3	0.30	0.02	0.03	0.07
AC-FT	30	41	95	88	310	671	359	196	57	6.3	5.8	8.2

## SANTA MARGARITA RIVER BASIN

## 11042400 TEMECULA CREEK NEAR AGUANGA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.50	3.28	5.45	16.4	25.6	20.5	10.9	4.99	2.63	1.50	1.28	1.27
MAX	7.94	47.9	66.0	361	266	105	87.3	25.5	13.1	8.19	9.40	6.93
(WY)	1984	1966	1967	1993	1980	1991	1958	1998	1980	1980	1983	1980
MIN	0.000	0.000	0.000	0.094	0.70	0.41	0.34	0.16	0.067	0.000	0.000	0.000
(WY)	1958	1963	1963	1963	1965	1965	1961	1961	1966	1964	1957	1957

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1957 - 2003	
ANNUAL TOTAL	322.03		941.44			
ANNUAL MEAN	0.88		2.58		7.85	
HIGHEST ANNUAL MEAN					56.1	1993
LOWEST ANNUAL MEAN					0.28	1961
HIGHEST DAILY MEAN	3.8	Dec 21	72	Mar 16	3600	Jan 16 1993
LOWEST DAILY MEAN	0.15	Aug 11	0.02	Jul 14	0.00	Aug 1 1957
ANNUAL SEVEN-DAY MINIMUM	0.16	Aug 9	0.04	Aug 12	0.00	Aug 1 1957
MAXIMUM PEAK FLOW			121	Mar 15	8100	Jan 16 1993
MAXIMUM PEAK STAGE			2.91	Mar 15	14.60	Jan 16 1993
ANNUAL RUNOFF (AC-FT)	639		1870		5690	
10 PERCENT EXCEEDS	1.6		5.4		11	
50 PERCENT EXCEEDS	0.72		0.88		1.7	
90 PERCENT EXCEEDS	0.26		0.09		0.00	

## 11042510 VAIL LAKE NEAR TEMECULA, CA

LOCATION.—Lat 33° 29'44", long 116° 58'33", in Pauba Grant, [Riverside County](#), Hydrologic Unit 18070302, near center of Vail Dam on Temecula Creek, 0.2 mi downstream from Arroyo Seco, and 10 mi east of Temecula.

DRAINAGE AREA.—320 mi<sup>2</sup>.

## RESERVOIR-STORAGE RECORDS

PERIOD OF RECORD.—October 1960 to September 1985 (monthend contents only). Prior to October 1977, published with Temecula Creek at Vail Dam. October 1987 to current year.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by the U.S. Bureau of Reclamation). June 4, 1969, to September 1985, nonrecording gage.

REMARKS.—Reservoir is formed by concrete arch-type dam, completed in June 1949. Total capacity, 49,370 acre-ft, between elevations 1,352.5 ft, bottom of lowest outlet, and 1,470 ft, crest of spillway, all of which is available for release. There had been no spill from Nov. 13, 1948, date of closure, to Feb. 20, 1980, when a peak spill of about 8,000 ft<sup>3</sup>/s occurred (from theoretical discharge curve). Water is released down Temecula Creek for diversion about 1 mi downstream. Figures given, excluding extremes, represent total contents at 2400 hours. See schematic diagram of [Santa Margarita River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum contents observed, 52,670 acre-ft, spilling, Feb. 21, 1980, elevation, 1,473.0 ft, from highwater mark; minimum observed, 1,038 acre-ft, Oct. 31, 1960, elevation, 1,379.44 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents observed, 19,420 acre-ft, May 16, elevation, 1,435.00 ft; minimum observed, 17,780 acre-ft, Dec. 8, elevation, 1,432.36 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on table dated Dec. 22, 1953)

1,390	2,400	1,420	11,400	1,440	22,780	1,460	39,280
1,400	4,530	1,430	16,390	1,450	30,420	1,475	54,940
1,410	7,560						

## RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18120	17940	17820	17920	17880	18300	19000	19340	19310	19030	18720	18340
2	18110	17940	17820	17900	17870	18320	19000	19330	19300	19010	18710	18330
3	18100	17940	17820	17900	17870	18320	19010	19350	19290	19000	18690	18320
4	18080	17930	17820	17900	17870	18330	19010	19360	19280	18990	18680	18300
5	18080	17920	17810	17900	17860	18350	19010	19370	19290	18990	18640	18260
6	18070	17920	17800	17880	17860	18340	19010	19360	19280	18960	18640	18250
7	18070	17910	17800	17860	17860	18350	19010	19380	19260	18950	18630	18220
8	18060	17920	17790	17860	17860	18350	19000	19390	19250	18930	18620	18210
9	18050	17930	17800	17870	17850	18370	19000	19390	19250	18930	18590	18200
10	18050	17930	17790	17870	17830	18360	19010	19390	19240	18920	18580	18180
11	18030	17910	17810	17870	17880	18370	19010	19390	19220	18910	18570	18180
12	18030	17910	17800	17870	17940	18370	19010	19390	19220	18890	18560	18160
13	18030	17910	17800	17870	17970	18370	19010	19390	19200	18880	18540	18150
14	18020	17900	17800	17870	17990	18370	19100	19390	19200	18860	18540	18140
15	18020	17890	17810	17850	17990	18480	19170	19380	19180	18850	18530	18130
16	18020	17880	17840	17860	17990	18640	19220	19390	19180	18860	18510	18120
17	18000	17880	17880	17860	17990	18790	19240	19390	19170	18840	18500	18100
18	18000	17880	17870	17860	17990	18880	19250	19390	19160	18840	18480	18090
19	17990	17870	17860	17860	18000	18920	19270	19390	19150	18820	18460	18120
20	17990	17850	17900	17870	18030	18950	19270	19390	19150	18810	18470	18070
21	17980	17850	17910	17880	18040	18960	19280	19390	19140	18790	18450	18050
22	17980	17850	17910	17900	18030	18990	19290	19380	19120	18790	18450	18050
23	17970	17850	17900	17880	18030	19010	19300	19360	19120	18780	18430	18060
24	17970	17840	17900	17880	18030	19010	19310	19360	19110	18760	18420	18020
25	17970	17840	17900	17880	18130	19030	19320	19350	19100	18740	18420	18020
26	17970	17820	17900	17880	18150	19030	19320	19360	19080	18730	18410	18000
27	17960	17810	17900	17880	18220	19050	19330	19360	e19080	18730	18380	18000
28	17960	17810	17900	17890	18260	19020	19330	19340	e19070	18730	18380	17990
29	17960	17820	17910	17880	---	19000	19320	19340	e19060	18710	18360	17980
30	17960	17820	17900	17890	---	19000	19320	19330	19050	18730	18350	17980
31	17950	---	17910	17880	---	19010	---	19320	---	18720	18350	---
MAX	18120	17940	17910	17920	18260	19050	19330	19390	19310	19030	18720	18340
MIN	17950	17810	17790	17850	17830	18300	19000	19320	19050	18710	18350	17980
a	1432.64	1432.42	1432.57	1432.52	1433.15	1434.36	1434.85	1434.85	1434.41	1433.89	1433.29	1432.69
b	-180	-130	+90	-30	+380	+750	+310	0	-270	-330	-370	-370
CAL YR 2002	MAX 19940	MIN 17790	b -1980									
WTR YR 2003	MAX 19390	MIN 17790	b -150									

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

## 11042510 VAIL LAKE NEAR TEMECULA, CA—Continued

## PRECIPITATION RECORDS

PERIOD OF RECORD.—October 2000 to current year.

INSTRUMENTATION.—Recording tipping-bucket rain gage since Oct. 1, 2000.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily rainfall, 0.67 in., Jan. 11, 2001; no rainfall for many days each year.

EXTREMES FOR CURRENT YEAR.—Maximum daily rainfall, 0.60 in., estimated, Mar. 16 and Apr. 15; no rainfall for many days.

## PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

## DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.01	0.00	e0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	e0.04	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.08	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	e0.01	e0.02	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	0.00	0.00	0.00	0.00
7	0.00	0.02	0.00	0.00	0.00	0.00	e0.00	e0.00	0.00	0.00	0.00	0.00
8	0.00	0.02	0.00	0.03	0.00	0.00	e0.00	e0.00	0.00	0.00	0.00	0.00
9	0.00	0.01	0.00	0.01	0.00	0.00	e0.00	e0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.06	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.07	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.01	0.00	0.15	e0.00	e0.10	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.01	0.00	0.25	e0.00	e0.25	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.24	e0.50	e0.60	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.46	0.00	0.12	e0.60	e0.00	0.02	0.00	0.00	0.00	0.00
17	0.00	0.00	0.28	0.00	0.06	e0.10	e0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.03	e0.00	e0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.02	e0.00	e0.00	0.00	0.00	0.00	0.00	e0.00
20	0.00	0.00	0.38	0.05	0.02	e0.00	e0.00	0.00	0.00	0.00	0.01	0.00
21	0.00	0.00	0.06	0.02	0.02	e0.00	0.01	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.02	e0.00	0.03	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.03	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.02	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.11	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.07	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00	0.00	0.00	0.00
29	0.00	0.01	0.05	0.00	---	e0.00	0.00	0.00	e0.00	0.00	0.00	0.00
30	0.00	0.01	0.01	0.00	---	e0.00	0.00	0.00	0.00	0.51	0.00	0.00
31	0.00	---	0.00	0.00	---	e0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.07	1.26	0.11	1.30	1.21	1.05	0.10	0.00	0.51	0.01	0.00
MAX	0.00	0.02	0.46	0.05	0.25	0.60	0.60	0.08	0.00	0.51	0.01	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

e Estimated.

11042631 PECHANGA CREEK NEAR TEMECULA, CA

LOCATION.—Lat 33° 28'06", long 117° 07'40", in Temecula Grant, Riverside County, Hydrologic Unit 18070302, on left bank, on upstream side of Highway S-16 Bridge, 0.4 mi upstream from Temecula Creek, and 2.1 mi southeast of Temecula.

DRAINAGE AREA.—13.8 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1987 to current year. Discharge measurements only, October 1991 to September 1992.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 1,010 ft above NGVD of 1929, from topographic map.

REMARKS.—Records poor. No regulation or diversion upstream from station. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,120 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 8.12 ft, from rating curve extended above 400 ft<sup>3</sup>/s on basis of step-backwater analysis; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft<sup>3</sup>/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 20	unknown	282	4.45	Mar. 15	2015	739	5.22
Feb. 25	1245	70	3.66	Apr. 14	1900	112	3.60

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	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	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	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	e0.48	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	5.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	5.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	1.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	6.9	0.00	10	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.09	64	1.5	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	e8.0	0.00	0.04	37	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	e0.50	0.00	0.00	16	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	e0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	e10	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	e20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	4.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	e1.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	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	e0.50	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	18.55	0.48	44.93	117.00	11.50	0.00	0.00	0.50	0.00	0.00
MEAN	0.000	0.000	0.60	0.015	1.60	3.77	0.38	0.000	0.000	0.016	0.000	0.000
MAX	0.00	0.00	10	0.48	20	64	10	0.00	0.00	0.50	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	37	1.0	89	232	23	0.00	0.00	1.0	0.00	0.00

e Estimated.

## SANTA MARGARITA RIVER BASIN

## 11042631 PECHANGA CREEK NEAR TEMECULA, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.000	0.025	0.063	4.33	2.74	2.25	0.34	0.14	0.036	0.016	0.011	0.000
MAX	0.003	0.32	0.60	63.4	24.4	16.5	2.63	0.95	0.51	0.23	0.18	0.006
(WY)	1988	2002	2003	1993	1993	1995	1998	1993	1993	1993	1993	1993
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1989	1989	1990	1991	1992	1989	1989	1988	1988	1988	1988	1988

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1988 - 2003	
ANNUAL TOTAL	18.55		192.96			
ANNUAL MEAN	0.051		0.53		0.82	
HIGHEST ANNUAL MEAN					8.27 1993	
LOWEST ANNUAL MEAN					0.000 1992	
HIGHEST DAILY MEAN	10	Dec 20	64	Mar 15	900	Jan 16 1993
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1987
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1987
MAXIMUM PEAK FLOW			739	Mar 15	3120	Jan 16 1993
MAXIMUM PEAK STAGE			5.22	Mar 15	8.12	Jan 16 1993
ANNUAL RUNOFF (AC-FT)	37		383		596	
10 PERCENT EXCEEDS	0.00		0.00		0.10	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

11042700 MURRIETA CREEK AT TENAJA ROAD, NEAR MURRIETA, CA

LOCATION.—Lat 33° 33'20", long 117° 13'50", in Temecula Grant, [Riverside County](#), Hydrologic Unit 18070302, on left bank, at Tenaja Road crossing, and 1.0 mi northwest of Murrieta.

DRAINAGE AREA.—30.0 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1997 to current year.

GAGE.—Water-stage recorder, crest-stage gage, and concrete road crossing. Elevation of gage is 1,105 ft above NGVD of 1929, from topographic map.

REMARKS.—Records poor. No regulation or diversion upstream from station. See schematic diagram of [Santa Margarita River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,390 ft<sup>3</sup>/s, Feb. 23, 1998, gage height, 10.35 ft, from rating curve extended above 304 ft<sup>3</sup>/s; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 130 ft<sup>3</sup>/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	2045	198	6.66	Mar. 16	0515	1,240	8.29
Feb. 25	1015	1,260	8.31	Apr. 14	1600	336	7.01

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	e0.50	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	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	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	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	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	20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	39	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.52	0.00	82	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	175	32	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	e40	0.00	e5.0	260	4.8	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	e0.50	0.00	0.00	27	3.6	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	11	2.9	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	7.6	2.1	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	5.7	2.2	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	4.4	1.4	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	e3.0	0.49	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	e1.5	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	e1.0	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	342	e0.75	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	81	e0.50	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	37	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	e12	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	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	40.50	0.00	536.52	497.95	131.49	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	1.31	0.000	19.2	16.1	4.38	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.00	40	0.00	342	260	82	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	80	0.00	1060	988	261	0.00	0.00	0.00	0.00	0.00

e Estimated.

## 11042700 MURRIETA CREEK AT TENAJA ROAD, NEAR MURRIETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.000	0.031	0.79	0.60	21.0	5.38	2.26	1.57	0.055	0.000	0.000	0.000
MAX	0.000	0.18	3.42	2.87	97.5	16.1	8.95	9.40	0.33	0.000	0.000	0.000
(WY)	1998	2001	1998	1998	1998	2003	1998	1998	1998	1998	1998	1998
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1998	1998	1999	1999	1999	1999	1999	1999	1999	1998	1998	1998

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1998 - 2003	
ANNUAL TOTAL	40.86		1206.46			
ANNUAL MEAN	0.11		3.31		2.52	
HIGHEST ANNUAL MEAN					10.7	1998
LOWEST ANNUAL MEAN					0.000	1999
HIGHEST DAILY MEAN	40	Dec 16	342	Feb 25	530	Feb 23 1998
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1997
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1997
MAXIMUM PEAK FLOW			1260	Feb 25	3390	Feb 23 1998
MAXIMUM PEAK STAGE			8.31	Feb 25	10.35	Feb 23 1998
ANNUAL RUNOFF (AC-FT)	81		2390		1820	
10 PERCENT EXCEEDS	0.00		0.00		0.00	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	



## 11042800 WARM SPRINGS CREEK NEAR MURRIETA, CA

LOCATION.—Lat 33° 31' 56", long 117° 10' 34", in Temecula Grant, [Riverside County](#), Hydrologic Unit 18070302, on left bank, at upstream end of Jefferson Road Bridge, 0.6 mi upstream from mouth, and 2.8 mi southeast of Murrieta.

DRAINAGE AREA.—55.4 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1987 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 1,040 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Gage out of operation for channel work from Nov. 5, 1991, to June 10, 1992. Rancho California Water District can discharge into creek from automated pump, approximately 0.1 mi upstream from station. Beginning in water year 1999, flows partly regulated by Diamond Valley Lake, capacity, 800,000 acre-ft. Diamond Valley Lake is used to store imported water. Construction of Diamond Valley Lake, beginning in 1996, permanently rerouted 2.4 mi<sup>2</sup> of drainage area in Goodhart Canyon out of the Warm Springs Creek Basin and into the Santa Ana River Basin. Compensatory releases to Warm Springs Creek from Diamond Valley Lake may occur at times. See schematic diagram of [Santa Margarita River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,570 ft<sup>3</sup>/s, Jan. 17, 1993, gage height, 8.59 ft, from rating curve extended above 2,190 ft<sup>3</sup>/s; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft<sup>3</sup>/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1930	455	5.19	Feb. 25	1100	1,190	6.02
Dec. 20	0915	57	4.47	Mar. 15	1845	794	5.61
Feb. 12	1700	401	5.12	Apr. 14	1645	388	5.16

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.06	0.00	0.00	0.00	0.00	5.3	0.00	0.00	0.04	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	4.3	0.00	0.00	0.00	0.01	0.00	0.00
3	0.03	0.02	0.03	0.00	0.00	2.0	0.00	0.09	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	2.0	0.00	0.00	0.03	0.00	0.00	0.00
5	0.03	0.02	0.02	0.00	0.00	0.88	0.00	0.04	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.03	0.00	0.00
7	0.02	0.05	0.03	0.00	0.00	0.10	0.00	0.03	0.00	0.00	0.00	0.00
8	0.00	0.04	0.00	0.00	0.00	0.16	0.00	0.04	0.04	0.00	0.00	0.00
9	0.02	0.07	0.02	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.03	0.00	0.00	0.00	0.00
11	0.11	0.02	0.02	0.00	38	0.05	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.03	0.00	73	0.04	0.00	0.00	0.00	0.00	0.00	0.00
13	0.03	0.02	0.04	0.01	16	0.15	0.01	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.02	0.00	16	0.06	82	0.00	0.00	0.01	0.00	0.00
15	0.01	0.01	0.04	0.00	0.09	182	46	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	46	0.01	0.00	235	1.9	0.00	0.00	0.09	0.00	0.00
17	0.01	0.02	0.78	0.00	0.00	22	0.52	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	4.2	0.24	0.00	0.00	0.00	0.00	0.01
19	0.03	0.03	0.00	0.01	0.00	2.0	0.07	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	8.0	0.01	e6.6	1.7	0.00	0.00	0.01	0.00	0.00	0.00
21	0.03	0.02	0.00	0.00	0.39	1.2	0.02	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.10	0.55	0.05	0.00	0.00	0.00	0.00	0.09
23	0.04	0.01	0.00	0.00	0.09	0.49	0.01	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.08	0.00	0.02	0.00
25	0.03	0.03	0.00	0.00	452	0.28	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	142	0.00	0.00	0.00	0.03	0.00	0.00	0.00
27	0.03	0.06	0.00	0.00	40	0.00	0.01	0.00	0.00	0.05	0.00	0.00
28	0.00	0.00	0.00	0.00	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.06	0.03	0.00	0.00	---	0.00	0.00	0.00	0.09	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	1.7	0.00	0.00
31	0.03	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.57	0.45	55.03	0.04	801.27	465.52	130.83	0.23	0.32	1.89	0.02	0.10
MEAN	0.018	0.015	1.78	0.001	28.6	15.0	4.36	0.007	0.011	0.061	0.001	0.003
MAX	0.11	0.07	46	0.01	452	235	82	0.09	0.09	1.7	0.02	0.09
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	1.1	0.9	109	0.08	1590	923	260	0.5	0.6	3.7	0.04	0.2

e Estimated.

## SANTA MARGARITA RIVER BASIN

## 11042800 WARM SPRINGS CREEK NEAR MURRIETA, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.066	0.15	0.59	17.4	18.5	10.0	1.05	0.36	0.21	0.067	0.033	0.015
MAX	0.46	0.68	2.27	226	116	74.0	6.19	2.99	2.93	0.71	0.41	0.13
(WY)	1993	1997	1993	1993	1998	1991	1998	1998	1998	1998	1999	2000
MIN	0.000	0.000	0.000	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1989	1989	1990	2003	1989	1988	1989	1989	1988	1989	1988	1988

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1988 - 2003	
ANNUAL TOTAL	58.10		1456.27			
ANNUAL MEAN	0.16		3.99		3.97	
HIGHEST ANNUAL MEAN					27.6	1993
LOWEST ANNUAL MEAN					0.053	2002
HIGHEST DAILY MEAN	46	Dec 16	452	Feb 25	2070	Jan 16 1993
LOWEST DAILY MEAN	0.00	Jan 6	0.00	Oct 2	0.00	Oct 1 1987
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 6	0.00	Dec 21	0.00	Oct 1 1987
MAXIMUM PEAK FLOW			1190	Feb 25	5570	Jan 17 1993
MAXIMUM PEAK STAGE			6.02	Feb 25	8.59	Jan 17 1993
ANNUAL RUNOFF (AC-FT)	115		2890		2870	
10 PERCENT EXCEEDS	0.03		0.26		0.82	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 11042900 SANTA GERTRUDIS CREEK NEAR TEMECULA, CA

LOCATION.—Lat 33° 31' 28", long 117° 09' 50", in Temecula Grant, [Riverside County](#), Hydrologic Unit 18070302, on left bank, 0.85 mi upstream from Murrieta Creek, 1.65 mi downstream from Tualota Creek, and 2.2 mi northeast of Temecula.

DRAINAGE AREA.—90.2 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1987 to current year. Discharge measurements only, October 1991 to September 1992.

REVISED RECORDS.—WDR CA-94-1: Drainage area. WDR CA-96-1: 1993(M).

GAGE.—Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 1,045 ft above NGVD of 1929, from topographic map. Prior to Oct. 11, 1994, at site 800 ft upstream at different datum.

REMARKS.—Records fair. Flow partly regulated by Skinner Reservoir, capacity, 43,800 acre-ft. See schematic diagram of [Santa Margarita River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,200 ft<sup>3</sup>/s, estimated, Jan. 16, 1993, gage height, 8.47 ft, site and datum then in use, based on critical depth computation; no flow for most of each year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.28	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	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	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	1.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	1.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.0	0.00	0.00
10	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.4	0.00	0.00
11	0.00	0.00	0.00	0.00	53	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.07	0.00	0.00	36	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	26	0.00	66	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	4.0	153	22	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	57	0.00	2.2	77	2.7	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	16	0.00	0.39	10	1.1	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	3.2	0.00	0.00	1.5	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	29	0.00	6.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	2.7	0.00	1.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.39	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	265	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	76	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	1.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	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	1.3	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.60	0.00	---
TOTAL	0.00	3.73	108.30	0.00	584.89	241.84	91.80	0.00	0.00	5.30	0.00	0.00
MEAN	0.000	0.12	3.49	0.000	20.9	7.80	3.06	0.000	0.000	0.17	0.000	0.000
MAX	0.00	1.9	57	0.00	265	153	66	0.00	0.00	2.0	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	7.4	215	0.00	1160	480	182	0.00	0.00	11	0.00	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

	0.018	0.35	0.88	11.6	13.6	10.1	5.49	2.50	0.009	0.042	0.008	0.047
MEAN	0.018	0.35	0.88	11.6	13.6	10.1	5.49	2.50	0.009	0.042	0.008	0.047
MAX	0.12	1.94	4.93	108	77.8	50.7	46.7	28.3	0.077	0.39	0.12	0.67
(WY)	1994	1997	1998	1993	1998	1995	1993	1993	1999	1999	2002	1997
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1988	1988	1990	1991	1988	1988	1989	1988	1988	1988	1988	1988

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1988 - 2003

ANNUAL TOTAL	122.99	1035.86	
ANNUAL MEAN	0.34	2.84	3.67
HIGHEST ANNUAL MEAN			23.2
LOWEST ANNUAL MEAN			0.006
HIGHEST DAILY MEAN	57	Dec 16	265
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
MAXIMUM PEAK FLOW			1460
MAXIMUM PEAK STAGE			3.49
ANNUAL RUNOFF (AC-FT)	244	2050	2660
10 PERCENT EXCEEDS	0.00	0.06	1.5
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

## 11043000 MURRIETA CREEK AT TEMECULA, CA

LOCATION.—Lat 33° 28' 47", long 117° 08' 35", in Temecula Grant, [Riverside County](#), Hydrologic Unit 18070302, on right bank, 0.4 mi upstream from confluence with Temecula Creek, 1.0 mi south of Temecula, and 12 mi downstream from Skinner Reservoir on Tualota Creek.

DRAINAGE AREA.—222 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1924 to current year. Prior to September 1930 monthly discharges only, published in WSP 1315-B.

REVISED RECORDS.—WSP 1345: 1952. WSP 1635: 1932, 1937. WSP 1928: Drainage area. WDR CA-93-1: 1991 (P), 1992 (M).

GAGE.—Water-stage recorder. Concrete control since Aug. 30, 1981. Elevation of gage is 970 ft above NGVD of 1929, from topographic map. See WSP 1735 for history of changes prior to Dec. 16, 1938.

REMARKS.—Records good except for estimated daily discharges and discharges after Aug. 1, which are poor. Flow partly regulated since 1974 by Skinner Reservoir, capacity, 43,800 acre-ft. Beginning in water year 1999, flows on Warm Springs Creek, a tributary to Murrieta Creek, are slightly regulated by Diamond Valley Lake, capacity, 800,000 acre-ft (see [station 11042800](#)). Pumping upstream from station for irrigation. Rancho California Water District can discharge into creek, approximately 0.1 mi upstream, to supplement low flow. See schematic diagram of [Santa Margarita River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 25,000 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 17.24 ft, on basis of slope-area measurement of peak flow; no flow on Dec. 11, 1976, many days in 1989–93, and on Dec. 30, 1999.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1000 ft<sup>3</sup>/s, or maximum, from rating curve extended above 6,430 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	2100	1,510	5.51	Mar. 15	2000	4,580	8.87
Feb. 12	1830	2,360	6.65	Apr. 14	1830	1,920	6.10
Feb. 25	0715	5,440	9.57				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	3.3	3.0	0.16	e0.08	16	e0.15	0.14	0.09	e0.07	0.06	0.05
2	3.9	3.3	2.9	0.12	e0.08	7.9	0.15	0.14	0.09	0.06	0.09	0.05
3	3.5	3.3	2.8	0.06	e0.08	4.0	0.13	4.8	0.10	0.06	0.06	0.05
4	3.4	3.3	2.8	0.07	0.07	5.3	0.22	6.3	0.10	0.07	e0.05	0.04
5	4.0	3.3	2.8	0.07	0.07	4.1	0.35	0.99	0.09	0.06	e0.06	0.04
6	4.0	3.3	2.8	0.09	0.07	1.6	0.23	0.68	0.09	0.06	e0.08	0.04
7	3.3	3.3	2.8	0.07	0.07	1.2	0.15	1.2	0.09	0.06	e0.05	0.05
8	3.5	7.1	2.8	0.54	0.07	2.1	0.15	0.90	0.10	0.07	0.06	0.05
9	3.3	29	2.8	0.21	0.07	2.0	0.12	0.41	0.10	0.07	0.06	0.09
10	3.4	9.8	2.8	0.11	0.07	1.9	0.12	0.20	0.10	0.07	0.06	0.05
11	3.5	4.2	2.8	0.17	213	1.7	0.10	0.14	0.08	0.07	0.07	0.05
12	4.0	1.5	2.8	0.13	568	1.5	0.11	0.43	0.08	0.07	e0.05	0.05
13	3.6	0.15	2.8	0.18	247	1.4	0.20	4.0	0.08	0.06	e0.05	0.04
14	3.4	1.6	2.9	0.62	56	1.4	438	1.1	0.08	0.06	e0.06	e0.05
15	3.7	2.5	2.9	0.15	17	916	262	0.37	0.07	0.07	e0.06	0.04
16	3.9	2.4	159	0.12	6.6	1060	32	0.19	0.07	0.07	0.06	e0.05
17	3.5	2.4	157	0.12	2.9	127	11	0.15	0.07	0.07	0.07	e0.05
18	4.0	1.7	12	0.11	1.4	30	5.1	0.14	0.07	0.13	0.09	e0.05
19	3.5	2.4	2.1	0.10	0.58	13	3.1	0.13	0.08	0.16	0.05	0.04
20	2.4	3.0	83	0.11	14	7.2	2.1	0.14	0.08	0.10	0.06	0.05
21	2.5	3.0	29	0.09	6.5	5.2	1.3	0.14	0.09	0.06	0.05	0.04
22	3.0	3.0	3.7	0.09	1.5	3.2	0.98	0.14	0.09	0.06	e0.05	0.05
23	3.1	3.0	0.87	0.10	0.47	e2.2	1.2	0.17	0.08	0.06	e0.05	e0.05
24	3.0	3.0	0.34	0.09	0.14	e1.2	0.58	0.18	0.07	0.06	e0.05	0.10
25	3.0	3.0	0.23	0.09	1890	e0.47	0.37	0.18	0.10	0.06	0.06	e0.04
26	3.0	3.0	0.21	0.09	480	e0.17	0.29	0.19	0.09	0.06	0.06	e0.05
27	3.0	3.0	0.18	0.08	176	e0.15	0.24	0.17	e0.07	0.06	0.06	e0.05
28	3.2	3.0	0.44	0.08	59	e0.15	0.20	1.5	0.06	0.06	0.10	e0.05
29	3.3	3.0	0.40	e0.08	---	e0.15	0.19	0.24	0.06	0.07	0.06	e0.05
30	3.3	3.0	0.63	e0.08	---	e0.15	0.15	0.18	0.09	0.34	0.06	e0.05
31	3.3	---	0.65	e0.08	---	e0.15	---	0.09	---	0.06	0.07	---
TOTAL	105.3	120.85	492.25	4.26	3740.82	2218.49	760.98	25.73	2.51	2.46	1.92	1.51
MEAN	3.40	4.03	15.9	0.14	134	71.6	25.4	0.83	0.084	0.079	0.062	0.050
MAX	4.0	29	159	0.62	1890	1060	438	6.3	0.10	0.34	0.10	0.10
MIN	2.4	0.15	0.18	0.06	0.07	0.15	0.10	0.09	0.06	0.06	0.05	0.04
AC-FT	209	240	976	8.4	7420	4400	1510	51	5.0	4.9	3.8	3.0

e Estimated.



## 11044000 SANTA MARGARITA RIVER NEAR TEMECULA, CA

LOCATION.—Lat 33° 28' 26", long 117° 08' 29", in Temecula Grant, [Riverside County](#), Hydrologic Unit 18070302, on left bank, at upper end of Temecula Canyon, 0.1 mi downstream from confluence of Murrieta and Temecula Creeks, 1.4 mi south of Temecula, 10 mi downstream from Vail Dam, and about 12 mi downstream from Skinner Reservoir.

DRAINAGE AREA.—588 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—January 1923 to current year. Prior to October 1952, published as "Temecula Creek at Railroad Canyon, near Temecula."

REVISED RECORDS.—WSP 981: 1927(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Concrete control since Nov. 3, 1966; buried by sand Nov. 19, 1985, uncovered by high flow in March 1991. Elevation of gage is 950 ft above NGVD of 1929. Prior to Nov. 3, 1966, at site 100 ft downstream at same datum.

REMARKS.—Records good except for estimated daily discharges, which are poor. Flow partly regulated since November 1948 by Vail Lake (station 11042510) on Temecula Creek, and since 1974 by Skinner Reservoir. Rancho California Water District can discharge into Murrieta Creek, approximately 1.0 mi upstream, to supplement low flow. Beginning in water year 1999, flows on Warm Springs Creek, a tributary to Murrieta Creek, are slightly regulated by Diamond Valley Lake, capacity, 800,000 acre-ft (see station 11042800). See schematic diagram of [Santa Margarita River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 31,000 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 22.5 ft, from rating curve extended above 4,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; minimum daily, 0.16 ft<sup>3</sup>/s, Mar. 31, Apr. 1, 11, 1988.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	2.8	2.7	15	12	24	11	11	10	8.1	8.2	7.9
2	4.3	2.8	3.0	11	12	10	9.9	11	6.3	7.6	8.2	7.9
3	3.8	2.8	2.8	8.9	11	13	12	18	8.0	8.0	8.2	7.8
4	3.2	2.7	2.8	13	11	17	11	21	8.7	8.1	8.2	7.8
5	4.1	2.6	2.9	13	11	13	10	9.8	8.8	8.2	8.0	7.9
6	4.0	2.6	2.9	12	11	9.5	9.7	7.1	8.8	8.3	8.0	8.2
7	3.0	2.7	2.9	11	11	9.6	10	8.3	8.8	8.2	8.1	8.2
8	3.2	8.2	2.9	18	11	9.9	11	12	8.8	8.2	8.2	8.2
9	2.8	46	2.9	14	11	9.6	10	11	8.8	8.2	8.1	8.1
10	2.9	14	2.9	13	11	10	9.3	11	8.8	8.2	8.1	8.1
11	3.1	5.1	2.9	12	e338	11	9.8	11	9.2	8.2	8.3	8.0
12	3.6	1.8	2.9	12	e706	11	9.2	11	9.6	8.5	8.2	7.9
13	3.3	0.50	2.9	12	e254	11	9.3	15	9.6	8.3	8.0	8.0
14	3.1	1.5	2.8	12	e75	11	543	11	9.6	8.3	8.1	8.0
15	3.3	e2.3	2.8	11	30	1050	306	10	9.6	8.6	8.1	8.1
16	3.6	e2.2	e228	11	12	1130	43	10	9.7	8.7	8.0	7.9
17	3.3	e2.2	e190	11	e4.0	187	14	10	9.7	8.6	8.2	7.9
18	3.5	e1.5	21	11	e2.0	43	11	10	9.7	8.6	8.3	7.9
19	3.2	2.1	3.7	11	1.3	20	14	10	9.6	8.8	8.1	7.9
20	2.0	2.8	e125	12	26	9.6	13	10	9.7	8.8	8.2	8.0
21	2.1	2.7	50	12	23	12	12	10	9.7	8.6	8.3	8.2
22	2.6	2.8	6.9	12	15	12	11	11	9.6	8.5	8.0	8.2
23	2.7	2.7	2.2	12	14	10	11	9.9	9.5	8.7	7.9	8.2
24	2.6	2.7	1.1	12	12	9.4	11	10	9.5	8.6	8.0	8.2
25	2.6	2.7	0.81	12	2030	9.7	12	10	9.6	8.5	8.0	8.0
26	2.7	2.7	0.86	12	529	7.6	11	9.9	9.4	8.5	7.9	8.0
27	2.6	2.9	0.76	12	232	11	11	10	9.3	8.6	7.9	8.0
28	2.7	2.8	0.75	8.1	74	12	10	11	9.3	8.4	7.9	7.8
29	2.8	2.8	0.81	11	---	12	9.8	10	9.5	8.4	7.9	8.0
30	2.8	2.8	1.4	11	---	12	9.8	11	9.5	9.1	7.9	8.2
31	2.8	---	9.2	11	---	10	---	10	---	8.4	7.9	---
TOTAL	96.6	136.80	685.49	369.0	4489.3	2726.9	1184.8	341.0	276.7	260.8	250.4	240.5
MEAN	3.12	4.56	22.1	11.9	160	88.0	39.5	11.0	9.22	8.41	8.08	8.02
MAX	4.3	46	228	18	2030	1130	543	21	10	9.1	8.3	8.2
MIN	2.0	0.50	0.75	8.1	1.3	7.6	9.2	7.1	6.3	7.6	7.9	7.8
AC-FT	192	271	1360	732	8900	5410	2350	676	549	517	497	477

e Estimated.

11044000 SANTA MARGARITA RIVER NEAR TEMECULA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1948, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.04	10.4	21.4	32.6	114	90.3	26.7	10.2	7.01	5.41	5.01	5.93
MAX	11.8	39.3	99.9	369	1205	1007	226	40.2	15.1	9.90	9.65	19.4
(WY)	1942	1945	1941	1943	1927	1938	1941	1941	1941	1941	1941	1939
MIN	3.77	3.11	4.97	8.03	7.59	5.90	4.19	3.62	3.12	1.55	1.90	2.31
(WY)	1925	1930	1930	1936	1925	1931	1928	1929	1929	1929	1926	1926

SUMMARY STATISTICS

WATER YEARS 1923 - 1948

ANNUAL MEAN	28.2
HIGHEST ANNUAL MEAN	101 1927
LOWEST ANNUAL MEAN	6.22 1925
HIGHEST DAILY MEAN	19900 Feb 16 1927
LOWEST DAILY MEAN	.90 Aug 9 1929
ANNUAL SEVEN-DAY MINIMUM	.99 Aug 8 1929
MAXIMUM PEAK FLOW	25000 Feb 16 1927
MAXIMUM PEAK STAGE	14.60 Feb 16 1927
ANNUAL RUNOFF (AC-FT)	20390
10 PERCENT EXCEEDS	21
50 PERCENT EXCEEDS	8.5
90 PERCENT EXCEEDS	3.5

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1973, BY WATER YEAR (WY)

MEAN	3.39	6.24	8.90	21.8	36.7	18.6	12.4	3.97	3.35	2.79	3.01	3.06
MAX	6.04	53.3	41.4	251	638	212	177	6.70	5.59	4.69	6.38	6.55
(WY)	1954	1966	1966	1952	1969	1952	1958	1949	1949	1949	1953	1953
MIN	2.05	2.22	2.69	2.73	2.54	2.57	2.35	2.39	2.19	1.51	1.28	1.45
(WY)	1967	1967	1965	1965	1965	1965	1972	1970	1973	1972	1972	1970

SUMMARY STATISTICS

WATER YEARS 1949 - 1973

ANNUAL MEAN	10.2
HIGHEST ANNUAL MEAN	62.5 1969
LOWEST ANNUAL MEAN	2.96 1964
HIGHEST DAILY MEAN	7730 Feb 25 1969
LOWEST DAILY MEAN	.30 Aug 18 1966
ANNUAL SEVEN-DAY MINIMUM	.67 Aug 17 1966
MAXIMUM PEAK FLOW	14600 Feb 25 1969
MAXIMUM PEAK STAGE	15.32 Feb 25 1969
ANNUAL RUNOFF (AC-FT)	7390
10 PERCENT EXCEEDS	7.3
50 PERCENT EXCEEDS	3.7
90 PERCENT EXCEEDS	2.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2003, BY WATER YEAR (WY)

MEAN	3.16	4.63	6.76	80.6	120	79.7	15.0	8.19	3.50	2.85	2.95	3.51
MAX	10.8	32.8	32.4	1255	1105	438	85.6	46.6	9.22	8.41	9.99	13.9
(WY)	1994	1986	1998	1993	1980	1978	1980	1980	2003	2003	1993	1976
MIN	1.25	0.27	0.33	0.59	1.84	0.36	0.32	0.58	0.72	0.58	0.91	1.33
(WY)	1982	1989	2000	2000	1989	1988	1989	1988	1984	1984	1984	1987

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1974 - 2003

ANNUAL TOTAL	1971.59	11058.29	
ANNUAL MEAN	5.40	30.3	27.1
HIGHEST ANNUAL MEAN			183 1993
LOWEST ANNUAL MEAN			2.17 1987
HIGHEST DAILY MEAN	228 Dec 16	2030 Feb 25	13000 Jan 16 1993
LOWEST DAILY MEAN	0.50 Nov 13	0.50 Nov 13	0.16 Mar 31 1988
ANNUAL SEVEN-DAY MINIMUM	0.93 Dec 24	0.93 Dec 24	0.18 Mar 31 1988
MAXIMUM PEAK FLOW		6330 Feb 25	31000 Jan 16 1993
MAXIMUM PEAK STAGE		9.28 Feb 25	22.50 Jan 16 1993
ANNUAL RUNOFF (AC-FT)	3910	21930	19620
10 PERCENT EXCEEDS	4.7	14	13
50 PERCENT EXCEEDS	3.4	8.7	2.8
90 PERCENT EXCEEDS	2.6	2.7	1.1





## 11044000 SANTA MARGARITA RIVER NEAR TEMECULA, CA—Continued

## DISSOLVED OXYGEN, MG/L, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.1	8.5	8.7	8.4	8.2	7.6	---	---	7.7	7.1	6.7	6.1
2	9.2	8.1	8.7	8.4	---	---	---	---	7.6	6.8	6.8	6.2
3	9.2	8.9	8.6	7.8	8.4	7.8	---	---	7.2	6.6	6.7	6.1
4	9.2	8.8	8.2	7.8	8.4	7.8	---	---	7.4	6.6	6.7	6.0
5	9.1	8.6	8.0	7.7	8.6	8.0	---	---	7.6	6.7	6.6	5.9
6	9.1	8.1	8.1	7.4	8.6	8.0	---	---	7.5	6.9	6.5	5.8
7	9.0	8.1	8.8	7.4	8.6	7.9	---	---	7.5	6.9	6.2	5.5
8	9.0	8.5	8.8	8.2	8.4	7.8	8.1	7.2	7.9	6.9	6.3	5.6
9	8.7	8.2	8.8	8.6	8.4	7.8	7.8	7.1	7.7	7.0	7.6	5.6
10	8.7	7.7	8.9	7.8	8.4	7.7	7.9	7.2	7.6	6.8	7.7	6.9
11	8.8	8.0	8.9	8.5	8.4	7.7	8.0	7.0	7.3	6.7	7.8	6.9
12	8.7	7.7	8.8	8.0	8.2	7.5	7.8	7.1	7.1	6.5	7.6	6.8
13	8.3	7.7	8.5	7.7	8.1	7.5	7.7	7.2	7.2	6.5	7.6	6.7
14	---	---	8.0	7.5	8.2	7.5	7.8	7.3	7.1	6.4	7.6	6.7
15	---	---	8.7	7.6	8.2	7.5	7.9	7.3	7.0	6.3	7.4	6.7
16	---	---	8.6	7.6	8.3	7.6	7.9	7.3	6.9	6.2	7.5	6.8
17	---	---	8.6	7.5	8.2	7.6	7.8	7.3	6.9	6.1	7.5	6.7
18	---	---	8.5	8.0	8.1	7.5	7.8	7.3	6.7	6.0	7.4	6.6
19	9.2	8.8	8.6	8.0	7.9	7.4	7.8	7.3	6.9	6.0	7.3	6.2
20	9.3	9.0	8.5	7.6	8.0	7.4	7.8	7.3	6.6	5.2	7.1	6.2
21	9.2	9.0	8.1	7.6	8.3	7.7	7.8	7.2	6.3	5.2	6.9	6.2
22	9.2	9.0	8.4	7.9	8.4	7.8	7.6	7.2	6.4	5.8	6.9	6.0
23	9.1	8.8	8.4	7.8	8.4	7.8	7.8	7.4	6.3	5.7	7.3	6.6
24	9.1	8.8	8.2	7.6	8.4	7.7	7.8	7.4	6.2	5.5	7.3	6.8
25	9.1	8.9	8.1	7.4	---	---	7.8	7.4	6.2	5.2	7.4	7.0
26	9.1	8.8	8.3	7.2	---	---	7.9	7.3	6.1	5.4	7.4	7.1
27	8.9	8.7	8.4	7.2	---	---	7.9	7.4	6.4	5.7	7.4	7.0
28	8.9	8.5	8.0	7.2	---	---	7.8	7.3	6.6	6.0	7.6	7.0
29	8.8	8.6	8.0	7.1	---	---	7.9	7.3	6.6	6.2	7.5	7.0
30	8.8	8.5	8.0	7.4	---	---	7.7	7.3	6.6	6.2	7.7	7.0
31	---	---	8.2	7.6	---	---	7.9	7.2	6.5	6.1	---	---
MONTH	---	---	8.9	7.1	---	---	---	---	7.9	5.2	7.8	5.5

## 11044000 SANTA MARGARITA RIVER NEAR TEMECULA, CA—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.6	7.6	7.7	7.6	7.7	7.6	---	---	8.1	8.0	7.6	7.5
2	7.7	7.6	7.7	7.6	7.7	7.6	---	---	8.1	8.0	7.6	7.5
3	7.7	7.6	7.7	7.6	7.7	7.6	---	---	8.1	8.0	8.0	7.5
4	7.7	7.6	7.7	7.6	7.7	7.6	---	---	8.1	8.1	8.0	7.8
5	7.7	7.6	7.7	7.6	7.8	7.7	---	---	8.1	8.1	7.9	7.8
6	7.7	7.6	7.7	7.6	7.8	7.7	---	---	8.1	8.1	7.9	7.8
7	7.7	7.6	7.7	7.6	7.8	7.7	---	---	8.1	7.7	8.0	7.8
8	7.7	7.6	7.7	7.4	7.7	7.7	---	---	7.9	7.6	8.0	7.9
9	7.7	7.6	7.4	7.1	7.8	7.7	---	---	8.0	7.8	8.0	7.8
10	7.7	7.6	7.4	7.2	7.8	7.7	8.1	8.0	7.9	7.7	7.9	7.8
11	7.7	7.4	7.5	7.4	7.8	7.7	8.1	7.9	---	---	7.9	7.8
12	7.7	7.5	7.5	7.4	7.8	7.7	8.2	8.0	---	---	7.9	7.8
13	7.6	7.5	7.4	7.3	7.8	7.7	8.2	8.1	---	---	8.0	7.8
14	7.6	7.5	7.4	7.3	7.8	7.7	8.2	8.1	---	---	8.0	7.8
15	7.6	7.5	7.5	7.4	7.8	7.7	8.1	8.0	---	---	---	---
16	7.6	7.5	7.5	7.5	---	---	8.1	8.0	---	---	---	---
17	7.6	7.5	7.6	7.5	---	---	8.2	8.0	---	---	---	---
18	7.6	7.5	7.6	7.5	---	---	8.2	8.0	---	---	---	---
19	7.6	7.5	7.6	7.5	---	---	8.2	8.0	7.6	7.5	---	---
20	7.6	7.5	7.8	7.6	---	---	8.2	7.9	8.0	7.4	7.7	7.5
21	7.6	7.5	7.7	7.6	---	---	8.0	7.9	8.0	7.8	7.9	7.6
22	7.6	7.6	7.7	7.6	---	---	8.0	7.8	8.1	8.0	7.9	7.8
23	7.7	7.6	7.7	7.6	---	---	8.0	7.9	8.1	8.1	7.9	7.8
24	7.7	7.6	7.7	7.6	---	---	8.1	7.9	8.1	8.1	7.9	7.8
25	7.7	7.6	7.7	7.6	---	---	8.1	7.9	---	---	8.0	7.7
26	7.7	7.6	7.7	7.6	---	---	8.1	7.8	---	---	7.9	7.7
27	7.7	7.6	7.7	7.6	---	---	8.1	7.9	---	---	8.0	7.8
28	7.7	7.6	7.7	7.6	---	---	8.1	7.3	---	---	8.0	7.9
29	7.7	7.6	7.7	7.6	---	---	7.9	7.9	---	---	8.0	8.0
30	7.7	7.6	7.7	7.6	---	---	8.1	7.9	---	---	8.0	7.9
31	7.7	7.6	---	---	---	---	8.1	8.1	---	---	8.0	7.8
MONTH	7.7	7.4	7.8	7.1	---	---	---	---	---	---	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	7.9	7.9	7.9	8.0	7.8	8.2	7.9	8.1	8.0	8.1	8.0
2	8.0	7.8	7.9	7.9	8.1	7.7	8.3	8.1	8.1	7.9	8.1	7.9
3	8.0	7.9	7.9	7.4	7.8	7.7	8.3	8.1	8.1	8.0	8.1	8.0
4	8.0	7.9	7.7	7.4	7.9	7.7	8.3	8.2	8.1	8.0	8.0	7.9
5	7.9	7.8	7.7	7.6	8.0	7.7	8.3	8.1	8.1	8.0	8.1	7.9
6	8.0	7.7	7.7	7.5	8.0	7.9	8.2	8.1	8.1	8.0	8.1	7.9
7	8.0	7.8	8.0	7.5	8.0	7.9	8.2	8.1	8.1	8.0	8.1	7.9
8	8.0	7.9	8.0	7.9	8.0	7.9	8.2	8.1	8.2	8.0	8.1	7.9
9	8.0	7.9	8.0	7.9	8.0	7.9	8.2	8.0	8.2	8.1	8.1	7.9
10	8.0	7.8	8.0	8.0	8.0	7.9	8.2	8.0	8.2	8.1	8.2	8.0
11	8.0	7.8	8.1	7.9	8.0	7.9	8.2	8.0	8.2	8.1	8.2	8.0
12	8.0	7.8	8.0	7.9	8.0	7.9	8.1	8.0	8.2	8.1	8.1	8.0
13	8.0	7.8	7.9	7.8	8.0	7.8	8.1	8.0	8.2	8.0	8.2	8.0
14	---	---	7.9	7.7	7.9	7.8	8.1	8.0	8.2	8.0	8.2	8.0
15	---	---	8.0	7.8	8.0	7.8	8.1	8.0	8.2	8.0	8.1	8.0
16	---	---	8.0	7.9	8.0	7.8	8.1	8.0	8.1	8.0	8.1	8.0
17	---	---	8.0	7.9	8.0	7.8	8.0	8.0	8.1	8.0	8.1	7.9
18	---	---	8.0	7.9	8.0	7.8	8.0	7.9	8.1	7.9	8.0	7.9
19	7.9	7.8	8.0	7.9	8.0	7.8	8.0	7.9	8.1	7.9	8.0	7.9
20	7.9	7.9	8.0	7.8	8.0	7.9	8.0	7.9	8.1	7.7	8.0	7.9
21	8.0	7.9	8.1	7.8	8.0	7.9	8.0	7.8	8.0	7.7	8.0	7.8
22	8.0	7.6	8.1	7.8	8.0	7.9	7.8	7.8	8.0	7.9	8.0	7.8
23	7.8	7.6	8.1	7.9	8.0	7.8	7.8	7.8	8.0	7.9	8.0	7.7
24	8.0	7.6	8.0	7.8	8.0	7.6	8.0	7.8	8.0	7.8	7.8	7.7
25	8.0	7.8	8.0	7.8	7.7	7.6	8.0	8.0	8.0	7.8	8.0	7.8
26	8.0	7.9	8.0	7.8	8.0	7.6	8.0	8.0	8.0	7.7	8.0	8.0
27	8.0	7.9	8.1	7.6	8.2	7.8	8.1	7.9	7.8	7.7	8.0	8.0
28	8.0	7.9	7.8	7.6	8.2	7.9	8.1	8.0	8.0	7.8	8.0	8.0
29	8.0	7.9	8.0	7.6	8.1	7.9	8.1	8.0	8.1	8.0	8.0	8.0
30	8.0	7.9	8.0	7.8	8.0	7.9	8.0	7.8	8.1	8.0	8.0	8.0
31	---	---	8.0	7.8	---	---	8.1	8.0	8.1	8.0	---	---
MONTH	---	---	8.1	7.4	8.2	7.6	8.3	7.8	8.2	7.7	8.2	7.7

## 11044000 SANTA MARGARITA RIVER NEAR TEMECULA, CA—Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1120	1060	896	839	929	891	---	---	897	893	808	667
2	1150	1080	902	853	951	898	---	---	898	893	972	540
3	1120	1080	899	860	898	807	---	---	895	893	1010	872
4	1090	1040	890	861	873	846	---	---	895	893	960	872
5	1130	1060	908	835	873	817	---	---	895	893	964	903
6	1120	1100	908	838	901	856	---	---	897	893	908	900
7	1150	1070	875	802	936	844	---	---	904	893	909	889
8	1110	1010	927	730	939	869	---	---	897	888	899	883
9	1110	1060	933	652	936	877	---	---	890	886	886	877
10	1100	1030	816	663	936	830	867	862	889	887	881	867
11	1160	973	934	816	919	856	869	866	---	---	875	866
12	1140	1100	971	880	919	845	870	867	---	---	876	867
13	1140	1090	1030	971	940	845	874	870	---	---	872	865
14	1130	1070	1040	974	940	860	880	874	---	---	868	863
15	1130	1040	974	887	891	858	879	875	---	---	---	---
16	1130	1070	923	881	---	---	881	878	---	---	---	---
17	1110	1070	903	882	---	---	882	879	---	---	---	---
18	1140	995	986	903	---	---	883	881	---	---	---	---
19	1120	1110	945	898	---	---	885	882	1180	1120	---	---
20	1110	978	934	878	---	---	886	884	1200	678	982	893
21	989	941	912	820	---	---	887	885	835	761	1040	892
22	941	901	898	810	---	---	888	886	864	835	914	898
23	928	887	937	872	---	---	889	887	871	862	918	899
24	928	870	937	878	---	---	890	888	876	865	914	890
25	890	829	892	857	---	---	892	889	---	---	897	879
26	906	851	899	801	---	---	893	891	---	---	907	870
27	904	858	904	849	---	---	893	891	---	---	899	866
28	915	879	890	823	---	---	1210	892	---	---	878	866
29	901	823	897	867	---	---	897	893	---	---	874	867
30	898	860	914	835	---	---	894	892	---	---	870	861
31	899	817	---	---	---	---	894	892	---	---	1030	862
MONTH	1160	817	1040	652	---	---	---	---	---	---	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	870	856	816	801	770	759	739	718	807	796	798	774
2	983	844	811	799	---	---	741	734	809	800	811	791
3	852	844	956	677	785	763	743	733	811	803	811	783
4	851	837	955	780	785	772	739	735	813	805	799	784
5	911	831	796	781	781	758	740	733	815	805	794	782
6	963	829	845	785	763	754	739	730	816	807	798	790
7	905	818	824	775	763	753	741	731	814	806	800	790
8	828	818	783	771	759	751	749	737	825	812	799	792
9	824	811	777	764	760	750	747	740	832	821	818	792
10	899	805	772	760	755	747	755	745	833	822	814	803
11	883	809	765	759	751	744	752	746	830	823	814	807
12	921	805	815	761	748	742	760	748	830	817	814	806
13	892	806	846	797	743	738	763	749	827	813	814	805
14	---	---	815	769	749	735	761	751	818	805	817	803
15	---	---	797	754	746	738	762	753	817	803	817	801
16	---	---	769	757	745	736	769	760	814	798	822	803
17	---	---	761	754	741	728	772	767	806	794	813	804
18	---	---	763	750	737	725	783	771	801	791	809	794
19	832	815	760	748	731	721	785	770	794	783	807	802
20	847	826	756	746	728	719	784	769	917	734	808	724
21	850	834	754	743	723	716	778	772	779	734	804	796
22	847	836	755	728	723	717	784	778	781	767	812	722
23	854	840	750	740	719	711	788	776	770	758	817	808
24	841	821	747	739	714	708	785	775	766	759	852	814
25	829	818	748	735	710	705	785	778	770	762	818	805
26	828	808	753	731	713	692	789	780	771	766	815	806
27	818	806	753	736	694	686	792	785	773	762	813	802
28	817	806	797	745	691	684	794	789	784	765	809	804
29	818	807	776	758	732	681	798	791	792	754	811	801
30	817	808	777	752	734	728	826	787	798	750	809	801
31	---	---	766	759	---	---	802	796	793	763	---	---
MONTH	---	---	956	677	---	---	826	718	917	734	852	722

## 11044000 SANTA MARGARITA RIVER NEAR TEMECULA, CA—Continued

## TEMPERATURE, WATER, DEGREES C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.5	18.4	20.4	18.9	17.5	15.6	---	---	14.2	13.8	15.3	12.1
2	18.8	16.7	19.8	17.9	17.3	15.3	---	---	14.2	13.9	17.4	12.5
3	21.4	16.0	19.0	16.2	17.3	15.0	---	---	14.1	13.7	14.2	11.6
4	19.5	16.6	18.6	16.6	17.4	15.4	---	---	14.0	13.7	14.0	13.1
5	19.1	16.4	18.8	16.2	17.4	14.9	---	---	13.8	13.5	14.6	12.6
6	19.6	16.9	18.7	16.3	17.0	14.9	---	---	13.7	13.3	15.0	13.5
7	19.9	16.7	18.9	16.3	17.8	16.2	---	---	13.6	13.3	15.0	13.4
8	19.7	17.2	19.4	17.1	17.7	15.7	---	---	13.5	13.1	15.1	13.9
9	19.8	16.9	17.7	16.3	17.2	15.5	---	---	13.5	13.0	15.2	14.1
10	20.2	18.5	18.5	17.0	16.9	14.7	12.7	12.5	13.4	13.1	15.2	14.2
11	20.5	18.2	19.2	16.5	17.8	15.8	12.9	12.5	---	---	15.3	14.5
12	18.9	17.6	19.0	16.3	16.9	14.9	13.0	12.5	---	---	15.4	14.6
13	19.1	16.3	16.5	14.3	17.1	14.6	12.9	12.6	---	---	15.6	14.8
14	19.9	18.2	16.2	13.5	17.3	15.5	13.0	12.6	---	---	15.6	15.0
15	19.4	17.8	17.8	15.6	18.0	16.5	13.0	12.6	---	---	---	---
16	18.9	17.7	18.4	16.1	---	---	13.0	12.6	---	---	---	---
17	17.9	17.1	17.2	15.2	---	---	13.0	12.6	---	---	---	---
18	18.4	17.4	17.3	15.0	---	---	13.1	12.7	---	---	---	---
19	18.0	16.0	17.3	13.7	---	---	13.1	12.7	17.5	12.8	---	---
20	19.4	17.2	19.3	16.9	---	---	13.2	13.0	15.2	11.9	19.0	13.9
21	19.0	18.0	19.4	17.2	---	---	13.3	13.0	14.3	13.0	16.8	14.6
22	20.0	18.9	18.6	16.6	---	---	13.3	13.0	14.3	13.7	16.7	15.2
23	20.1	18.5	17.9	16.0	---	---	13.3	13.1	14.3	13.9	16.8	15.4
24	20.4	18.8	18.1	16.1	---	---	13.5	13.1	14.4	13.9	16.0	15.3
25	19.7	18.1	17.6	16.4	---	---	13.5	13.2	---	---	17.0	15.2
26	19.6	18.8	18.0	16.0	---	---	13.7	13.3	---	---	24.3	15.4
27	19.5	17.8	17.8	16.9	---	---	13.8	13.5	---	---	16.9	15.9
28	19.5	16.9	18.3	17.0	---	---	15.3	12.1	---	---	16.8	15.8
29	19.5	18.4	18.8	17.6	---	---	13.8	13.3	---	---	16.7	15.6
30	19.9	18.5	18.7	17.3	---	---	13.9	13.4	---	---	16.8	15.7
31	19.4	18.0	---	---	---	---	14.0	13.6	---	---	21.5	15.5
MONTH	21.4	16.0	20.4	13.5	---	---	---	---	---	---	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17.0	15.7	17.4	16.7	20.6	20.0	22.1	21.2	26.7	26.0	27.4	26.9
2	16.7	15.7	17.5	16.9	---	---	22.5	21.5	26.7	26.1	27.5	26.9
3	16.4	15.6	18.2	16.9	20.5	20.2	22.7	21.9	26.7	26.1	27.6	27.1
4	16.3	15.5	18.0	16.9	20.9	20.3	22.7	22.2	26.8	26.2	27.7	27.1
5	16.3	15.2	18.0	16.8	20.8	20.4	22.9	22.3	26.8	26.3	27.8	27.3
6	16.5	14.2	17.9	16.9	21.1	20.5	23.0	22.5	26.7	26.2	27.8	27.3
7	16.6	15.4	17.6	16.6	21.3	20.6	23.0	22.6	26.8	26.2	27.6	27.2
8	16.8	15.7	17.3	16.5	21.1	20.7	23.1	22.6	26.8	26.3	27.6	27.2
9	16.8	15.8	17.4	16.4	21.0	20.7	23.2	22.7	26.9	26.4	27.2	26.9
10	17.0	15.7	17.4	16.4	21.2	20.8	23.2	22.7	27.0	26.5	27.0	26.6
11	17.2	15.9	17.6	16.5	21.4	20.8	23.1	22.6	26.9	26.6	26.8	26.4
12	18.2	16.2	17.4	16.6	21.3	20.9	23.3	22.6	27.0	26.5	26.8	26.4
13	18.1	16.3	17.6	16.9	21.5	20.9	23.1	22.5	27.0	26.5	26.7	26.2
14	---	---	17.3	16.8	21.5	21.0	23.2	22.6	27.0	26.5	26.7	26.2
15	---	---	17.9	16.7	21.5	20.9	23.3	22.7	27.0	26.5	26.7	26.3
16	---	---	17.9	17.0	21.6	21.1	23.4	22.9	27.0	26.4	26.5	26.2
17	---	---	17.9	17.1	21.7	21.1	23.4	23.2	27.0	26.5	26.4	26.0
18	---	---	18.0	17.3	21.8	21.2	23.6	23.2	27.0	26.6	26.2	25.8
19	16.8	15.4	18.1	17.3	21.7	21.3	23.9	23.3	27.0	26.5	26.1	25.6
20	17.0	15.8	18.3	17.3	21.7	21.4	24.1	23.5	26.9	25.9	25.9	25.4
21	16.7	15.8	18.5	17.3	21.5	21.2	24.0	23.8	27.0	25.9	25.8	25.3
22	16.4	15.7	18.6	17.5	21.2	21.0	24.2	23.8	26.8	26.4	25.8	25.3
23	16.8	15.6	18.6	17.9	21.3	21.0	24.6	23.9	26.8	26.2	25.7	25.3
24	17.0	15.9	18.8	18.2	21.3	20.8	24.8	24.1	27.0	26.4	25.5	25.3
25	16.8	15.8	19.2	18.4	21.5	20.8	25.0	24.4	27.1	26.6	25.5	25.1
26	17.3	16.3	19.8	18.6	22.4	21.0	25.1	24.6	27.2	26.7	25.5	25.2
27	17.4	16.5	20.3	18.8	22.5	20.7	25.5	24.8	27.2	26.7	25.6	25.2
28	17.5	16.6	20.9	19.0	22.5	20.8	25.6	25.1	27.3	26.8	25.5	25.2
29	17.5	16.7	20.2	19.3	21.8	20.4	26.0	25.2	27.2	26.7	25.6	25.2
30	17.5	16.6	20.5	19.5	21.7	21.0	26.4	24.7	27.3	26.7	25.6	25.3
31	---	---	20.5	19.7	---	---	26.4	25.8	27.3	26.9	---	---
MONTH	---	---	20.9	16.4	---	---	26.4	21.2	27.3	25.9	27.8	25.1

## 11044000 SANTA MARGARITA RIVER NEAR TEMECULA, CA—Continued

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

Date	Time	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)	Loca- tion in X-sect. looking dwnstrm ft from l bank (00009)
FEB								
07...*	1337	735	9.4	94	7.7	895	13.5	50.0
07...*	1339	735	9.5	95	7.7	895	13.5	46.0
07...*	1342	735	9.5	95	7.7	895	13.5	42.0
07...*	1344	735	9.6	96	7.7	894	13.5	38.0
07...*	1346	735	9.4	94	7.7	895	13.4	34.0
07...*	1349	735	9.3	92	7.7	896	13.3	30.0
07...*	1351	735	9.3	93	7.7	897	13.4	26.0
07...*	1353	735	9.2	92	7.7	897	13.5	22.0
07...*	1356	735	9.2	92	7.7	898	13.5	19.0
AUG								
08...*	1124	740	7.2	93	8.2	818	26.6	49.0
08...*	1126	740	7.2	93	8.2	818	26.7	46.0
08...*	1129	740	7.3	94	8.2	819	26.6	42.0
08...*	1131	740	7.3	94	8.2	819	26.6	39.0
08...*	1132	740	7.3	94	8.2	819	26.7	36.0
08...*	1134	740	7.4	96	8.2	820	26.7	33.0
08...*	1136	740	7.5	97	8.2	820	26.7	30.0
08...*	1139	740	7.4	96	8.2	820	26.7	27.0
08...*	1142	740	7.4	95	8.2	819	26.6	24.0
08...*	1145	740	7.3	94	8.2	818	26.6	20.0

\* Instantaneous discharge at time of cross-sectional measurement: Feb. 7, 12.0 ft<sup>3</sup>/s; Aug. 8, 8.5 ft<sup>3</sup>/s.

## 11044250 RAINBOW CREEK NEAR FALLBROOK, CA

LOCATION.—Lat 33° 24'27", long 117° 12'00", in NW 1/4 SE 1/4 sec.9, T.9 S., R.3 W., San Diego County, Hydrologic Unit 18070302, on left bank, 1.0 mi upstream from the confluence with Santa Margarita River, and 3.4 mi northeast of Fallbrook.

DRAINAGE AREA.—10.3 mi<sup>2</sup>.

PERIOD OF RECORD.—November 1989 to current year.

REVISED RECORDS.—WDR CA-91-1: 1990(M).

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 540 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair. No regulation upstream from station. Undetermined amount of water upstream from station used for irrigation by a local nursery. Natural flow affected by return flow from irrigated areas. Water is imported for domestic use and irrigation. See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,000 ft<sup>3</sup>/s, estimated, Jan. 16, 1993, gage height unknown, on basis of slope-area measurement of peak flow; maximum recorded gage height, 8.35 ft, Feb. 23, 1998; minimum daily, 0.01 ft<sup>3</sup>/s, Sept. 22, 2002, Nov. 3, 2002.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended above 712 ft<sup>3</sup>/s:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1945	278	5.63	Mar. 15	1945	476	6.26
Feb. 12	1645	187	5.28	Apr. 14	1715	176	5.23
Feb. 25	0800	261	5.57				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	0.02	0.10	0.25	0.65	3.7	2.6	0.72	0.20	0.09	0.05	0.04
2	0.02	0.02	0.09	0.21	0.61	3.2	2.9	0.81	0.19	0.08	0.05	0.04
3	0.02	0.01	0.09	0.20	0.36	2.8	2.7	3.4	0.21	0.08	0.05	0.04
4	0.03	0.02	0.09	0.19	0.33	3.2	2.5	2.8	0.24	0.08	0.05	0.04
5	0.03	0.03	0.09	0.19	0.41	2.5	2.6	1.5	0.24	0.07	0.05	0.04
6	0.03	0.04	0.08	0.17	0.31	1.9	2.6	0.85	0.26	0.08	0.05	0.04
7	0.03	0.04	0.09	0.16	0.32	1.1	2.3	1.1	0.25	0.08	0.05	0.04
8	0.02	2.4	0.10	0.47	0.20	1.5	1.3	1.7	0.23	0.07	0.05	0.04
9	0.02	6.4	0.09	0.85	0.17	1.3	1.2	1.2	0.23	0.07	0.05	0.04
10	0.02	2.5	0.09	0.36	0.17	1.2	0.88	0.54	0.22	0.07	0.04	0.04
11	0.02	0.29	0.10	0.31	8.7	1.3	1.1	0.55	0.31	0.07	0.04	0.04
12	0.03	0.10	0.09	0.24	27	1.2	0.94	0.43	0.22	0.07	0.04	0.04
13	0.02	0.06	0.09	0.22	5.7	1.3	1.3	0.45	0.19	0.06	0.04	0.04
14	0.03	0.05	0.09	0.21	8.2	1.1	32	0.89	0.17	0.06	0.04	0.04
15	0.03	0.06	0.10	0.19	2.1	74	14	0.90	0.15	0.06	0.04	0.04
16	0.04	0.06	27	0.18	0.91	44	5.5	0.46	0.14	0.06	0.04	0.04
17	0.05	0.06	6.0	0.17	1.0	26	4.4	0.54	0.14	0.07	0.05	0.04
18	0.05	0.06	1.6	0.17	0.85	8.8	3.7	0.43	0.13	0.07	0.05	0.04
19	0.04	0.06	0.58	0.17	0.67	7.0	3.7	0.34	0.15	0.06	0.05	0.04
20	0.02	0.08	9.6	0.17	0.52	5.0	3.3	0.32	0.18	0.06	0.05	0.04
21	0.02	0.07	3.2	0.18	0.42	5.5	2.6	0.29	0.21	0.06	0.05	0.04
22	0.02	0.08	1.2	0.18	0.39	5.1	2.3	0.37	0.22	0.07	0.05	0.04
23	0.02	0.08	1.00	0.27	0.40	4.0	2.0	0.82	0.18	0.06	0.04	0.04
24	0.02	0.09	0.50	0.20	0.38	3.6	1.8	0.48	0.15	0.06	0.04	0.04
25	0.02	0.07	0.38	0.18	57	3.6	1.6	0.35	0.13	0.06	0.04	0.04
26	0.03	0.07	0.32	0.21	5.9	3.4	1.4	0.31	0.11	0.06	0.04	0.04
27	0.02	0.08	0.28	0.20	12	3.1	1.5	0.26	0.11	0.06	0.04	0.04
28	0.02	0.07	0.28	0.27	5.2	2.4	0.85	0.23	0.10	0.06	0.04	0.04
29	0.02	0.11	0.29	0.21	---	2.0	1.0	0.24	0.10	0.06	0.04	0.04
30	0.02	0.14	0.25	0.35	---	1.5	0.81	0.24	0.09	0.06	0.04	0.04
31	0.02	---	0.31	0.36	---	2.0	---	0.22	---	0.06	0.04	---
TOTAL	0.80	13.22	54.17	7.69	140.87	228.3	107.38	23.74	5.45	2.08	1.39	1.20
MEAN	0.026	0.44	1.75	0.25	5.03	7.36	3.58	0.77	0.18	0.067	0.045	0.040
MAX	0.05	6.4	27	0.85	57	74	32	3.4	0.31	0.09	0.05	0.04
MIN	0.02	0.01	0.08	0.16	0.17	1.1	0.81	0.22	0.09	0.06	0.04	0.04
AC-FT	1.6	26	107	15	279	453	213	47	11	4.1	2.8	2.4

11044250 RAINBOW CREEK NEAR FALLBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.41	0.78	1.06	11.2	12.0	9.11	2.80	1.17	0.61	0.32	0.27	0.36
MAX	0.95	3.40	2.72	97.3	58.9	55.4	9.20	5.73	2.07	0.90	0.75	1.25
(WY)	1998	1997	1997	1993	1998	1995	1998	1998	1998	1990	1995	1995
MIN	0.026	0.15	0.20	0.25	0.22	0.18	0.10	0.075	0.040	0.027	0.027	0.022
(WY)	2003	2000	2000	2003	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	97.53		586.29			
ANNUAL MEAN	0.27		1.61		3.47	
HIGHEST ANNUAL MEAN					14.4	1993
LOWEST ANNUAL MEAN					0.14	2002
HIGHEST DAILY MEAN	27	Dec 16	74	Mar 15	800	Jan 16 1993
LOWEST DAILY MEAN	0.01	Sep 22	0.01	Nov 3	0.01	Sep 22 2002
ANNUAL SEVEN-DAY MINIMUM	0.02	Oct 28	0.02	Oct 28	0.02	Oct 28 2002
MAXIMUM PEAK FLOW			476	Mar 15	e8000	Jan 16 1993
MAXIMUM PEAK STAGE			6.26	Mar 15	8.35	Feb 23 1998
ANNUAL RUNOFF (AC-FT)	193		1160		2510	
10 PERCENT EXCEEDS	0.28		3.1		4.6	
50 PERCENT EXCEEDS	0.07		0.17		0.45	
90 PERCENT EXCEEDS	0.02		0.04		0.06	

e Estimated.

## 11044300 SANTA MARGARITA RIVER AT FALLBROOK PUBLIC UTILITY DISTRICT SUMP, NEAR FALLBROOK, CA

LOCATION.—Lat 33° 24'49", long 117° 14'25", in NW 1/4 NW 1/4 sec.7, T.9 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on left bank, 0.3 mi upstream from confluence with Sandia Creek, and 2.9 mi north of Fallbrook.

DRAINAGE AREA.—620 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1989 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 330 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair. Flow partly regulated since November 1948 by Vail Lake (station 11042510) and since 1974 by Skinner Reservoir.

Flow in Warm Springs Creek, a tributary to Murrieta Creek, slightly regulated beginning in water year 1999 by Diamond Valley Lake, capacity, 800,000 acre-ft (see station 11042800). See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 34,000 ft<sup>3</sup>/s, estimated, based on regression equation and flood routing of upstream flows, Jan. 16, 1993, gage height, 15.89 ft; no flow several days in 1990.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	4.6	4.5	11	13	50	18	14	17	12	8.7	9.2
2	3.8	4.6	4.2	15	13	29	19	15	16	10	8.1	9.0
3	4.0	5.4	3.9	8.0	12	20	20	21	11	10	8.4	8.9
4	3.7	4.8	4.3	11	12	26	20	29	14	10	8.1	8.5
5	2.5	4.7	4.3	14	12	24	20	21	14	9.4	7.9	8.2
6	3.1	4.4	4.0	13	12	19	18	16	14	9.9	7.6	8.0
7	3.3	4.8	4.3	11	12	16	18	15	14	10	7.9	8.2
8	3.1	9.3	4.6	13	11	17	17	20	14	9.9	7.5	8.1
9	2.2	37	4.7	18	12	16	16	21	14	9.8	7.4	8.8
10	2.2	36	4.7	14	12	15	16	20	13	11	7.2	9.2
11	2.7	16	4.6	14	175	17	15	20	12	9.6	7.3	9.3
12	3.0	7.7	4.6	14	720	18	15	20	13	9.0	7.5	8.3
13	4.4	5.7	4.6	14	509	18	16	21	13	9.2	7.0	8.7
14	4.1	3.9	4.6	14	119	18	358	24	13	8.7	6.7	8.9
15	3.1	2.5	4.9	14	49	697	393	22	13	9.4	6.7	8.4
16	3.4	2.6	23	14	19	1740	69	21	13	10	6.9	8.0
17	4.1	4.0	276	14	11	374	30	22	13	11	6.5	7.9
18	4.1	4.2	45	14	6.4	86	19	22	14	11	6.6	7.7
19	3.4	4.0	12	14	4.7	44	19	23	14	11	6.7	7.5
20	4.8	2.6	91	14	5.6	31	17	24	15	9.6	6.8	7.9
21	3.5	2.8	77	14	30	26	16	25	15	9.4	7.3	7.9
22	2.5	3.5	19	15	18	28	16	25	16	10	8.1	8.3
23	2.9	4.0	7.5	16	16	25	16	27	15	11	9.0	8.2
24	3.5	4.5	4.4	16	15	22	15	28	14	9.9	8.8	8.1
25	3.7	4.7	3.2	15	2500	21	15	28	13	9.4	8.2	8.2
26	3.9	5.1	2.6	14	1010	20	15	28	12	9.4	8.0	8.1
27	4.3	5.1	2.4	14	432	17	15	27	12	10	8.0	8.1
28	4.2	5.2	2.1	13	143	19	14	23	12	9.4	8.1	9.3
29	4.1	6.9	2.3	8.9	---	19	14	21	13	9.5	8.0	8.9
30	4.6	5.1	2.3	12	---	18	14	19	13	9.8	8.4	8.4
31	4.6	---	2.1	12	---	19	---	18	---	11	9.2	---
TOTAL	110.6	215.7	638.7	417.9	5903.7	3509	1283	680	409	309.3	238.6	252.2
MEAN	3.57	7.19	20.6	13.5	211	113	42.8	21.9	13.6	9.98	7.70	8.41
MAX	4.8	37	276	18	2500	1740	393	29	17	12	9.2	9.3
MIN	2.2	2.5	2.1	8.0	4.7	15	14	14	11	8.7	6.5	7.5
AC-FT	219	428	1270	829	11710	6960	2540	1350	811	613	473	500

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	6.14	7.48	12.4	147	178	99.5	24.7	16.6	8.32	5.43	4.81	4.94		
MAX	15.7	24.4	37.1	1462	860	490	70.4	58.3	25.1	11.4	10.1	9.03		
(WY)	1994	1997	1998	1993	1993	1991	1993	1998	1993	1993	1993	1993		
MIN	3.57	1.48	1.66	3.19	6.10	2.50	4.51	5.45	2.43	2.11	1.00	1.22		
(WY)	2003	1992	1990	2000	2002	1990	1990	2002	1997	1990	1990	1990		

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	2178.79		13967.7			
ANNUAL MEAN	5.97		38.3		42.3	
HIGHEST ANNUAL MEAN					220	
LOWEST ANNUAL MEAN					5.23	
HIGHEST DAILY MEAN	276		2500		14300	
LOWEST DAILY MEAN	0.99		2.1		0.00	
ANNUAL SEVEN-DAY MINIMUM	1.4		2.4		0.05	
MAXIMUM PEAK FLOW			6450		e34000	
MAXIMUM PEAK STAGE			7.35		15.89	
ANNUAL RUNOFF (AC-FT)	4320		27700		30670	
10 PERCENT EXCEEDS	7.5		26		33	
50 PERCENT EXCEEDS	4.0		11		6.2	
90 PERCENT EXCEEDS	2.1		4.0		2.5	

e Estimated.



11044300 SANTA MARGARITA RIVER AT FALLBROOK PUBLIC UTILITY DISTRICT SUMP, NEAR FALLBROOK, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—December 1999 to February 2003 (discontinued).

DISSOLVED OXYGEN: December 1999 to February 2003 (discontinued).

pH: December 1999 to February 2003 (discontinued).

SPECIFIC CONDUCTANCE: December 1999 to February 2003 (discontinued).

WATER TEMPERATURE: December 1999 to February 2003 (discontinued).

PERIOD OF DAILY RECORD.—December 1999 to February 2003 (discontinued).

DISSOLVED OXYGEN: December 1999 to February 2003 (discontinued).

pH: December 1999 to February 2003 (discontinued).

SPECIFIC CONDUCTANCE: December 1999 to February 2003 (discontinued).

WATER TEMPERATURE: December 1999 to February 2003 (discontinued).

INSTRUMENTATION.—Water-quality monitor December 1999 to February 2003 (discontinued).

REMARKS.—Dissolved oxygen records rated fair except for May 17–July 12, which are poor. pH records rated good. Specific conductance records rated good. Temperature records rated excellent.

EXTREMES FOR PERIOD OF DAILY RECORD.—

DISSOLVED OXYGEN: Maximum recorded, 17.9 mg/L, Mar. 23, 2000; minimum recorded, 0.5 mg/L, Dec. 16, 2002.

pH: Maximum recorded, 9.2 standard units, Mar. 22, 2000; minimum recorded, 6.8 standard units, several days in March and April 2001.

SPECIFIC CONDUCTANCE: Maximum recorded, 1,760 microsiemens, Nov. 14, 2001; minimum recorded, 461 microsiemens, Dec. 17, 2002.

WATER TEMPERATURE: Maximum recorded, 27.8°C, July 8, 2002; minimum recorded, 4.5°C, Jan. 8, 2000.

EXTREMES FOR CURRENT YEAR.—

DISSOLVED OXYGEN: Maximum recorded, 13.5 mg/L, Feb. 6; minimum recorded, 0.5 mg/L, Dec. 16.

pH: Maximum recorded, 8.0 standard units, several days; minimum recorded, 7.2 standard units, Nov. 29, Dec. 16.

SPECIFIC CONDUCTANCE: Maximum recorded, 1,600 microsiemens, Jan. 1; minimum recorded, 461 microsiemens, Dec. 17.

WATER TEMPERATURE: Maximum recorded, 19.4°C, Oct. 10; minimum recorded, 7.8°C, Dec. 24, 26.

## DISSOLVED OXYGEN, MG/L, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.4	6.9	8.6	7.3	8.1	7.6	10.3	8.8	11.6	9.0	---	---
2	9.1	7.1	8.7	7.4	8.2	7.8	10.3	9.1	11.4	8.9	---	---
3	8.8	7.1	9.0	7.6	8.2	7.9	10.0	7.8	12.2	9.6	---	---
4	8.8	7.1	8.8	7.6	8.6	8.2	10.1	9.1	12.9	10.2	---	---
5	8.8	6.9	9.3	7.8	8.9	8.2	9.8	8.9	12.9	10.4	---	---
6	8.8	6.8	9.4	8.1	8.9	8.3	9.6	8.7	13.5	10.8	---	---
7	8.7	6.6	9.7	8.3	8.7	8.2	9.2	8.3	---	---	---	---
8	8.6	6.6	8.3	7.6	9.0	8.3	9.4	8.5	---	---	---	---
9	8.4	6.5	7.9	7.3	9.0	8.4	9.4	8.7	---	---	---	---
10	8.0	6.4	7.6	7.1	9.4	8.6	10.4	9.2	---	---	---	---
11	8.0	6.4	7.8	7.2	9.2	8.6	10.1	9.4	---	---	---	---
12	8.2	6.4	7.6	7.0	9.5	8.8	10.6	9.5	---	---	---	---
13	8.3	6.7	7.9	7.2	9.7	9.0	10.6	9.6	---	---	---	---
14	8.0	6.5	7.9	7.2	9.6	8.8	10.8	9.6	---	---	---	---
15	8.0	6.5	7.8	6.8	9.2	8.3	11.0	9.6	---	---	---	---
16	7.7	6.7	7.9	6.8	8.9	0.5	11.1	9.5	---	---	---	---
17	8.0	7.0	8.7	7.6	9.4	7.8	11.0	9.5	---	---	---	---
18	8.1	7.1	8.9	7.9	9.1	8.6	11.3	9.6	---	---	---	---
19	8.5	7.2	9.0	7.9	9.4	8.8	11.5	9.7	---	---	---	---
20	8.4	7.2	8.2	7.0	10.5	8.9	11.2	9.3	---	---	---	---
21	8.1	7.1	8.8	7.0	10.5	9.4	11.1	9.3	---	---	---	---
22	8.0	6.9	9.2	8.0	9.4	8.8	11.6	9.3	---	---	---	---
23	8.1	6.8	9.3	8.2	9.7	9.0	11.3	9.4	---	---	---	---
24	8.3	6.9	9.5	8.3	9.8	9.1	11.6	9.4	---	---	---	---
25	8.4	7.0	9.4	8.2	9.5	8.8	11.1	9.2	---	---	---	---
26	8.2	7.0	9.3	8.0	9.7	9.0	11.3	9.3	---	---	---	---
27	8.4	7.1	9.3	8.0	9.5	8.7	11.6	9.3	---	---	---	---
28	8.8	7.4	8.9	7.2	9.3	8.2	11.9	9.4	---	---	---	---
29	8.3	7.3	8.0	6.5	8.6	7.7	11.3	9.2	---	---	---	---
30	8.4	7.3	7.6	7.1	9.1	7.5	11.6	9.3	---	---	---	---
31	8.7	7.5	---	---	9.2	7.9	11.4	9.0	---	---	---	---
MONTH	9.1	6.4	9.7	6.5	10.5	0.5	11.9	7.8	---	---	---	---

## 11044300 SANTA MARGARITA RIVER AT FALLBROOK PUBLIC UTILITY DISTRICT SUMP, NEAR FALLBROOK, CA—Continued

## PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.7	7.6	7.9	7.8	7.6	7.6	7.7	7.4	8.0	7.6	---	---
2	7.8	7.6	7.9	7.8	7.7	7.6	7.7	7.6	7.9	7.6	---	---
3	7.8	7.6	7.9	7.8	7.7	7.6	7.6	7.5	7.9	7.6	---	---
4	7.8	7.7	7.9	7.8	7.7	7.7	7.6	7.5	8.0	7.6	---	---
5	7.8	7.7	7.9	7.8	7.7	7.7	7.6	7.5	8.0	7.6	---	---
6	7.8	7.7	7.9	7.9	7.7	7.6	7.6	7.5	8.0	7.6	---	---
7	7.8	7.7	8.0	7.9	7.6	7.6	7.6	7.5	---	---	---	---
8	7.8	7.7	7.9	7.7	7.6	7.6	7.6	7.5	---	---	---	---
9	7.8	7.7	7.8	7.6	7.6	7.6	7.7	7.5	---	---	---	---
10	7.7	7.6	7.7	7.6	7.7	7.6	7.8	7.6	---	---	---	---
11	7.7	7.6	7.6	7.6	7.7	7.6	7.8	7.6	---	---	---	---
12	7.7	7.7	7.6	7.6	7.7	7.6	7.8	7.7	---	---	---	---
13	7.8	7.7	7.6	7.6	7.7	7.6	7.8	7.7	---	---	---	---
14	7.8	7.7	7.6	7.6	7.7	7.6	7.8	7.7	---	---	---	---
15	7.8	7.6	7.6	7.6	7.7	7.6	7.9	7.7	---	---	---	---
16	7.8	7.6	7.7	7.6	7.7	7.2	7.9	7.7	---	---	---	---
17	7.8	7.7	7.7	7.7	7.6	7.4	7.9	7.7	---	---	---	---
18	7.8	7.7	7.8	7.7	7.5	7.5	7.9	7.6	---	---	---	---
19	7.8	7.7	7.8	7.7	7.5	7.5	8.0	7.6	---	---	---	---
20	7.8	7.7	7.8	7.6	7.7	7.4	7.9	7.6	---	---	---	---
21	7.8	7.7	7.8	7.6	7.5	7.5	7.9	7.6	---	---	---	---
22	7.7	7.6	7.8	7.7	7.5	7.5	7.9	7.6	---	---	---	---
23	7.8	7.7	7.8	7.8	7.5	7.5	7.9	7.6	---	---	---	---
24	7.8	7.7	7.8	7.8	7.5	7.5	7.9	7.6	---	---	---	---
25	7.8	7.7	7.8	7.8	7.5	7.5	7.9	7.6	---	---	---	---
26	7.8	7.7	7.8	7.7	7.5	7.5	7.9	7.6	---	---	---	---
27	7.9	7.7	7.8	7.7	7.5	7.5	7.9	7.6	---	---	---	---
28	7.9	7.8	7.8	7.7	7.5	7.5	7.9	7.6	---	---	---	---
29	7.9	7.8	7.8	7.2	7.5	7.5	7.8	7.6	---	---	---	---
30	7.9	7.8	7.6	7.4	7.5	7.5	7.9	7.6	---	---	---	---
31	7.9	7.8	---	---	7.5	7.4	7.9	7.6	---	---	---	---
MONTH	7.9	7.6	8.0	7.2	7.7	7.2	8.0	7.4	---	---	---	---

## SPECIFIC CONDUCTANCE, MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1450	1450	1410	1400	1330	1320	1600	1520	1040	1030	---	---
2	1450	1440	1400	1390	1330	1320	1580	1210	1030	1010	---	---
3	1450	1430	1390	1370	1330	1320	1270	1200	1010	1000	---	---
4	1450	1450	1370	1360	1320	1310	1280	1200	1000	978	---	---
5	1460	1450	1370	1370	1310	1310	1220	1170	984	971	---	---
6	1460	1460	1370	1360	1310	1300	1170	1160	988	969	---	---
7	1460	1450	1360	1360	1320	1310	1180	1170	---	---	---	---
8	1460	1450	1440	1350	1320	1320	1180	1170	---	---	---	---
9	1460	1450	1590	1400	1340	1320	1170	1160	---	---	---	---
10	1460	1450	1450	1210	1350	1340	1170	1050	---	---	---	---
11	1460	1450	1260	1240	1350	1340	1140	1060	---	---	---	---
12	1450	1440	1310	1260	1350	1340	1140	1140	---	---	---	---
13	1450	1440	1330	1310	1340	1340	1140	1140	---	---	---	---
14	1440	1440	1350	1330	1340	1340	1170	1140	---	---	---	---
15	1440	1440	1390	1350	1340	1330	1150	1130	---	---	---	---
16	1440	1430	1420	1390	1340	734	1160	1150	---	---	---	---
17	1430	1420	1430	1420	1170	461	1160	1150	---	---	---	---
18	1420	1420	1440	1420	1060	760	1150	1150	---	---	---	---
19	1430	1420	1480	1440	1260	1060	1150	1150	---	---	---	---
20	1430	1420	1490	1470	1280	554	1150	1140	---	---	---	---
21	1430	1420	1500	1490	824	530	1150	1150	---	---	---	---
22	1440	1430	1500	1480	975	824	1150	1140	---	---	---	---
23	1440	1430	1520	1500	1150	975	1140	1140	---	---	---	---
24	1440	1430	1520	1500	1240	1150	1140	1130	---	---	---	---
25	1450	1440	1500	1480	1310	1240	1130	1120	---	---	---	---
26	1450	1440	1480	1480	1360	1310	1120	1100	---	---	---	---
27	1450	1440	1480	1480	1400	1360	1100	1080	---	---	---	---
28	1450	1440	1480	1470	1440	1400	1080	1060	---	---	---	---
29	1450	1440	1480	1160	1470	1440	1090	1060	---	---	---	---
30	1440	1400	1330	1310	1490	1470	1070	1040	---	---	---	---
31	1430	1410	---	---	1520	1490	1050	1040	---	---	---	---
MONTH	1460	1400	1590	1160	1520	461	1600	1040	---	---	---	---

11044300 SANTA MARGARITA RIVER AT FALLBROOK PUBLIC UTILITY DISTRICT SUMP, NEAR FALLBROOK, CA—Continued

TEMPERATURE, WATER, DEGREES C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.8	17.1	16.9	14.9	13.3	11.3	10.3	8.2	14.6	12.1	---	---
2	18.2	14.9	16.3	14.1	13.0	10.8	10.6	8.5	14.9	12.6	---	---
3	18.0	14.4	15.4	12.8	13.0	11.2	11.9	9.2	13.4	10.7	---	---
4	18.0	14.2	15.8	13.8	12.3	10.2	12.1	9.6	12.5	9.7	---	---
5	18.4	14.4	14.9	12.3	12.2	10.0	12.5	10.2	11.9	9.2	---	---
6	18.9	14.9	14.4	11.6	11.9	9.7	12.5	10.8	11.0	8.1	---	---
7	19.0	15.1	13.7	11.3	12.7	10.9	13.5	11.7	---	---	---	---
8	18.9	15.1	14.8	13.2	12.3	10.2	13.1	11.3	---	---	---	---
9	19.1	15.3	16.4	14.8	12.4	10.5	12.8	10.9	---	---	---	---
10	19.4	16.8	17.1	15.6	11.4	9.4	12.3	10.4	---	---	---	---
11	19.3	17.0	16.0	14.5	12.1	9.7	12.1	10.0	---	---	---	---
12	18.1	16.1	16.4	14.2	11.3	9.2	11.8	9.8	---	---	---	---
13	18.4	15.9	15.3	13.2	11.2	8.8	11.9	9.6	---	---	---	---
14	19.1	17.1	15.5	12.4	11.4	9.2	11.7	9.3	---	---	---	---
15	18.2	16.9	15.7	12.5	12.5	10.5	12.0	9.2	---	---	---	---
16	17.3	16.6	15.0	11.6	13.4	11.3	11.8	9.2	---	---	---	---
17	16.9	16.1	13.6	11.0	13.8	12.3	12.5	9.7	---	---	---	---
18	17.5	16.0	13.7	10.8	12.3	10.5	12.0	9.6	---	---	---	---
19	16.8	14.5	14.2	10.8	10.6	9.0	11.9	9.4	---	---	---	---
20	17.2	15.0	16.4	12.2	10.5	9.1	13.2	10.8	---	---	---	---
21	17.1	15.7	15.4	12.2	10.2	8.9	13.7	11.6	---	---	---	---
22	18.0	16.1	13.8	11.3	10.9	9.6	13.1	10.9	---	---	---	---
23	18.0	15.8	14.0	11.8	10.0	8.2	13.5	11.6	---	---	---	---
24	17.8	15.9	13.3	10.9	9.9	7.8	13.3	10.7	---	---	---	---
25	17.2	15.3	13.5	11.7	10.1	7.9	14.2	11.2	---	---	---	---
26	16.8	15.4	13.1	11.0	10.2	7.8	14.2	11.5	---	---	---	---
27	17.1	14.8	13.4	12.2	10.7	8.0	13.7	11.2	---	---	---	---
28	16.1	13.4	13.8	12.0	10.8	8.3	13.3	10.8	---	---	---	---
29	16.4	15.0	14.4	13.2	12.4	10.2	14.4	11.8	---	---	---	---
30	16.8	14.8	14.4	12.5	11.1	8.6	14.2	11.3	---	---	---	---
31	15.9	14.3	---	---	11.2	8.4	15.0	11.6	---	---	---	---
MONTH	19.4	13.4	17.1	10.8	13.8	7.8	15.0	8.2	---	---	---	---

CROSS SECTION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	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 25 degC (00095)	Temper- ature, deg C (00010)	Loca- tion in X-sect. looking downstrm ft from 1 bank (00009)
FEB								
07...*	1130	750	12.0	106	7.7	970	9.1	100
07...*	1132	750	12.2	108	7.7	970	9.1	90.0
07...*	1135	750	12.3	109	7.7	970	9.2	80.0
07...*	1137	750	12.3	109	7.7	970	9.2	70.0
07...*	1140	750	12.5	111	7.7	971	9.2	60.0
07...*	1143	750	12.4	110	7.7	971	9.2	50.0
07...*	1146	750	12.4	110	7.7	971	9.2	40.0
07...*	1148	750	12.3	109	7.7	971	9.1	30.0
07...*	1151	750	12.3	109	7.7	971	9.2	20.0
07...*	1153	750	12.3	109	7.7	970	9.1	10.0

\* Instantaneous discharge at time of cross-sectional measurement: Feb.7, 13.0 ft<sup>3</sup>/s.

## 11044350 SANDIA CREEK NEAR FALLBROOK, CA

LOCATION.—Lat 33° 25'28", long 117° 14'54", in SW 1/4 NE 1/4 sec.1, T.9 S., R.4 W., [San Diego County](#), Hydrologic Unit 18070302, on left bank, 1.05 mi north of intersection of Sandia and Rock Mountain Roads, 0.8 mi upstream from mouth, and 3.8 mi north of Fallbrook.

DRAINAGE AREA.—21.1 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1989 to current year.

REVISED RECORDS.—WDR CA-91-1: 1990(M).

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 380 ft above NGVD of 1929, from topographic map. Prior to Sept. 30, 1993, at site 0.65 mi downstream at different datum.

REMARKS.—Records fair. No regulation or diversion upstream from station. Natural flow affected by pumping and return flow from irrigated areas. See schematic diagram of [Santa Margarita River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,100 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 17.60 ft, site and datum then in use, from floodmarks (may have been affected by backwater from the Santa Margarita River); no flow for many days in summer of 1996.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 75 ft<sup>3</sup>/s, or maximum, from rating curve extended above 536 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1945	463	3.82	Feb. 25	0715	682	4.36
Dec. 20	1000	88	2.74	Mar. 15	2000	690	4.38
Feb. 12	1930	350	3.53	Apr. 14	1715	545	4.02

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	4.2	5.2	5.6	3.9	23	14	14	8.9	6.7	5.6	3.1
2	2.5	2.6	5.1	5.3	3.7	20	14	13	9.0	6.3	4.0	3.7
3	3.0	2.4	4.8	5.3	3.7	18	13	16	9.8	6.4	4.2	3.6
4	2.6	2.8	4.8	5.2	3.9	18	13	14	10	5.8	4.8	4.1
5	1.9	3.7	4.7	4.8	4.3	16	13	13	10	4.7	5.1	3.3
6	0.85	3.6	4.5	4.8	4.8	15	13	13	10	5.5	3.9	3.0
7	1.3	3.9	4.6	4.7	4.7	14	13	13	9.0	6.5	4.2	3.1
8	1.3	9.2	4.5	5.0	4.0	14	12	14	9.0	6.0	4.5	3.6
9	1.5	10	4.4	4.9	3.9	14	12	13	11	5.9	3.2	3.8
10	2.8	8.3	4.4	4.9	5.0	13	12	12	10	6.7	2.7	3.6
11	3.1	5.7	4.5	4.6	17	13	12	11	9.9	5.9	3.3	3.9
12	1.4	5.0	4.4	4.2	83	13	12	11	9.8	4.7	4.5	4.4
13	1.3	4.8	4.5	4.5	50	12	12	11	8.1	4.6	3.9	4.2
14	2.1	4.7	4.1	4.7	23	12	129	12	7.8	4.6	3.3	3.8
15	2.5	4.5	3.7	4.7	16	145	51	12	7.5	4.6	3.5	4.0
16	2.7	4.3	65	4.9	13	173	24	12	7.9	5.2	3.0	4.0
17	4.7	4.3	32	4.5	11	63	21	10	8.4	6.2	2.9	4.0
18	3.0	4.2	10	3.7	9.8	34	19	9.9	9.1	5.4	3.4	4.2
19	2.2	4.1	6.7	3.8	9.3	27	18	11	9.7	4.7	3.7	4.1
20	2.1	4.0	31	4.5	8.9	23	16	11	10	4.2	3.9	3.5
21	3.2	4.0	13	5.0	7.9	21	16	10	9.3	5.0	3.9	3.3
22	3.2	4.1	10	4.9	7.6	20	16	10	8.8	6.3	4.6	3.7
23	3.7	4.0	8.4	4.5	7.4	19	15	9.7	9.2	7.0	3.9	3.7
24	3.6	3.5	7.2	5.1	7.4	18	15	11	8.8	6.5	3.3	4.2
25	3.6	3.9	6.7	4.4	232	17	14	10	7.4	5.9	3.6	4.4
26	3.1	4.1	6.2	3.8	52	17	14	9.1	7.6	4.7	3.2	4.6
27	2.9	4.3	5.9	4.1	47	17	14	9.4	7.6	4.8	2.9	4.2
28	3.6	4.2	5.9	4.3	31	15	14	9.5	6.4	5.6	3.1	4.1
29	3.6	4.7	6.0	4.8	---	14	14	10	6.1	5.6	3.8	4.4
30	3.6	5.7	5.9	5.0	---	13	14	9.9	6.6	6.2	3.1	4.5
31	4.3	---	5.8	4.6	---	13	---	9.0	---	6.7	3.0	---
TOTAL	83.55	138.8	293.9	145.1	675.2	864	589	353.5	262.7	174.9	116.0	116.1
MEAN	2.70	4.63	9.48	4.68	24.1	27.9	19.6	11.4	8.76	5.64	3.74	3.87
MAX	4.7	10	65	5.6	232	173	129	16	11	7.0	5.6	4.6
MIN	0.85	2.4	3.7	3.7	3.7	12	12	9.0	6.1	4.2	2.7	3.0
AC-FT	166	275	583	288	1340	1710	1170	701	521	347	230	230

## 11044350 SANDIA CREEK NEAR FALLBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.72	2.75	4.08	28.1	28.6	22.8	10.9	6.51	4.25	2.31	1.46	1.40
MAX	3.57	4.63	9.48	237	128	79.8	28.0	18.3	9.49	5.64	3.74	3.87
(WY)	2001	2003	2003	1993	1993	1995	1995	1998	1998	2003	2003	2003
MIN	0.53	1.34	1.88	2.56	3.66	3.20	3.09	2.14	1.02	0.31	0.030	0.062
(WY)	1997	1992	1990	2000	2002	2002	2002	1999	1996	1996	1996	1996

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	1175.95		3812.75			
ANNUAL MEAN	3.22		10.4		9.48	
HIGHEST ANNUAL MEAN					36.8	
LOWEST ANNUAL MEAN					2.62	
HIGHEST DAILY MEAN	65	Dec 16	232	Feb 25	2000	Jan 16 1993
LOWEST DAILY MEAN	0.49	Jun 30	0.85	Oct 6	0.00	Jul 26 1996
ANNUAL SEVEN-DAY MINIMUM	1.1	Jul 26	1.8	Oct 4	0.00	Aug 14 1996
MAXIMUM PEAK FLOW			690	Mar 15	5100	Jan 16 1993
MAXIMUM PEAK STAGE			4.38	Mar 15	17.60	Jan 16 1993
ANNUAL RUNOFF (AC-FT)	2330		7560		6870	
10 PERCENT EXCEEDS	4.5		16		15	
50 PERCENT EXCEEDS	2.7		5.4		3.0	
90 PERCENT EXCEEDS	0.98		3.2		0.73	

## 11044800 DE LUZ CREEK NEAR DE LUZ, CA

LOCATION.—Lat 33° 25' 11", long 117° 19' 15", in SW 1/4 SE 1/4 sec.5, T.9 S., R.4 W., [San Diego County](#), Hydrologic Unit 18070302, on left bank, 4.85 mi upstream from mouth, and 1.2 mi south of De Luz.

DRAINAGE AREA.—33.0 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1992 to current year.

GAGE.—Water-stage recorder, concrete control, and crest-stage gage. Elevation of gage is 270 ft above NGVD of 1929, from topographic map. February 1951 to September 1965 and October 1989 to September 1991, at site 4.2 mi downstream (published as 11044900, "De Luz Creek near Fallbrook").

REMARKS.—Records fair. No regulation or diversion upstream from station. See schematic diagram of [Santa Margarita River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9,700 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 15.13 ft, on basis of flow-over-road computation; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended above 385 ft<sup>3</sup>/s, on basis of flow-over-road computation:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1930	242	5.91	Mar. 16	0445	951	7.42
Feb. 12	0945	296	6.06	Apr. 14	1815	252	5.94
Feb. 25	0830	1,120	7.69				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	2.0	2.8	1.7	34	9.6	6.0	6.8	2.6	0.24	0.00
2	0.00	0.00	1.6	2.3	1.6	26	9.3	6.5	9.8	2.5	0.18	0.00
3	0.00	0.00	1.1	2.0	1.4	29	9.4	11	3.7	1.8	0.26	0.00
4	0.00	0.00	0.83	2.0	1.6	28	9.1	9.4	2.8	1.2	0.21	0.00
5	0.00	0.00	0.66	2.0	1.5	25	9.1	8.8	4.3	1.2	0.15	0.00
6	0.00	0.00	0.57	1.6	1.6	20	9.0	8.3	9.0	1.1	0.04	0.00
7	0.00	0.00	0.55	1.6	1.6	16	8.2	8.8	9.2	1.1	0.04	0.00
8	0.00	0.00	0.64	2.0	1.5	18	6.9	9.0	8.9	1.2	0.02	0.00
9	0.00	0.00	0.60	3.1	1.4	25	6.3	8.2	8.9	1.5	0.02	0.00
10	0.00	0.00	0.81	2.0	1.6	16	6.5	7.6	6.4	1.4	0.01	0.00
11	0.00	0.00	0.77	1.9	7.0	14	6.4	8.3	4.3	0.87	0.01	0.00
12	0.00	0.00	0.41	1.8	67	11	5.9	8.2	4.0	0.55	0.00	0.00
13	0.00	0.00	0.37	1.6	94	10	6.9	7.9	5.6	0.60	0.00	0.00
14	0.00	0.00	0.56	1.6	30	9.9	60	8.3	3.6	0.77	0.00	0.00
15	0.00	0.00	0.83	1.6	17	198	48	8.6	3.4	0.49	0.00	0.00
16	0.00	0.00	36	1.7	12	409	19	8.9	3.4	0.73	0.00	0.00
17	0.00	0.00	27	2.0	11	144	16	8.4	2.5	1.1	0.00	0.00
18	0.00	0.00	8.6	1.7	9.9	72	14	8.5	3.3	1.1	0.00	0.00
19	0.00	0.00	5.5	1.7	8.7	53	12	9.0	4.5	0.80	0.00	0.00
20	0.00	0.00	20	1.6	7.7	43	11	9.0	3.6	0.44	0.00	0.00
21	0.00	0.00	10	1.9	6.8	36	11	8.7	3.8	0.41	0.00	0.00
22	0.00	0.00	6.7	2.0	6.6	25	11	8.4	4.5	0.68	0.00	0.00
23	0.00	0.00	5.0	2.0	6.2	23	11	8.9	5.1	0.29	0.00	0.00
24	0.00	0.00	4.2	2.0	6.5	22	11	8.8	4.6	0.07	0.00	0.00
25	0.00	0.00	3.8	1.7	392	22	11	8.3	3.9	0.34	0.00	0.00
26	0.00	0.00	3.3	1.5	115	22	11	7.9	2.8	0.42	0.00	0.22
27	0.00	0.00	2.9	1.5	74	18	10	7.2	3.6	0.37	0.00	0.49
28	0.00	0.00	2.9	1.5	49	15	8.0	6.4	3.8	0.36	0.00	0.51
29	0.00	0.00	2.9	1.5	---	12	6.7	6.5	3.9	0.21	0.00	0.69
30	0.00	0.99	2.8	1.5	---	11	6.0	6.6	3.7	0.41	0.00	0.70
31	0.00	---	2.9	1.6	---	10	---	6.5	---	0.54	0.00	---
TOTAL	0.00	0.99	156.80	57.3	935.9	1416.9	379.3	252.9	147.7	27.15	1.18	2.61
MEAN	0.000	0.033	5.06	1.85	33.4	45.7	12.6	8.16	4.92	0.88	0.038	0.087
MAX	0.00	0.99	36	3.1	392	409	60	11	9.8	2.6	0.26	0.70
MIN	0.00	0.00	0.37	1.5	1.4	9.9	5.9	6.0	2.5	0.07	0.00	0.00
AC-FT	0.00	2.0	311	114	1860	2810	752	502	293	54	2.3	5.2

11044800 DE LUZ CREEK NEAR DE LUZ, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.29	0.90	2.66	50.8	58.6	35.1	11.1	6.84	2.86	0.93	0.35	0.15
MAX	1.07	3.42	10.1	365	252	189	37.2	37.0	10.2	5.01	2.38	0.84
(WY)	1993	1999	1997	1993	1998	1995	1998	1998	1998	1998	1998	1998
MIN	0.000	0.000	0.045	0.33	0.60	0.64	0.26	0.000	0.000	0.000	0.000	0.000
(WY)	1995	1995	2000	2000	2002	2002	2002	2002	2002	1996	1994	1994

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1993 - 2003	
ANNUAL TOTAL	223.54		3378.73			
ANNUAL MEAN	0.61		9.26		14.0	
HIGHEST ANNUAL MEAN					53.9	
LOWEST ANNUAL MEAN					0.38	
HIGHEST DAILY MEAN	36	Dec 16	409	Mar 16	3220	Jan 16 1993
LOWEST DAILY MEAN	0.00	Apr 14	0.00	Oct 1	0.00	Aug 1 1994
ANNUAL SEVEN-DAY MINIMUM	0.00	Apr 30	0.00	Oct 1	0.00	Aug 1 1994
MAXIMUM PEAK FLOW			1120	Feb 25	9700	Jan 16 1993
MAXIMUM PEAK STAGE			7.69	Feb 25	15.13	Jan 16 1993
ANNUAL RUNOFF (AC-FT)	443		6700		10130	
10 PERCENT EXCEEDS	0.88		16		20	
50 PERCENT EXCEEDS	0.00		1.6		0.97	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 11044900 DE LUZ CREEK NEAR FALLBROOK, CA

LOCATION.—Lat 33° 22' 11", long 117° 19' 18", in SE 1/4 NW 1/4 sec.29, T.9 S., R.4 W., [San Diego County](#), Hydrologic Unit 18070302, on Camp Joseph H. Pendleton Naval Reservation, on right bank, 0.60 mi upstream from mouth and 4.2 mi west of Fallbrook.

DRAINAGE AREA.—47.5 mi<sup>2</sup>.

PERIOD OF RECORD.—February 1951 to September 1965, October 1989 to September 1990, April 2002 to February 2003 (discontinued).

GAGE.—Water-stage recorder, concrete control, and crest-stage gage. Elevation of gage is 155 ft above NGVD of 1929, from topographic map. December 1958 to September 1965 and October 1989 to September 1990, at a site 200 ft upstream at different datum. Prior to December 1958, at site 750 ft upstream at different datum.

REMARKS.—No regulation or diversion upstream from station. See schematic diagram of [Santa Margarita River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,800 ft<sup>3</sup>/s, Apr. 1, 1958, gage height, 9.95 ft, site and datum then in use, from rating curve extended above 450 ft<sup>3</sup>/s; no flow for all or part of most years.

EXTREMES FOR CURRENT YEAR.—No flow October to February.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---
2	0.00	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---
3	0.00	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---
4	0.00	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---
5	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
6	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
7	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
8	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
9	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
10	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
11	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
12	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
13	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
14	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
15	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
16	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
17	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
18	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
19	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
20	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
21	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
22	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
23	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
24	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
25	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
26	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
27	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
28	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
29	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
30	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
31	0.00	---	0.00	0.00	---	---	---	---	---	---	---	---
TOTAL	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
MEAN	0.000	0.000	0.000	0.000	---	---	---	---	---	---	---	---
MAX	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
MIN	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---
AC-FT	0.00	0.00	0.00	0.00	---	---	---	---	---	---	---	---

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2003, BY WATER YEAR (WY)

	0.000	0.97	3.14	9.18	7.69	15.9	13.5	0.94	0.13	0.020	0.000	0.000
MEAN	0.000	17.3	34.7	61.1	39.3	127	192	7.27	0.69	0.17	0.000	0.003
MAX (WY)	1952	1966	1967	1952	1962	1958	1958	1958	1952	1967	1952	1963
MIN (WY)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	1952	1952	1954	1955	1961	1961	1961	1957	1955	1953	1952	1952

## SUMMARY STATISTICS

## WATER YEARS 1952 - 2003

ANNUAL MEAN	4.40
HIGHEST ANNUAL MEAN	28.7 1958
LOWEST ANNUAL MEAN	0.000 1961
HIGHEST DAILY MEAN	2800 Apr 1 1958
LOWEST DAILY MEAN	0.00 Oct 1 1951
ANNUAL SEVEN-DAY MINIMUM	0.00 Oct 1 1951
ANNUAL RUNOFF (AC-FT)	3190
10 PERCENT EXCEEDS	3.2
50 PERCENT EXCEEDS	0.00
90 PERCENT EXCEEDS	0.00



## 11045300 FALLBROOK CREEK NEAR FALLBROOK, CA

LOCATION.—Lat 33° 20'49", long 117° 19'01", in SE 1/4 SE 1/4 sec.32, T.9 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on Camp Joseph H. Pendleton Naval Reservation, on right bank, at culvert on DeLuz Road, 0.75 mi upstream from O'Neill Lake, and 4.5 mi southwest of Fallbrook.

DRAINAGE AREA.—6.97 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1993 to current year. Discharge records for October 1964 to September 1977 and October 1989 to September 1993 available in files of U.S. Marine Corps at Camp Pendleton.

GAGE.—Water-stage recorder, crest-stage gage, and concrete control with low-water Parshall flume. Elevation of gage is 190 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good. Slight regulation by two small storage reservoirs upstream from station. See schematic diagram of [Santa Margarita River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 895 ft<sup>3</sup>/s, Feb. 23, 1998, gage height, 9.73 ft, from rating curve extended above 140 ft<sup>3</sup>/s, on basis of culvert computation; no flow for many days in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	2300	101	2.40	Mar. 15	2130	226	4.00
Feb. 12	2000	147	3.04	Apr. 14	1830	213	3.85
Feb. 25	0930	337	5.18				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.48	0.48	0.27	1.5	0.48	0.52	0.42	0.38	0.04	0.01
2	0.00	0.00	0.45	0.49	0.26	1.1	0.48	0.52	0.47	0.40	0.02	0.01
3	0.00	0.00	0.45	0.48	0.25	0.94	0.48	2.2	0.48	0.41	0.02	0.01
4	0.00	0.00	0.45	0.48	0.25	1.6	0.47	1.9	0.49	0.41	0.01	0.01
5	0.00	0.00	0.45	0.49	0.25	1.2	0.52	0.61	0.53	0.42	0.01	0.00
6	0.00	0.00	0.45	0.42	0.24	0.77	0.51	0.58	0.49	0.42	0.01	0.00
7	0.00	0.00	0.45	0.38	0.23	0.65	0.47	0.60	0.48	0.41	0.01	0.00
8	0.00	0.11	0.44	0.40	0.22	0.63	0.46	0.68	0.45	0.41	0.01	0.00
9	0.00	0.04	0.43	0.42	0.23	0.58	0.46	0.56	0.45	0.40	0.01	0.00
10	0.00	0.15	0.43	0.43	0.25	0.58	0.45	0.50	0.45	0.41	0.01	0.00
11	0.00	0.32	0.43	0.43	2.1	0.58	0.47	0.45	0.44	0.36	0.01	0.00
12	0.00	0.36	0.41	0.45	28	0.55	0.47	0.43	0.43	0.31	0.01	0.00
13	0.00	0.40	0.40	0.45	14	0.58	0.66	0.44	0.42	0.21	0.02	0.00
14	0.00	0.45	0.39	0.45	10	0.58	42	0.48	0.42	0.14	0.01	0.00
15	0.00	0.43	0.36	0.45	1.2	38	24	0.46	0.42	0.07	0.01	0.00
16	0.00	0.43	7.2	0.45	0.72	47	2.1	0.45	0.44	0.05	0.01	0.00
17	0.00	0.42	15	0.43	0.61	5.3	1.5	0.44	0.44	0.05	0.01	0.00
18	0.00	0.42	2.1	0.29	0.58	1.9	1.4	0.45	0.41	0.07	0.02	0.00
19	0.00	0.40	0.66	0.28	0.58	1.3	0.88	0.40	0.42	0.07	0.01	0.00
20	0.00	0.39	15	0.27	0.58	1.1	0.75	0.43	0.43	0.05	0.01	0.00
21	0.00	0.38	3.9	0.23	0.51	0.97	0.68	0.43	0.43	0.03	0.02	0.00
22	0.00	0.37	1.3	0.23	0.50	0.87	0.89	0.40	0.50	0.04	0.02	0.00
23	0.00	0.34	0.62	0.23	0.52	0.79	0.72	0.41	0.50	0.11	0.02	0.00
24	0.00	0.27	0.56	0.22	0.52	0.66	0.58	0.43	0.45	0.10	0.02	0.00
25	0.00	0.22	0.52	0.23	86	0.68	0.58	0.47	0.42	0.06	0.01	0.00
26	0.00	0.17	0.52	0.27	8.3	0.65	0.56	0.44	0.35	0.04	0.01	0.00
27	0.00	0.10	0.52	0.28	15	0.56	0.55	0.43	0.31	0.03	0.01	0.00
28	0.00	0.07	0.52	0.28	5.0	0.56	0.58	0.41	0.32	0.03	0.01	0.00
29	0.00	0.09	0.51	0.28	---	0.50	0.52	0.44	0.28	0.02	0.01	0.00
30	0.00	0.36	0.49	0.28	---	0.48	0.52	0.44	0.35	0.03	0.01	0.00
31	0.00	---	0.48	0.28	---	0.48	---	0.44	---	0.03	0.01	---
TOTAL	0.00	6.69	56.37	11.23	177.17	113.64	85.19	17.84	12.89	5.97	0.42	0.04
MEAN	0.000	0.22	1.82	0.36	6.33	3.67	2.84	0.58	0.43	0.19	0.014	0.001
MAX	0.00	0.45	15	0.49	86	47	42	2.2	0.53	0.42	0.04	0.01
MIN	0.00	0.00	0.36	0.22	0.22	0.48	0.45	0.40	0.28	0.02	0.01	0.00
AC-FT	0.00	13	112	22	351	225	169	35	26	12	0.8	0.08

## SANTA MARGARITA RIVER BASIN

## 11045300 FALLBROOK CREEK NEAR FALLBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.11	0.72	1.08	3.86	6.60	4.50	1.93	0.94	0.46	0.21	0.096	0.073
MAX	0.40	3.35	3.20	18.5	35.9	23.8	5.63	3.28	1.50	0.82	0.41	0.41
(WY)	1999	1997	1997	1995	1998	1995	1998	1998	1995	1998	1995	1998
MIN	0.000	0.031	0.17	0.36	0.38	0.33	0.33	0.14	0.000	0.000	0.000	0.000
(WY)	2002	2000	2000	2003	2002	2002	2002	2002	2002	2002	2000	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1994 - 2003
ANNUAL TOTAL	111.14	487.45	
ANNUAL MEAN	0.30	1.34	1.69
HIGHEST ANNUAL MEAN			4.77 1998
LOWEST ANNUAL MEAN			0.17 2002
HIGHEST DAILY MEAN	15 Dec 17	86 Feb 25	256 Mar 5 1995
LOWEST DAILY MEAN	0.00 May 22	0.00 Oct 1	0.00 Sep 5 1994
ANNUAL SEVEN-DAY MINIMUM	0.00 May 22	0.00 Oct 1	0.00 Sep 5 1994
MAXIMUM PEAK FLOW		337 Feb 25	895 Feb 23 1998
MAXIMUM PEAK STAGE		5.18 Feb 25	9.73 Feb 23 1998
ANNUAL RUNOFF (AC-FT)	220	967	1220
10 PERCENT EXCEEDS	0.43	0.87	2.1
50 PERCENT EXCEEDS	0.11	0.41	0.43
90 PERCENT EXCEEDS	0.00	0.00	0.00



## SANTA MARGARITA RIVER BASIN

## 11045370 O'NEILL LAKE TRIBUTARY NEAR FALLBROOK, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.000	0.059	0.11	0.015	0.004	0.037	0.001	0.000	0.000	0.000	0.000	0.000
MAX	0.000	0.067	0.19	0.021	0.004	0.037	0.001	0.000	0.000	0.000	0.000	0.000
(WY)	2002	2003	2003	2003	2002	2002	2002	2002	2002	2002	2002	2002
MIN	0.000	0.050	0.018	0.008	0.004	0.037	0.001	0.000	0.000	0.000	0.000	0.000
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## WATER YEARS 2002 - 2003

ANNUAL TOTAL	9.59	
ANNUAL MEAN	0.026	0.010
HIGHEST ANNUAL MEAN		0.010 2002
LOWEST ANNUAL MEAN		0.010 2002
HIGHEST DAILY MEAN	2.9 Dec 16	2.9 Dec 16 2002
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1 2001
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1 2001
MAXIMUM PEAK FLOW		32 Dec 16 2002
MAXIMUM PEAK STAGE		3.72 Dec 16 2002
ANNUAL RUNOFF (AC-FT)	19	7.2
10 PERCENT EXCEEDS	0.01	0.00
50 PERCENT EXCEEDS	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00

11045600 O'NEILL LAKE OUTLET CHANNEL NEAR FALLBROOK, CA

LOCATION.—Lat 33° 19'30", long 117° 19'29", in SE 1/4 NW 1/4 sec. 8, T.10 S., R.4 W., San Diego County, Hydrologic Unit 18070302, on Camp Joseph H. Pendleton Naval Reservation, on left bank, 300 ft downstream from O'Neill Lake, and 5.5 mi southwest of Fallbrook.

DRAINAGE AREA.—9.77 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1998 to February 2003 (discontinued).

GAGE.—Water-stage recorder and concrete control with low-water V-notch weir. Elevation of gage is 100 ft above NGVD of 1929, from topographic map.

REMARKS.—Records excellent. Records for this station represent regulated releases from O'Neill Lake. Water is sometimes diverted into O'Neill Lake from the Santa Margarita River via a diversion dam 0.9 mi above gage. Slight regulation by two small storage reservoirs upstream from gaging station on Fallbrook Creek near Fallbrook (station 11045300). See schematic diagram of Santa Margarita River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 20 ft<sup>3</sup>/s, Nov. 29, 2001, gage height, 2.59 ft; no flow at times in most years.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.07	0.01	---	---	---	---	---	---	---
2	0.00	0.00	0.00	0.09	0.01	---	---	---	---	---	---	---
3	0.00	0.00	0.00	0.07	0.01	---	---	---	---	---	---	---
4	0.00	0.00	0.01	0.06	0.01	---	---	---	---	---	---	---
5	0.00	0.00	0.01	0.06	---	---	---	---	---	---	---	---
6	0.00	0.00	0.01	0.02	---	---	---	---	---	---	---	---
7	0.00	0.00	0.01	0.01	---	---	---	---	---	---	---	---
8	0.00	0.00	0.01	0.02	---	---	---	---	---	---	---	---
9	0.00	0.00	0.02	0.03	---	---	---	---	---	---	---	---
10	0.00	0.00	0.02	0.04	---	---	---	---	---	---	---	---
11	0.00	0.00	0.03	0.03	---	---	---	---	---	---	---	---
12	0.00	0.00	0.03	0.03	---	---	---	---	---	---	---	---
13	0.00	0.00	0.03	0.02	---	---	---	---	---	---	---	---
14	0.00	0.00	0.03	0.02	---	---	---	---	---	---	---	---
15	0.00	0.00	0.03	0.03	---	---	---	---	---	---	---	---
16	0.00	0.00	0.04	0.03	---	---	---	---	---	---	---	---
17	0.00	0.00	0.06	0.03	---	---	---	---	---	---	---	---
18	0.00	0.00	0.07	0.04	---	---	---	---	---	---	---	---
19	0.00	0.00	0.08	0.04	---	---	---	---	---	---	---	---
20	0.00	0.00	0.07	0.04	---	---	---	---	---	---	---	---
21	0.00	0.00	0.06	0.03	---	---	---	---	---	---	---	---
22	0.00	0.00	0.06	0.03	---	---	---	---	---	---	---	---
23	0.00	0.00	0.07	0.02	---	---	---	---	---	---	---	---
24	0.00	0.00	0.07	0.02	---	---	---	---	---	---	---	---
25	0.00	0.00	0.07	0.02	---	---	---	---	---	---	---	---
26	0.00	0.00	0.07	0.01	---	---	---	---	---	---	---	---
27	0.00	0.00	0.08	0.01	---	---	---	---	---	---	---	---
28	0.00	0.00	0.07	0.01	---	---	---	---	---	---	---	---
29	0.00	0.00	0.07	0.01	---	---	---	---	---	---	---	---
30	0.00	0.00	0.07	0.01	---	---	---	---	---	---	---	---
31	0.00	---	0.07	0.01	---	---	---	---	---	---	---	---
TOTAL	0.00	0.00	1.32	0.96	---	---	---	---	---	---	---	---
MEAN	0.000	0.000	0.043	0.031	---	---	---	---	---	---	---	---
MAX	0.00	0.00	0.08	0.09	---	---	---	---	---	---	---	---
MIN	0.00	0.00	0.00	0.01	---	---	---	---	---	---	---	---
AC-FT	0.00	0.00	2.6	1.9	---	---	---	---	---	---	---	---

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

	1999	2001	2002	1999	1999	1999	1999	1999	1999	1999	1999	1999
MEAN	0.071	1.07	1.99	0.11	0.12	0.14	0.13	0.10	0.085	0.069	0.041	0.021
MAX	0.35	3.88	7.99	0.48	0.48	0.48	0.50	0.39	0.33	0.27	0.16	0.076
(WY)	1999	2001	2002	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	0.000	0.000	0.004	0.004	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000
(WY)	2001	2003	2000	2002	2002	2002	2000	2000	2000	2000	2000	2002

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

WATER YEARS 1999 - 2003

ANNUAL TOTAL	1.53		
ANNUAL MEAN	0.004		0.40
HIGHEST ANNUAL MEAN			0.76
LOWEST ANNUAL MEAN			0.004
HIGHEST DAILY MEAN	0.08	Dec 19	19
LOWEST DAILY MEAN	0.00	Jan 5	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 5	0.00
MAXIMUM PEAK FLOW			20
MAXIMUM PEAK STAGE			2.59
ANNUAL RUNOFF (AC-FT)	3.0		288
10 PERCENT EXCEEDS	0.01		0.43
50 PERCENT EXCEEDS	0.00		0.01
90 PERCENT EXCEEDS	0.00		0.00

## 11045700 O'NEILL LAKE SPILL CHANNEL NEAR FALLBROOK, CA

LOCATION.—Lat 33° 19'44", long 117° 19'35", in NW 1/4 NW 1/4 sec.8, T.10 S., R.4 W., [San Diego County](#), Hydrologic Unit 18070302, on Camp Joseph H. Pendleton Naval Reservation, on right bank, 100 ft upstream from spillway on O'Neill Lake, 1.3 mi upstream from confluence with Santa Margarita River, and 5.5 mi southwest of Fallbrook.

DRAINAGE AREA.—9.77 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1998 to February 2003 (discontinued).

GAGE.—Water-stage recorder and sharp-crested weir (wooden flashboards in four weir boxes). Elevation of gage is 110 ft above NGVD of 1929, from topographic map.

REMARKS.— Records for this station represent spill from O'Neill Lake. Minor seepage through weir flashboards may occur at times and is not indicated in records for this station. Water is sometimes diverted into O'Neill Lake from the Santa Margarita River via a diversion dam 0.55 mi above gage. Slight regulation by two small storage reservoirs upstream from gaging station on Fallbrook Creek near Fallbrook (station 11045300). See schematic diagram of [Santa Margarita River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3.5 ft<sup>3</sup>/s, Apr. 8, 2001, gage height, 6.65 ft, from rating curve developed on basis of sharp-crested weir computations; no flow for all or most of each year.

EXTREMES FOR CURRENT YEAR.—No flow October to February.

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.000	0.000	0.000	0.000	0.000	0.10	0.20	0.000	0.000	0.000	0.000	0.000
MAX	0.000	0.000	0.000	0.000	0.000	0.41	0.80	0.000	0.000	0.000	0.000	0.000
(WY)	1999	1999	1999	1999	1999	2001	2001	1999	1999	1999	1999	1999
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## WATER YEARS 1999 - 2003

ANNUAL TOTAL	0.00	
ANNUAL MEAN	0.000	0.025
HIGHEST ANNUAL MEAN		0.10 2001
LOWEST ANNUAL MEAN		0.000 1999
HIGHEST DAILY MEAN	0.00	Jan 1 2.8 Mar 11 2001
LOWEST DAILY MEAN	0.00	Jan 1 0.00 Oct 1 1998
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1 0.00 Oct 1 1998
MAXIMUM PEAK FLOW		3.5 Apr 8 2001
MAXIMUM PEAK STAGE		6.65 Apr 8 2001
ANNUAL RUNOFF (AC-FT)	0.00	18
10 PERCENT EXCEEDS	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00

## 11046000 SANTA MARGARITA RIVER AT YSIDORA, CA

LOCATION.—Lat 33° 18' 40", long 117° 20' 47", in NW 1/4 NW 1/4 sec.18, T.10 S., R.4 W., [San Diego County](#), Hydrologic Unit 18070302, on Camp Joseph H. Pendleton Naval Reservation, at Basilone Road Bridge, 7.9 mi upstream from mouth, and 5.2 mi upstream from Ysidora.

DRAINAGE AREA.—723 mi<sup>2</sup>.

PERIOD OF RECORD.—February 1923 to February 1999, Sept. 27, 2001, to current year (see GAGE paragraph). Low-flow records not equivalent prior to Dec. 10, 1980, due to installation of conservation ponds above downstream site.

CHEMICAL DATA: Water years 1980–81.

WATER TEMPERATURE: Water years 1969–81.

SEDIMENT DATA: Water years 1969–78, 1982–83.

REVISED RECORDS.—WDR CA-87-1: Drainage area.

GAGE.—Water-stage recorder. Auxiliary gage 2.3 mi upstream with crest-stage gage and steel drop structure (diversion dam). Primary gage temporarily out of operation from Feb. 26, 1999, to Sept. 27, 2001, due to channel work and replacement of Basilone Road Bridge. During this period, the auxiliary gage (station 11045050) was operated as a temporary replacement. Elevation of gage is 75 ft above NGVD of 1929, from topographic map. February 1923 to Feb. 16, 1927, at site 4.4 mi downstream at different datum (destroyed by flood). Feb. 17, 1927, to Feb. 1, 1931, no gage in operation; records based on discharge measurements. Feb. 2, 1931, to Feb. 24, 1970, at site 5.4 mi downstream at different datum; Feb. 25, 1970, to Dec. 10, 1980, at site 6.2 mi downstream at different datum.

REMARKS.—Records rated fair except for estimated daily discharges, which are poor. Flow partly regulated by Vail Lake (station 11042510) since November 1948 and by Skinner Reservoir since 1974. Flow in Warm Springs Creek, a tributary to Murrieta Creek, slightly regulated beginning in water year 1999 by Diamond Valley Lake, capacity, 800,000 acre-ft (see station 11042800). Diversions to O'Neill Lake and to ground-water recharge basins are made at point 2.3 mi upstream by Camp Pendleton personnel. Regulated return flows from O'Neill Lake can occur at times, as can unregulated spills. See schematic diagram of [Santa Margarita River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 44,000 ft<sup>3</sup>/s, estimated, based on regression equation and flood routing of upstream flows, Jan. 16, 1993, gage height, 20.47 ft; no flow for all or part of most years.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	9.2	16	207	43	42	26	17	17	12
2	0.00	0.00	0.00	8.8	15	140	41	43	23	17	15	13
3	0.00	e0.00	0.00	8.8	15	117	41	44	22	17	17	12
4	0.00	e0.00	0.00	8.5	15	105	40	43	24	17	19	11
5	0.00	e0.00	0.00	8.5	15	93	38	45	24	17	14	11
6	0.00	e0.00	0.00	8.3	15	86	38	45	25	16	13	8.8
7	0.00	e0.00	0.00	7.9	14	85	36	40	25	17	12	9.3
8	0.00	e0.00	0.00	6.0	14	81	33	36	26	13	12	10
9	0.00	e0.00	0.00	7.9	14	78	31	38	25	15	13	9.1
10	0.00	e0.00	0.00	9.3	14	80	30	34	26	16	14	9.0
11	0.00	e0.00	0.00	10	15	79	28	33	24	15	18	10
12	0.00	e0.00	0.00	12	199	70	28	30	26	18	17	10
13	0.00	e0.00	0.00	11	723	68	28	31	22	16	15	12
14	0.00	0.00	0.00	11	124	64	168	31	22	16	14	14
15	0.00	0.00	0.00	14	45	414	1180	33	24	15	16	12
16	0.00	0.00	2.3	16	26	3040	150	31	23	16	17	11
17	0.00	0.00	226	12	20	840	77	29	22	13	16	13
18	0.00	0.00	107	12	16	291	61	29	21	16	11	13
19	0.00	0.00	42	13	15	208	54	29	22	17	11	13
20	0.00	0.00	27	13	14	161	54	30	23	17	10	14
21	0.00	0.00	89	13	14	140	47	29	26	17	10	14
22	0.00	0.00	48	13	15	132	46	27	23	17	10	13
23	0.00	0.00	28	14	15	123	43	27	25	15	10	9.6
24	0.00	0.00	19	14	16	102	40	26	26	17	11	11
25	0.00	0.00	15	15	e2060	89	40	27	25	18	12	13
26	0.00	0.00	14	15	991	97	41	28	23	17	11	14
27	0.00	0.00	12	15	684	85	41	24	20	18	11	14
28	0.00	0.00	11	14	439	62	41	26	22	17	11	12
29	0.00	0.00	10	15	---	51	41	24	19	18	9.2	11
30	0.00	0.00	9.2	15	---	49	43	24	17	20	9.3	12
31	0.00	---	9.2	15	---	45	---	23	---	18	9.5	---
TOTAL	0.00	0.00	668.70	365.2	5578	7282	2622	1001	701	513	405.0	350.8
MEAN	0.000	0.000	21.6	11.8	199	235	87.4	32.3	23.4	16.5	13.1	11.7
MAX	0.00	0.00	226	16	2060	3040	1180	45	26	20	19	14
MIN	0.00	0.00	0.00	6.0	14	45	28	23	17	13	9.2	8.8
AC-FT	0.00	0.00	1330	724	11060	14440	5200	1990	1390	1020	803	696

e Estimated.

## 11046000 SANTA MARGARITA RIVER AT YSIDORA, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1948, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.31	6.31	30.9	58.5	152	190	58.9	11.8	3.21	.54	.29	.88
MAX	13.3	65.8	141	532	1002	1730	465	101	28.7	3.15	2.30	13.5
(WY)	1942	1945	1941	1943	1937	1938	1941	1941	1941	1936	1935	1939
MIN	.000	.000	.000	.000	1.32	1.18	1.33	.000	.000	.000	.000	.000
(WY)	1924	1924	1948	1948	1925	1925	1925	1948	1923	1923	1923	1923

## SUMMARY STATISTICS

## WATER YEARS 1923 - 1948

ANNUAL MEAN	43.3
HIGHEST ANNUAL MEAN	169 1938
LOWEST ANNUAL MEAN	.77 1948
HIGHEST DAILY MEAN	15500 Mar 3 1938
LOWEST DAILY MEAN	.00 May 11 1923
ANNUAL SEVEN-DAY MINIMUM	.00 May 11 1923
MAXIMUM PEAK FLOW	33600 Feb 16 1927
MAXIMUM PEAK STAGE	18.00 Feb 16 1927
ANNUAL RUNOFF (AC-FT)	31390
10 PERCENT EXCEEDS	53
50 PERCENT EXCEEDS	1.6
90 PERCENT EXCEEDS	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1980, BY WATER YEAR (WY)

MEAN	.007	1.31	4.30	69.8	153	84.3	26.3	3.84	.65	.17	.036	.030
MAX	.23	41.7	71.7	749	2249	1071	379	52.7	12.1	3.14	.80	.67
(WY)	1970	1966	1967	1978	1980	1978	1958	1980	1979	1979	1980	1980
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1949	1949	1949	1949	1950	1950	1949	1949	1949	1949	1949	1949

## SUMMARY STATISTICS

## WATER YEARS 1949 - 1980

ANNUAL MEAN	27.9
HIGHEST ANNUAL MEAN	282 1980
LOWEST ANNUAL MEAN	.000 1950
HIGHEST DAILY MEAN	18000 Feb 21 1980
LOWEST DAILY MEAN	.00 Oct 1 1948
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1 1948
MAXIMUM PEAK FLOW	24000 Feb 18 1980
MAXIMUM PEAK STAGE	18.80 Feb 18 1980
ANNUAL RUNOFF (AC-FT)	20250
10 PERCENT EXCEEDS	4.4
50 PERCENT EXCEEDS	.00
90 PERCENT EXCEEDS	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2003, BY WATER YEAR (WY)

MEAN	4.73	15.3	29.4	178	203	189	53.8	25.9	10.9	3.77	3.36	2.05
MAX	39.3	62.0	124	2261	1296	896	202	121	36.6	16.5	31.6	11.7
(WY)	1984	1984	1984	1993	1993	1995	1983	1998	1998	2003	1983	2003
MIN	0.000	0.000	0.013	4.74	8.27	3.85	4.07	1.58	0.000	0.000	0.000	0.000
(WY)	1982	1985	1990	1991	1989	1987	2002	1984	1984	1981	1981	1981

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1981 - 2003

ANNUAL TOTAL	1817.79	19486.70	
ANNUAL MEAN	4.98	53.4	59.9
HIGHEST ANNUAL MEAN			337 1993
LOWEST ANNUAL MEAN			4.59 1989
HIGHEST DAILY MEAN	226 Dec 17	3040 Mar 16	22000 Jan 16 1993
LOWEST DAILY MEAN	0.00 Jun 24	0.00 Oct 1	0.00 Jun 19 1981
ANNUAL SEVEN-DAY MINIMUM	0.00 Jun 24	0.00 Oct 1	0.00 Jun 19 1981
MAXIMUM PEAK FLOW		6310 Feb 25	e44000 Jan 16 1993
MAXIMUM PEAK STAGE		9.50 Feb 25	20.47 Jan 16 1993
ANNUAL RUNOFF (AC-FT)	3610	38650	43420
10 PERCENT EXCEEDS	11	78	75
50 PERCENT EXCEEDS	1.1	15	7.5
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated.



## 11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA

LOCATION.—Lat 33° 14' 08", long 117° 24' 27", in SW 1/4 NE 1/4 sec.9, T.11 S., R.5 W., [San Diego County](#), Hydrologic Unit 18070302, on Camp Joseph H. Pendleton Naval Reservation, on right bank, 300 ft downstream from bridge on Interstate Highway 5, 0.5 mi upstream from mouth, and 3.5 mi northwest of Oceanside.

DRAINAGE AREA.—744 mi<sup>2</sup>.

## GAGE-HEIGHT RECORDS

PERIOD OF RECORD.—October 1989 to current year. Unpublished records for water year 1989 available in files of the U.S. Geological Survey.

GAGE.—Water-stage recorder. Datum of gage is 2.78 ft below NGVD of 1929.

REMARKS.—Gage height generally affected by tide. Interruptions in record at times due to malfunction of recording equipment. See schematic diagram of [Santa Margarita River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum gage height, 15.10 ft, from floodmarks and hydrographers' notes, Jan. 16, 1993; minimum recorded gage height, 2.02 ft, Feb. 3, 1999.

EXTREMES FOR CURRENT YEAR.—Maximum recorded gage height, 7.68 ft, Mar. 16; minimum recorded gage height, 2.71 ft, Apr. 12.

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

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	5.67	5.41	5.61	4.59	6.81	4.39	7.48	4.54	7.11	4.43	6.62	3.92
2	5.66	5.23	6.13	4.60	7.50	4.55	7.55	4.43	7.04	4.43	6.30	3.74
3	5.78	4.85	6.88	4.60	7.62	4.44	7.49	4.38	6.08	4.40	6.05	3.64
4	5.97	4.59	7.34	4.60	7.54	4.36	7.16	4.36	5.35	4.32	5.78	3.58
5	5.85	4.57	7.51	4.53	7.61	4.34	6.91	4.36	4.70	4.29	5.15	3.50
6	5.93	4.53	7.39	4.40	7.47	4.39	6.21	4.41	4.43	4.22	4.87	3.44
7	6.32	4.52	7.11	4.38	6.88	4.52	6.21	4.41	4.41	4.20	4.79	3.36
8	6.55	4.41	6.99	4.38	6.24	4.48	5.58	4.89	4.54	4.20	4.74	3.32
9	6.38	4.27	6.29	4.61	5.34	4.44	5.65	5.56	4.52	4.21	4.48	3.29
10	5.94	4.18	5.42	4.60	4.77	4.44	5.73	5.64	4.70	4.21	4.40	3.28
11	5.26	4.17	4.93	4.56	4.83	4.37	5.78	5.71	5.24	4.22	4.39	3.22
12	4.73	4.13	4.65	4.44	4.70	4.31	5.81	5.77	6.01	4.26	4.53	3.21
13	4.58	4.10	4.74	4.41	4.89	4.31	5.93	5.80	6.95	5.29	4.86	3.20
14	4.60	4.15	5.19	4.42	5.41	4.31	6.01	5.92	6.75	4.73	5.41	3.19
15	4.73	4.18	5.32	4.47	5.76	4.37	6.10	5.16	6.99	4.33	6.26	3.29
16	4.88	4.23	5.40	4.41	7.04	4.81	6.13	4.87	7.12	4.10	7.68	3.89
17	4.96	4.28	5.93	4.40	7.60	5.27	6.55	4.71	7.15	4.02	6.99	4.28
18	4.94	4.32	6.34	4.42	7.30	5.07	6.78	4.54	6.68	3.95	6.41	3.72
19	5.13	4.35	6.31	4.38	6.85	4.91	6.78	4.40	6.21	3.91	5.89	3.50
20	5.61	4.43	6.67	4.38	7.42	4.86	6.74	4.37	6.21	3.87	5.97	3.40
21	5.70	4.47	6.70	4.36	7.30	4.84	6.03	4.36	5.72	3.75	6.03	3.30
22	5.82	4.44	6.73	4.38	7.05	5.02	5.08	4.35	5.59	3.69	5.77	3.24
23	5.80	4.36	6.61	4.38	6.61	4.84	4.51	4.29	5.77	3.70	5.56	3.21
24	5.76	4.30	6.07	4.38	5.30	4.64	4.99	4.29	5.93	3.69	5.33	3.21
25	5.79	4.28	5.75	4.33	4.77	4.57	5.38	4.35	6.72	3.97	4.91	3.13
26	5.51	4.29	5.20	4.34	4.66	4.44	5.35	4.35	6.77	4.99	4.90	3.03
27	5.17	4.28	4.83	4.35	4.72	4.43	5.62	4.54	6.59	4.52	5.41	3.06
28	4.72	4.28	5.07	4.35	5.52	4.44	6.10	4.58	6.71	4.23	5.62	2.93
29	4.85	4.27	5.73	4.37	6.26	4.56	6.43	4.54	---	---	5.43	2.87
30	5.10	4.31	6.15	4.41	6.81	4.57	6.81	4.47	---	---	5.31	2.85
31	5.54	4.44	---	---	7.02	4.58	7.08	4.45	---	---	5.37	2.84
MONTH	6.55	4.10	7.51	4.33	7.62	4.31	7.55	4.29	7.15	3.69	7.68	2.84





## SANTA MARGARITA RIVER BASIN

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

DISSOLVED OXYGEN, MG/L, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.8	5.4	10.3	5.2	8.2	3.5	10.9	3.2	9.2	1.4	---	---
2	9.6	5.4	10.2	5.2	8.8	3.3	10.7	3.1	9.4	2.3	---	---
3	9.8	5.6	9.6	4.8	9.7	4.3	10.2	3.1	8.8	3.6	---	---
4	10.2	5.8	10.0	4.8	9.0	4.4	9.7	3.4	7.5	2.0	---	---
5	10.0	6.2	10.4	4.9	8.8	4.2	10.8	3.2	9.0	1.4	---	---
6	10.2	5.7	10.3	5.0	8.7	3.8	10.6	3.4	9.5	2.0	10.8	3.0
7	9.9	5.7	9.5	5.5	11.3	3.9	9.6	2.9	7.4	2.0	12.1	2.5
8	9.3	5.2	10.1	5.4	11.4	3.3	9.1	1.0	6.8	1.5	12.7	2.3
9	9.6	5.2	9.9	4.6	9.3	3.8	11.7	2.5	7.7	2.1	11.7	2.8
10	9.5	5.1	10.0	5.5	10.4	4.0	12.7	2.9	---	---	12.5	2.7
11	9.3	4.7	9.9	5.1	9.5	3.5	13.8	3.3	---	---	12.2	2.5
12	9.2	5.2	9.9	5.3	8.8	3.2	12.5	2.3	---	---	11.4	2.3
13	9.2	4.7	9.0	5.2	9.0	3.0	12.0	3.2	---	---	11.9	2.1
14	7.8	5.0	9.8	5.3	8.1	2.6	---	---	---	---	9.7	1.7
15	7.6	6.2	9.6	5.5	7.3	2.7	---	---	11.6	3.6	10.2	1.9
16	8.0	6.5	9.3	4.7	6.6	2.8	---	---	10.7	3.3	11.3	1.9
17	8.7	6.9	8.4	4.0	6.8	3.0	---	---	7.9	2.2	8.8	2.6
18	8.8	7.1	8.6	4.0	5.7	2.8	---	---	6.9	1.6	8.9	1.2
19	8.9	6.7	8.2	4.2	7.4	3.1	---	---	10.7	1.4	8.8	1.2
20	8.9	6.4	8.1	4.2	7.7	3.2	---	---	13.6	2.0	9.6	1.4
21	8.8	6.4	8.7	4.1	6.8	2.0	---	---	12.7	1.7	8.0	1.2
22	9.5	6.8	8.6	4.0	7.0	1.1	---	---	11.0	2.1	7.8	1.3
23	9.6	6.6	9.2	3.5	11.2	1.7	---	---	11.3	2.9	7.0	1.1
24	9.6	6.0	9.8	4.6	10.6	2.3	12.4	1.4	11.2	3.2	8.4	2.1
25	9.6	6.0	9.7	3.7	10.1	3.2	10.8	1.7	10.4	2.9	8.1	1.6
26	9.9	5.9	10.8	4.5	10.1	3.5	10.7	1.6	10.2	3.4	6.3	1.4
27	9.8	5.7	9.9	4.1	10.1	3.5	10.9	1.3	11.8	3.8	7.3	0.7
28	9.7	5.5	8.0	3.5	10.2	3.2	11.7	1.1	15.8	3.5	6.6	1.4
29	9.9	5.4	8.0	3.0	10.0	3.1	12.2	1.5	9.0	3.7	6.4	1.0
30	10.1	5.5	9.8	3.9	10.0	3.0	11.7	0.9	---	---	6.3	1.0
31	---	---	8.2	3.4	---	---	10.7	1.1	---	---	---	---
MONTH	10.2	4.7	10.8	3.0	11.4	1.1	---	---	---	---	---	---

## 11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.4	8.1	8.5	7.9	---	---	---	---	8.3	7.8	---	---
2	8.5	8.1	8.4	7.9	---	---	---	---	8.3	7.9	---	---
3	8.7	8.2	8.3	7.9	---	---	---	---	8.3	7.9	---	---
4	8.5	7.8	8.3	7.9	---	---	---	---	8.3	8.0	---	---
5	8.5	7.7	8.2	7.9	---	---	---	---	8.4	8.0	---	---
6	8.5	7.6	8.1	7.8	---	---	---	---	8.5	8.1	---	---
7	8.3	7.8	8.2	7.7	---	---	---	---	8.6	8.2	---	---
8	8.4	8.0	7.9	7.6	---	---	---	---	8.6	8.2	---	---
9	8.4	8.1	7.8	7.4	---	---	---	---	8.8	8.2	---	---
10	8.3	8.0	7.8	7.4	---	---	---	---	8.6	8.3	---	---
11	8.4	8.0	8.0	7.4	---	---	---	---	8.6	8.2	---	---
12	8.5	8.1	8.0	7.5	---	---	---	---	8.3	7.8	---	---
13	8.6	8.2	8.0	7.7	---	---	---	---	7.8	7.6	8.9	7.8
14	8.5	8.1	8.0	7.6	---	---	---	---	7.7	7.6	8.8	7.8
15	8.5	8.1	8.0	7.6	---	---	---	---	8.0	7.7	8.2	7.8
16	8.3	8.0	8.1	7.5	---	---	---	---	8.1	7.6	7.8	7.5
17	8.2	7.9	8.0	7.4	---	---	8.2	7.9	8.1	7.7	7.6	7.4
18	8.3	7.8	7.9	7.6	---	---	8.2	7.9	8.1	7.7	7.8	7.4
19	8.3	7.7	8.0	7.7	---	---	8.2	8.0	8.0	7.7	7.8	7.7
20	8.2	7.8	8.0	7.6	---	---	8.2	7.9	8.0	7.6	7.9	7.7
21	8.1	7.8	8.1	7.6	---	---	8.3	7.9	7.9	7.6	7.9	7.6
22	8.2	7.9	8.0	7.6	---	---	8.3	7.9	7.9	7.6	8.0	7.6
23	8.3	7.9	7.8	7.5	---	---	8.6	8.0	8.0	7.6	8.0	7.6
24	8.3	8.0	8.1	7.4	---	---	8.5	7.9	8.0	7.6	8.0	7.6
25	8.2	8.0	8.1	7.5	---	---	8.5	8.0	8.0	7.6	8.0	7.8
26	8.2	7.9	8.3	7.5	---	---	8.5	7.9	---	---	8.1	7.8
27	8.4	8.0	7.8	7.6	---	---	8.4	8.0	---	---	8.2	7.9
28	8.6	8.1	7.9	7.6	---	---	8.3	8.0	---	---	8.1	7.9
29	8.5	8.2	---	---	---	---	8.2	8.0	---	---	8.1	7.8
30	8.6	8.2	---	---	---	---	8.2	7.8	---	---	8.1	7.9
31	8.6	8.1	---	---	---	---	8.3	7.8	---	---	8.1	7.8
MONTH	8.7	7.6	---	---	---	---	---	---	---	---	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.2	7.8	8.1	7.7	8.2	7.7	8.4	7.6	8.3	7.6	8.1	7.8
2	8.2	7.8	8.1	7.7	8.2	7.6	8.3	7.6	8.2	7.7	8.1	7.6
3	8.2	7.7	8.0	7.7	8.2	7.7	8.4	7.7	8.1	7.8	8.0	7.6
4	8.2	7.8	8.1	7.7	8.3	7.8	8.2	7.7	8.1	7.8	8.0	7.6
5	8.2	7.9	8.2	7.7	8.1	7.8	8.2	7.8	8.2	7.7	8.1	7.6
6	8.2	7.9	8.1	7.7	8.2	7.8	8.1	7.7	8.2	7.8	8.2	7.8
7	8.2	7.9	8.1	7.8	8.3	7.7	8.2	7.8	8.2	7.8	8.4	7.9
8	8.2	7.8	8.1	7.6	8.4	7.7	8.1	7.6	8.1	7.8	8.5	8.0
9	8.2	7.8	8.3	7.6	8.3	7.8	8.2	7.7	8.1	7.7	8.5	8.0
10	8.2	7.8	8.2	7.8	8.4	7.8	8.2	7.6	8.1	7.7	8.5	8.0
11	8.2	7.8	8.2	7.9	8.4	7.9	8.3	7.7	8.2	7.7	8.5	8.0
12	8.2	7.9	8.2	7.8	8.4	7.8	8.3	7.6	8.3	7.8	8.4	8.0
13	8.2	7.8	8.2	7.8	8.6	7.8	8.3	7.6	8.4	7.8	8.4	7.9
14	8.1	7.8	8.2	7.8	8.4	7.8	8.3	7.5	8.4	7.8	8.3	7.9
15	8.0	7.6	8.2	7.8	8.3	7.8	8.3	7.5	8.3	7.9	8.3	7.8
16	8.1	7.6	8.2	7.8	8.3	7.6	8.3	7.5	8.3	7.9	8.4	7.8
17	8.1	7.9	8.2	7.8	8.3	7.7	8.3	7.6	8.2	7.8	8.3	7.8
18	8.2	7.9	8.2	7.8	8.1	7.7	8.2	7.5	8.1	7.8	8.1	7.7
19	8.2	7.9	8.2	7.8	8.2	7.8	8.4	7.6	8.4	7.8	8.1	7.7
20	8.2	8.0	8.2	7.8	8.3	7.8	8.5	7.6	8.6	7.8	8.2	7.8
21	8.1	7.9	8.2	7.8	8.2	7.7	8.4	7.6	8.7	8.1	8.2	7.8
22	8.1	7.9	8.2	7.7	8.3	7.6	8.1	7.5	8.8	8.1	8.1	7.7
23	8.2	7.9	8.2	7.8	8.4	7.6	8.1	7.5	8.6	8.0	8.0	7.6
24	8.2	7.8	8.2	7.8	8.4	7.6	8.2	7.6	8.5	7.9	8.0	7.7
25	8.2	7.8	8.3	7.8	8.3	7.6	8.2	7.6	8.3	7.8	8.1	7.6
26	8.2	7.8	8.2	7.7	8.3	7.7	8.2	7.6	8.3	7.8	7.8	7.5
27	8.2	7.6	8.2	7.8	8.3	7.7	8.2	7.6	8.4	7.8	7.9	7.4
28	8.2	7.6	8.2	7.7	8.3	7.5	8.3	7.6	8.5	7.8	8.0	7.4
29	8.1	7.7	8.1	7.6	8.3	7.5	8.3	7.5	8.4	7.9	8.0	7.4
30	8.1	7.6	8.3	7.7	8.4	7.6	8.3	7.5	8.3	7.9	7.9	7.3
31	---	---	8.2	7.7	---	---	8.4	7.5	8.2	7.9	---	---
MONTH	8.2	7.6	8.3	7.6	8.6	7.5	8.5	7.5	8.8	7.6	8.5	7.3

## 11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	46300	44200	47500	42500	---	---	---	---	49100	42900	43500	1140
2	45900	41000	48200	43400	---	---	---	---	49000	40000	30900	1650
3	45600	41600	48800	44600	---	---	---	---	48800	40600	28300	2060
4	47800	42600	49000	45000	---	---	---	---	44300	38200	23200	3600
5	49100	44400	49300	45300	---	---	---	---	44000	36900	15800	3740
6	49300	44800	49300	44700	---	---	---	---	40000	36300	16600	2360
7	48800	46500	49100	41900	---	---	---	---	38400	35500	17500	2430
8	48900	46800	48500	41900	---	---	---	---	40200	35000	24400	2000
9	48900	42800	47100	39700	---	---	---	---	39800	34700	27400	2000
10	49000	41600	45500	35400	---	---	---	---	43600	34500	10600	1900
11	47400	44800	41300	35200	---	---	---	---	47900	37000	4110	1820
12	46900	43700	38200	35600	---	---	---	---	48500	37400	16700	1800
13	45600	42900	35700	32600	---	---	---	---	42400	575	41700	1840
14	44400	42100	39400	34100	---	---	---	---	6810	718	46900	2180
15	44000	42100	45700	37500	---	---	---	---	45800	1200	48100	4210
16	44500	42200	46400	38800	---	---	---	---	47900	28600	21300	381
17	44700	43200	47900	41300	---	---	48800	41600	48000	35300	904	400
18	45500	41900	48600	41600	---	---	49100	40500	47900	42500	32400	904
19	46600	42900	48700	41800	---	---	49200	41600	48200	41100	45600	1240
20	47100	44400	49000	42600	---	---	48700	40400	48200	34700	46600	1360
21	48200	45500	49200	43300	---	---	47800	38300	48300	32200	46600	1440
22	47600	44000	48800	42600	---	---	43600	37800	48100	30900	46600	1520
23	47500	44200	49100	42000	---	---	41100	37200	48300	30900	46400	1540
24	46700	42600	47800	41100	---	---	45700	38500	48700	28600	44700	1540
25	47500	42900	46700	40500	---	---	47800	40300	47200	544	29300	1540
26	47000	42300	45400	40100	---	---	47800	42500	901	598	35000	1570
27	45700	44100	44000	41500	---	---	47900	42000	968	706	45300	1520
28	44900	41800	44800	42100	---	---	48800	41500	1140	878	47500	1840
29	42200	39800	---	---	---	---	48900	43100	---	---	47500	2020
30	43600	39600	---	---	---	---	49100	42900	---	---	47400	2100
31	46000	42200	---	---	---	---	49200	41900	---	---	47700	2350
MONTH	49300	39600	---	---	---	---	---	---	49100	544	48100	381
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	47500	2240	48600	1910	49900	3330	50600	8730	50000	24000	48700	39000
2	47100	2140	48900	1870	49700	2960	50400	9360	49800	31100	48300	35300
3	48100	2160	48800	1800	49700	3190	50400	5460	49200	30700	47500	32500
4	46700	1910	48700	1730	49600	2780	50300	11700	49200	36700	48000	35400
5	48300	1840	48700	1730	49500	2470	50200	10300	49300	31500	49800	38800
6	48100	1970	48700	1780	49000	2030	50400	17800	49000	29300	50000	41700
7	47700	1820	47900	1760	44500	2030	50300	16200	49000	29900	50100	42100
8	45000	1790	42300	1580	48900	2940	50500	16000	49300	29700	50100	43500
9	40100	1750	24100	1580	49400	10000	50600	17300	49400	28200	50100	39800
10	35900	2020	43900	1760	49700	11000	50700	18400	49400	31400	50100	42500
11	44100	2290	47600	2020	50100	3660	50600	16800	49400	33900	49900	41800
12	47300	2470	48400	2330	50200	3620	50300	17600	49500	33600	49700	42700
13	48100	3070	49200	2630	50100	3200	50000	15900	49400	33900	49400	42300
14	48300	1770	49400	2460	50000	3490	49900	18000	50100	37100	49100	42000
15	2920	617	49400	2550	50000	3550	49700	18700	50100	39000	49000	39900
16	47700	853	49500	2800	49900	4060	49800	18000	49500	40100	48200	40400
17	48200	1310	49400	2890	49900	3920	49800	19400	48600	38600	47800	39700
18	49100	1480	49400	2800	49900	5370	49800	19200	46500	37100	45400	41100
19	49000	1610	49500	2670	49400	4810	49300	13600	47500	32200	47100	41800
20	49000	1640	49500	2400	49100	5960	48600	11300	44700	37100	49200	42200
21	48800	1690	48900	3090	49300	4190	48300	13200	45700	35800	50200	44600
22	45500	1580	47400	2730	49600	3220	49100	7220	49000	35800	50400	44500
23	43600	1620	45400	2710	50600	2940	49900	16300	49500	37200	50500	44800
24	41900	1760	48500	2660	49300	3170	50600	15100	49600	36600	50600	44600
25	45600	1860	48800	2960	49700	3260	50600	18200	49800	36800	50700	44600
26	47900	1870	49500	2790	50100	3210	50400	17400	49800	35700	50800	44400
27	48200	1950	49600	4080	50300	3520	50200	18000	49700	36400	50800	44600
28	48200	2020	49600	3770	50400	3570	50200	18400	49700	38000	51200	44300
29	49000	2070	49500	5000	50600	3820	50100	18500	49500	37200	51400	46100
30	48500	1960	49900	3230	50600	5300	50100	19100	49400	35700	51500	44700
31	---	---	49900	3650	---	---	50000	18000	48800	35900	---	---
MONTH	49100	617	49900	1580	50600	2030	50700	5460	50100	24000	51500	32500

11046050 SANTA MARGARITA RIVER AT MOUTH, NEAR OCEANSIDE, CA—Continued

TEMPERATURE, WATER, DEGREES C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.5	21.1	18.7	17.0	---	---	---	---	16.7	14.5	16.3	13.1
2	21.3	19.7	18.7	16.6	---	---	---	---	17.5	14.8	16.7	13.3
3	21.6	19.7	17.8	15.1	---	---	---	---	16.4	12.5	16.0	12.8
4	21.4	18.6	17.7	15.3	---	---	---	---	15.1	11.7	14.9	12.6
5	20.9	18.1	17.7	15.8	---	---	---	---	14.8	12.6	16.0	12.2
6	21.3	18.0	17.5	14.9	---	---	---	---	14.4	11.3	16.4	12.6
7	20.1	18.1	17.1	15.2	---	---	---	---	14.0	12.4	16.4	12.7
8	21.3	19.3	16.8	16.0	---	---	---	---	15.5	13.3	17.5	13.6
9	22.3	20.0	17.8	16.4	---	---	---	---	15.2	12.6	17.6	14.8
10	21.8	20.1	19.2	17.5	---	---	---	---	14.5	12.5	18.0	15.0
11	22.4	21.0	19.3	17.6	---	---	---	---	---	---	17.9	15.0
12	21.8	21.1	19.2	17.5	---	---	---	---	14.7	13.5	19.0	15.8
13	21.4	20.6	18.3	16.8	---	---	---	---	15.4	13.9	18.6	16.1
14	21.2	20.7	17.9	16.0	---	---	---	---	16.7	14.7	19.8	15.8
15	21.0	20.1	17.4	15.4	---	---	---	---	16.5	14.6	17.8	15.3
16	20.5	19.1	16.8	14.2	---	---	---	---	16.4	15.3	15.5	14.5
17	19.1	18.4	16.2	13.2	---	---	14.7	13.0	16.4	15.4	16.6	13.8
18	18.8	18.2	15.8	13.0	---	---	14.7	13.0	16.1	15.1	17.1	12.8
19	19.0	16.8	15.7	13.2	---	---	14.9	13.2	16.0	15.3	18.4	12.9
20	18.5	17.6	16.5	14.8	---	---	15.6	13.9	16.5	15.4	18.2	14.2
21	18.4	17.5	16.5	14.9	---	---	16.1	13.9	17.6	15.2	19.2	14.0
22	18.9	17.7	16.5	13.7	---	---	16.0	15.1	17.8	15.4	19.8	14.4
23	19.2	17.4	15.9	15.0	---	---	16.1	15.2	17.7	15.5	20.0	14.7
24	18.8	17.5	15.6	13.1	---	---	16.3	14.2	17.8	15.7	19.4	16.1
25	18.5	17.0	16.4	14.6	---	---	16.7	14.2	17.2	12.3	20.0	13.9
26	17.6	16.4	16.1	14.8	---	---	16.9	14.2	14.9	12.2	20.5	15.5
27	18.2	16.9	16.0	15.2	---	---	16.2	14.1	14.6	12.3	20.4	15.7
28	19.5	17.9	15.4	14.1	---	---	16.0	13.9	16.1	12.1	19.5	15.2
29	19.3	18.7	---	---	---	---	17.1	14.7	---	---	19.1	13.4
30	19.6	18.6	---	---	---	---	16.9	14.4	---	---	19.4	13.8
31	19.0	17.6	---	---	---	---	16.5	14.3	---	---	20.7	13.9
MONTH	22.5	16.4	---	---	---	---	---	---	---	---	20.7	12.2
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	19.6	14.7	21.1	15.8	24.9	18.4	28.2	19.9	29.0	20.1	25.1	21.8
2	20.5	15.8	22.0	16.0	21.5	18.4	28.6	20.7	27.8	19.8	24.6	22.9
3	19.0	14.5	21.8	16.1	20.7	18.4	29.7	21.1	26.6	19.8	25.8	22.4
4	19.0	14.2	22.5	16.5	22.3	18.3	28.5	20.8	26.8	22.9	26.4	21.2
5	19.3	14.9	21.7	16.5	22.6	18.6	28.9	21.9	28.4	22.6	27.5	21.2
6	19.3	13.8	22.3	16.6	22.3	18.6	26.6	21.8	28.6	22.1	27.9	21.6
7	20.0	14.6	20.9	16.8	22.2	18.3	28.6	22.1	27.9	21.7	28.8	21.6
8	21.7	15.3	21.9	16.4	21.4	18.0	25.1	22.9	28.8	21.1	27.5	21.6
9	21.7	16.1	21.5	16.0	20.4	17.7	25.6	22.1	29.3	21.2	26.7	21.6
10	21.9	17.1	22.2	15.2	23.5	17.7	25.1	21.9	30.0	21.1	27.0	21.5
11	22.4	16.2	23.2	14.8	26.3	18.6	29.3	21.9	26.9	20.5	26.7	21.5
12	23.6	15.8	23.2	15.1	25.3	18.4	28.6	21.8	29.1	20.8	26.1	21.0
13	24.0	15.4	21.0	16.2	26.7	18.8	29.3	22.2	28.3	20.0	26.3	21.0
14	19.4	15.4	22.1	15.9	26.2	18.5	27.6	22.3	27.6	20.1	24.5	21.9
15	17.5	14.4	23.7	15.4	24.8	17.6	25.7	21.6	25.9	20.6	24.0	21.8
16	18.9	13.7	24.2	15.6	22.5	18.1	26.9	21.6	28.6	21.2	25.4	22.3
17	18.2	14.1	22.1	16.1	23.2	18.1	26.4	21.6	28.1	22.8	25.2	22.9
18	19.1	14.4	25.4	16.7	21.9	18.8	23.9	21.7	28.1	24.8	25.4	22.7
19	19.5	14.9	25.4	16.6	19.9	18.4	28.4	21.9	27.7	24.6	25.8	23.0
20	19.2	15.7	26.3	16.6	24.1	17.8	28.9	23.7	29.2	25.4	25.7	22.6
21	19.0	16.3	25.3	17.0	22.2	18.6	27.7	23.8	28.5	26.0	24.0	21.0
22	18.9	14.9	24.4	17.8	24.6	18.8	24.6	21.6	26.6	23.2	22.7	18.8
23	19.9	15.0	22.9	18.2	26.0	18.4	27.4	21.6	27.7	20.3	21.7	16.8
24	20.9	15.3	21.4	18.1	26.1	18.4	26.9	23.3	27.9	19.7	23.9	18.4
25	20.9	14.7	23.8	17.4	26.5	18.2	26.6	22.9	27.7	18.2	24.6	18.0
26	21.1	14.2	24.8	18.3	26.1	18.8	26.1	22.6	27.7	17.9	22.1	17.7
27	21.2	14.2	23.4	18.4	26.4	20.3	28.2	22.2	27.1	19.3	21.6	18.5
28	21.7	15.5	24.2	18.0	26.7	20.5	26.2	21.2	27.9	20.1	21.0	19.4
29	21.7	14.9	22.6	18.0	27.3	20.3	29.8	21.8	27.5	20.4	21.3	19.1
30	21.2	15.4	22.9	18.4	27.7	19.4	30.1	21.8	26.1	21.2	21.2	19.2
31	---	---	23.2	18.4	---	---	29.8	21.9	26.7	21.5	---	---
MONTH	24.0	13.7	26.3	14.8	27.7	17.6	30.1	19.9	30.0	17.9	28.8	16.8

## 331346117243401 SANTA MARGARITA RIVER ESTUARY NEAR OCEANSIDE, CA

LOCATION.—Lat 33° 13'46", long 117° 24'34", in SE 1/4 SW 1/4 sec.9, T.11 S., R.5 W., San Diego County, Hydrologic Unit 18070302, on tidal flat of the Santa Margarita River, on Camp Joseph H. Pendleton Naval Reservation, 0.6 mi west of Interstate Highway 5, and 3.0 mi northwest of Oceanside.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—November 1993 to current year.

DISSOLVED OXYGEN: November 1993 to current year.

pH: November 1993 to current year.

SPECIFIC CONDUCTANCE: November 1993 to current year.

WATER TEMPERATURE: November 1993 to current year.

PERIOD OF DAILY RECORD.—November 1993 to current year.

DISSOLVED OXYGEN: November 1993 to current year.

pH: November 1993 to current year.

SPECIFIC CONDUCTANCE: November 1993 to current year.

WATER TEMPERATURE: November 1993 to current year.

INSTRUMENTATION.—Water-quality monitor since November 1993.

REMARKS.—Dissolved oxygen records rated poor. pH records rated good except for Mar. 12–20, which are poor. Specific conductance records rated good except for Nov. 1–14, July 17 to Sept. 3, which are poor. Temperature records rated good. Interruptions in record at times in some years due to malfunction of recording equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.—

DISSOLVED OXYGEN: Maximum recorded, 21.1 mg/L, Apr. 18, 1997; minimum recorded, 0.0 mg/L, many days during period of record.

pH: Maximum recorded, 9.9 standard units, Jan. 17, 2000; minimum recorded, 6.0 standard units, Nov. 23, 1994, Apr. 24, 1995.

SPECIFIC CONDUCTANCE: Maximum recorded, 58,700 microsiemens, July 2, 1998; minimum recorded, 236 microsiemens, Feb. 25, 1998.

WATER TEMPERATURE: Maximum recorded, 35.0° C, Aug. 14, 1996; minimum recorded, 2.0° C, Nov. 19, 21, 1994.

EXTREMES FOR CURRENT YEAR.—

DISSOLVED OXYGEN: Maximum recorded, 16.4 mg/L, June 8; minimum recorded, <0.2 mg/L, May 26, June 3.

pH: Maximum recorded, 8.9 standard units, May 7, 9, 10, July 29; minimum recorded, 7.1 standard units, Mar. 18.

SPECIFIC CONDUCTANCE: Maximum recorded, 56,600 microsiemens, Aug. 11; minimum recorded, 1,680 microsiemens, Mar. 17.

WATER TEMPERATURE: Maximum recorded, 32.9° C, July 30; minimum recorded, 8.0° C, Feb. 6.

## DISSOLVED OXYGEN, MG/L, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	9.4	8.0	---	---	8.7	6.4	---	---	7.2	3.9
2	---	---	9.7	8.2	---	---	9.0	6.3	---	---	8.4	3.6
3	---	---	10.0	8.5	---	---	8.4	3.6	---	---	9.0	4.6
4	---	---	9.9	8.5	---	---	8.8	2.6	---	---	9.3	4.6
5	---	---	10.4	8.7	---	---	8.6	2.7	---	---	9.6	5.2
6	---	---	10.6	9.1	---	---	9.3	5.1	---	---	9.2	5.2
7	---	---	10.9	9.4	---	---	9.9	5.4	---	---	9.8	5.2
8	---	---	9.4	8.6	---	---	10.4	5.3	---	---	10.8	4.9
9	8.6	6.6	9.0	8.2	---	---	10.6	6.1	---	---	10.3	4.8
10	8.2	6.4	8.7	7.9	---	---	10.3	6.4	---	---	9.8	4.5
11	8.2	6.5	8.9	8.1	---	---	11.4	6.4	---	---	11.6	4.4
12	8.3	6.5	---	---	---	---	10.6	6.3	---	---	11.8	4.4
13	8.6	6.9	---	---	---	---	10.3	4.9	---	---	11.1	5.6
14	8.3	6.7	---	---	---	---	10.7	6.0	---	---	9.6	5.7
15	8.4	6.7	9.9	5.1	---	---	---	---	7.7	3.3	8.0	5.1
16	8.1	6.9	10.0	6.7	---	---	9.7	6.8	9.4	4.4	8.3	5.4
17	8.4	7.2	10.2	6.0	6.7	5.3	9.3	7.2	8.9	4.7	9.2	6.5
18	8.5	7.4	9.0	6.3	7.4	5.4	9.4	6.6	10.2	5.0	8.9	5.4
19	9.0	7.5	9.0	5.8	8.0	6.1	8.3	5.8	11.2	4.7	9.3	6.0
20	8.9	7.6	9.0	4.5	7.0	4.9	8.0	4.7	8.9	5.3	9.2	6.1
21	8.7	7.6	8.3	5.4	6.3	4.3	8.0	4.1	9.7	5.3	8.7	5.8
22	8.6	7.2	8.0	3.8	6.9	4.0	7.4	2.7	9.4	5.1	9.2	6.0
23	8.8	7.2	7.6	3.8	8.6	4.8	6.8	3.1	9.2	5.2	8.6	5.1
24	8.9	7.3	8.5	3.1	7.8	6.0	7.6	4.7	8.4	4.8	8.1	4.6
25	9.1	7.5	8.6	3.1	9.1	6.6	8.4	5.4	7.5	4.6	9.0	4.8
26	8.9	7.5	8.1	3.1	9.6	6.9	8.8	5.4	7.7	2.8	10.9	4.7
27	9.2	7.7	---	---	8.4	6.9	9.0	5.6	8.5	3.5	13.6	4.7
28	9.6	8.1	---	---	9.5	6.2	10.1	6.0	8.3	3.6	11.2	5.0
29	9.2	7.9	---	---	7.7	5.5	8.8	6.0	---	---	10.7	5.0
30	9.3	7.9	---	---	8.6	5.5	8.8	5.0	---	---	11.2	5.9
31	9.6	8.2	---	---	8.5	6.0	9.1	4.8	---	---	14.9	5.6
MONTH	---	---	---	---	---	---	---	---	---	---	14.9	3.6



## 331346117243401 SANTA MARGARITA RIVER ESTUARY NEAR OCEANSIDE, CA—Continued

## DISSOLVED OXYGEN, MG/L, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.7	4.6	---	---	14.4	1.9	13.8	1.5	---	---	---	---
2	13.1	4.6	---	---	14.1	1.0	13.6	0.9	---	---	---	---
3	14.2	5.7	---	---	14.4	<0.2	11.0	0.3	---	---	---	---
4	16.2	5.0	---	---	15.0	2.9	11.4	1.0	---	---	8.6	1.8
5	13.0	6.4	---	---	15.4	3.4	13.3	1.0	---	---	8.8	1.1
6	15.5	5.9	---	---	13.9	5.4	10.4	0.9	---	---	10.0	1.6
7	15.8	4.7	---	---	13.9	2.6	9.6	0.8	---	---	11.0	1.6
8	15.9	2.8	---	---	16.4	2.7	---	---	---	---	12.1	1.3
9	12.9	2.9	---	---	14.1	5.0	---	---	---	---	11.3	1.1
10	14.4	3.0	---	---	---	---	---	---	---	---	10.4	1.4
11	14.3	2.0	---	---	---	---	---	---	---	---	9.3	1.4
12	15.7	2.0	---	---	---	---	---	---	13.1	1.4	---	---
13	11.8	2.8	---	---	---	---	---	---	13.0	1.6	---	---
14	7.4	2.8	---	---	---	---	---	---	11.8	2.0	---	---
15	11.0	4.6	---	---	---	---	---	---	8.9	1.2	---	---
16	11.4	2.7	13.4	1.9	---	---	---	---	9.2	2.2	---	---
17	9.7	5.1	13.6	0.5	---	---	---	---	7.6	1.8	---	---
18	11.5	5.1	13.6	0.8	---	---	11.0	0.3	8.6	2.5	---	---
19	11.0	4.9	13.0	1.5	---	---	11.1	0.3	---	---	---	---
20	14.3	3.7	14.6	2.5	14.2	1.9	8.7	1.4	---	---	8.4	2.5
21	14.2	4.6	14.1	1.9	10.4	0.8	6.5	0.9	---	---	7.8	1.9
22	14.9	4.7	15.5	1.0	13.6	1.1	7.1	1.6	---	---	8.7	1.8
23	14.2	4.1	14.8	2.3	13.9	0.9	---	---	---	---	6.8	2.4
24	14.4	2.8	14.9	1.8	13.2	1.8	---	---	---	---	9.4	1.8
25	13.9	4.3	15.8	2.6	12.6	0.5	---	---	---	---	8.9	1.9
26	15.3	3.0	13.7	<0.2	11.1	0.8	---	---	---	---	7.3	1.6
27	12.8	0.5	15.0	0.8	10.0	1.0	---	---	---	---	7.7	1.7
28	13.0	0.3	13.9	2.4	9.4	1.0	---	---	---	---	6.4	1.2
29	---	---	12.0	0.8	13.2	0.5	---	---	---	---	5.3	1.0
30	---	---	14.5	0.6	13.8	0.5	---	---	---	---	5.0	1.9
31	---	---	13.3	0.6	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

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

## SANTA MARGARITA RIVER BASIN

331346117243401 SANTA MARGARITA RIVER ESTUARY NEAR OCEANSIDE, CA—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.5	8.1	7.8	7.7	8.1	7.8	8.0	8.0	8.3	8.1	7.7	7.2
2	8.5	8.2	7.8	7.7	8.0	7.8	8.0	7.9	8.3	8.0	7.9	7.3
3	8.5	8.2	7.8	7.7	8.0	7.8	8.0	7.8	8.4	8.0	7.8	7.4
4	8.4	8.1	7.8	7.7	8.0	7.8	8.0	7.6	8.6	8.1	7.8	7.4
5	8.3	8.0	7.8	7.7	8.0	7.7	8.0	7.6	8.7	8.3	7.8	7.4
6	8.2	8.0	7.8	7.8	8.0	7.7	8.0	7.8	8.6	8.5	7.7	7.5
7	8.2	7.8	7.8	7.8	7.9	7.7	8.0	7.8	8.6	8.4	7.7	7.4
8	8.1	7.7	7.8	7.6	8.0	7.7	8.0	7.8	8.6	8.4	7.7	7.5
9	7.8	7.7	7.7	7.5	8.0	7.7	8.1	7.9	8.7	8.5	8.0	7.5
10	7.7	7.6	7.6	7.4	8.0	7.8	8.1	7.9	8.7	8.5	8.0	7.6
11	7.7	7.6	7.5	7.4	8.1	7.9	8.2	8.0	---	---	8.1	7.6
12	7.7	7.7	7.5	7.5	8.1	8.0	8.2	8.0	8.0	7.7	8.7	7.7
13	7.8	7.7	7.5	7.5	8.2	8.0	8.2	8.0	7.7	7.5	8.6	8.2
14	7.8	7.7	8.0	7.5	8.2	8.0	8.2	8.0	7.8	7.4	8.3	7.4
15	7.8	7.6	8.1	7.9	8.1	7.9	---	---	7.9	7.3	7.8	7.6
16	7.8	7.6	8.2	8.0	8.0	7.9	8.3	8.2	8.0	7.6	7.6	7.3
17	7.8	7.7	8.2	8.0	7.9	7.7	8.3	8.2	7.9	7.6	7.8	7.3
18	7.8	7.7	8.1	8.0	7.9	7.8	8.3	8.2	8.0	7.6	7.7	7.1
19	7.8	7.7	8.1	8.0	8.0	7.8	8.2	8.1	8.0	7.6	7.8	7.4
20	7.8	7.7	8.0	7.9	7.9	7.8	8.2	8.0	8.0	7.6	8.1	7.5
21	7.8	7.7	8.0	7.9	7.9	7.7	8.2	7.9	7.9	7.6	8.1	7.8
22	7.7	7.6	8.0	7.8	8.0	7.7	8.3	7.9	7.9	7.6	8.1	7.8
23	7.8	7.7	7.9	7.7	8.0	7.7	8.3	8.0	7.9	7.7	8.1	7.7
24	7.8	7.7	8.0	7.6	8.0	7.9	8.3	8.1	7.9	7.7	8.1	7.7
25	7.8	7.7	8.0	7.6	8.1	7.9	8.3	8.2	7.8	7.4	8.0	7.7
26	7.8	7.7	8.0	7.7	8.2	8.0	8.3	8.2	7.4	7.2	8.2	7.8
27	7.8	7.7	8.0	7.8	8.1	8.1	8.4	8.2	7.5	7.2	8.2	7.9
28	7.8	7.7	8.1	7.8	8.2	8.0	8.5	8.3	7.9	7.2	8.2	7.9
29	7.8	7.7	8.1	7.8	8.1	7.9	8.4	8.2	---	---	8.2	7.9
30	7.8	7.7	8.1	7.8	8.1	8.0	8.3	8.2	---	---	8.2	7.9
31	7.8	7.7	---	---	8.1	8.0	8.3	8.1	---	---	8.2	7.8
MONTH	8.5	7.6	8.2	7.4	8.2	7.7	---	---	---	---	8.7	7.1
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.1	7.8	8.8	7.8	8.3	7.4	8.4	7.4	8.8	7.8	8.4	7.7
2	8.2	7.8	8.7	7.8	8.2	7.3	8.4	7.4	8.8	7.9	8.4	7.9
3	8.4	7.9	8.5	7.9	8.1	7.3	8.5	7.5	8.7	7.9	8.2	7.8
4	8.4	7.9	8.7	7.7	8.4	7.3	8.4	7.7	8.5	8.0	8.2	7.7
5	8.5	7.9	8.8	7.7	8.3	7.5	8.3	7.6	8.5	8.1	8.2	7.6
6	8.5	8.0	8.8	7.6	8.6	7.7	8.2	7.6	8.4	7.9	8.3	7.6
7	8.7	8.0	8.9	7.9	8.2	7.8	8.2	7.6	8.3	7.8	8.5	7.6
8	8.6	8.0	8.8	7.8	8.4	7.9	8.0	7.5	8.2	7.5	8.5	7.6
9	8.6	8.1	8.9	8.0	8.2	7.6	8.0	7.4	8.3	7.4	8.5	7.7
10	8.5	8.1	8.9	8.0	8.7	7.4	8.0	7.3	8.4	7.4	8.5	7.7
11	8.6	8.0	8.8	7.8	8.5	7.7	8.0	7.3	8.4	7.3	8.4	7.7
12	8.7	8.0	8.8	7.8	8.4	7.6	8.2	7.3	8.5	7.4	8.3	7.5
13	8.5	7.9	8.7	7.7	8.6	7.5	8.1	7.2	8.5	7.6	8.3	7.5
14	8.3	7.5	8.8	7.6	8.4	7.4	8.3	7.2	8.4	7.6	8.2	7.5
15	8.4	7.4	8.8	7.5	8.4	7.4	8.1	7.3	8.4	7.7	8.2	7.5
16	7.9	7.2	8.7	7.6	8.3	7.3	8.2	7.4	8.5	7.7	8.3	7.7
17	7.8	7.5	8.5	7.3	8.4	7.3	8.4	7.3	8.5	7.8	8.2	7.8
18	8.0	7.6	8.2	7.4	8.3	7.4	8.4	7.6	8.5	8.0	8.3	7.6
19	8.4	7.8	8.7	7.6	8.1	7.5	8.5	7.5	8.5	8.0	8.3	7.7
20	8.4	7.6	8.5	7.5	8.3	7.5	8.3	7.6	8.4	8.0	8.3	7.8
21	8.2	7.8	8.6	7.8	8.2	7.7	8.0	7.6	8.4	7.9	8.3	7.8
22	8.4	7.9	8.6	7.8	8.3	7.6	7.9	7.5	8.3	7.9	8.3	7.7
23	8.4	7.8	8.6	7.8	8.3	7.6	8.1	7.3	8.3	7.7	8.1	7.7
24	8.8	7.8	8.7	7.7	8.2	7.5	8.1	7.5	8.3	7.7	8.4	7.5
25	8.8	7.8	8.4	7.6	8.3	7.5	8.2	7.5	8.3	7.6	8.4	7.6
26	8.7	7.8	8.4	7.6	8.2	7.3	8.4	7.6	8.4	7.5	8.2	7.5
27	8.6	7.8	8.4	7.4	8.2	7.5	8.6	7.6	8.5	7.6	8.2	7.5
28	8.8	7.8	8.2	7.4	8.2	7.4	8.6	7.7	8.7	7.7	8.0	7.5
29	8.6	7.8	8.3	7.2	8.4	7.4	8.9	7.6	8.6	7.8	8.0	7.4
30	8.7	7.8	8.2	7.2	8.4	7.3	8.8	7.7	8.6	7.9	7.9	7.4
31	---	---	8.5	7.3	---	---	8.8	7.6	8.5	7.9	---	---
MONTH	8.8	7.2	8.9	7.2	8.7	7.3	8.9	7.2	8.8	7.3	8.5	7.4

## 331346117243401 SANTA MARGARITA RIVER ESTUARY NEAR OCEANSIDE, CA—Continued

## SPECIFIC CONDUCTANCE, MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH					
1	49100	46600	48800	48100	48800	48100	49900	49200	50400	49200	44600	13600				
2	48300	46700	49100	48400	49500	48400	50300	49500	50200	49400	46000	39200				
3	48200	47200	49400	48500	49900	49200	50600	49800	50300	49000	46500	44200				
4	49300	48100	50100	48900	50000	49300	50700	49700	50500	48900	47400	45300				
5	49500	48700	50300	49000	50300	49400	51400	49400	50500	48500	47700	45600				
6	49800	49300	50800	49200	50700	49500	50900	49300	50800	48600	48000	41600				
7	50200	49000	51500	50100	50800	49900	50800	49600	49500	48300	48200	42200				
8	50000	49200	51900	46700	50900	49700	50600	50200	48700	47800	47700	47000				
9	50000	48100	52400	50100	51000	49400	50500	49700	48900	47000	47900	47400				
10	49500	48200	52800	49800	51000	50500	50100	48700	49300	47800	47700	47200				
11	49200	48200	52000	49800	50800	50200	48900	48000	48800	44300	47500	44600				
12	49000	48300	49800	47800	50600	50000	48700	47400	47800	38900	45200	42400				
13	48300	47400	47800	46200	50700	50000	47700	46500	43800	27000	45900	42500				
14	48200	46600	46200	44900	50600	49800	46700	45300	40900	12200	48400	43500				
15	47700	46900	47500	45100	50600	49500	---	---	47100	26200	48500	22300				
16	48300	47200	47500	46600	---	---	48800	44300	48300	41800	44200	1820				
17	48800	47700	48100	46900	49200	45700	49400	46400	48500	42600	13000	1680				
18	48800	47700	48600	47200	48500	47900	49700	48300	47500	45300	37400	12100				
19	48900	48100	48900	47700	48700	48200	49700	49000	47900	45200	45200	34900				
20	49200	48600	---	---	48800	46800	49700	48600	48900	46200	45800	32200				
21	49400	48800	49100	48400	48700	46800	48900	48400	47800	45100	46000	36400				
22	49500	48400	49500	48800	48800	46500	48900	48000	48000	45500	46400	23800				
23	49000	48200	49500	48300	48400	47100	48700	48200	48400	45500	44600	34800				
24	48800	47200	49500	49000	48200	47300	48500	47500	48700	42200	42800	30700				
25	48500	46900	49400	48200	47600	47000	48700	47100	45900	12700	37500	25100				
26	48100	47100	49100	47600	47400	47100	48600	47900	28200	5240	40800	27400				
27	47900	47300	49100	48100	47500	47000	48900	48000	21000	2460	47500	34800				
28	47800	47100	48300	47700	47900	46500	49200	48600	16500	3070	48300	46200				
29	47300	45600	48300	47700	49000	46900	49600	49000	---	---	49500	47900				
30	48100	46100	48200	47500	48900	47900	49800	49100	---	---	50200	48500				
31	48600	47500	---	---	49500	48600	50000	49300	---	---	50300	45900				
MONTH	50200	45600	---	---	---	---	---	---	50800	2460	50300	1680				
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER					
1	50800	47700	51700	47900	46200	43400	50300	48600	52200	49100	50500	48900				
2	51000	48500	51700	45900	46300	42500	50300	48800	51500	49300	50300	48600				
3	50900	46900	49900	42700	45400	38600	51200	49400	51600	49600	50000	48600				
4	50800	49300	47600	42900	44800	39600	51700	49900	51700	50300	50100	48800				
5	50500	44600	46000	39700	44600	39600	51000	49400	51800	48400	50000	48700				
6	49700	43200	44800	25200	43700	36000	50800	49200	54600	49400	50500	49200				
7	48300	37400	42300	25200	42800	38900	50500	48000	55100	53600	50900	49400				
8	46100	37400	37200	28600	40600	32600	50300	47900	55000	53200	51800	49000				
9	43400	26400	41500	29700	39700	33200	50400	48800	56000	54000	52100	49400				
10	40500	37500	45600	36700	45600	34500	50400	48500	56400	53900	52000	49100				
11	46800	37500	46900	44900	48200	38800	50600	47600	56600	49900	51400	49100				
12	48600	41700	47600	46000	48600	42600	51100	49200	52400	49600	50700	48500				
13	49000	29800	48600	46500	49800	44700	51100	47300	52500	50900	51200	48800				
14	49000	4490	48600	46100	50300	48800	51200	48900	52500	49500	50300	49000				
15	39800	3410	49000	44500	50500	48500	51300	49500	52500	50500	50200	48900				
16	41400	6180	47900	46100	50400	48300	50900	48500	52400	49700	50300	48900				
17	47200	38400	48500	46400	50300	47700	51900	48800	52400	50400	49800	48000				
18	47700	42100	47800	44900	49900	45900	50400	48400	52200	50200	49800	48800				
19	48300	44200	48100	44100	49300	48000	52100	49700	52100	50300	50900	48500				
20	48400	43600	46800	43600	49400	47000	52200	50600	52100	49700	51000	49900				
21	47600	33200	46600	43000	49400	47500	52100	50800	51600	48800	51000	49800				
22	45300	32300	46400	41700	49700	46000	51600	44600	51100	50400	51300	49500				
23	46200	33300	45700	41500	49300	47800	50100	47100	51100	49100	50700	49200				
24	48200	44000	46100	41900	49800	47000	49300	46200	51000	49500	51400	49500				
25	48700	43800	47000	43600	49800	47600	49400	46800	50800	49100	51600	49600				
26	49300	47500	47100	43900	49800	47200	49700	48600	51000	48900	50900	49500				
27	50400	48800	47000	42800	50000	46400	49700	48000	50700	48500	50800	49400				
28	50900	44800	46600	39600	50100	46900	49900	47800	51500	48900	50600	49600				
29	50400	48400	46000	41400	49900	48000	50400	48000	51700	49200	50600	49600				
30	51100	48300	45500	42700	50300	47000	50600	48500	51200	48900	50400	48800				
31	---	---	46300	42600	---	---	51400	48600	50700	49400	---	---				
MONTH	51100	3410	51700	25200	50500	32600	52200	44600	56600	48400	52100	48000				

## SANTA MARGARITA RIVER BASIN

331346117243401 SANTA MARGARITA RIVER ESTUARY NEAR OCEANSIDE, CA—Continued

TEMPERATURE, WATER, DEGREES C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.5	19.8	16.9	14.9	17.2	14.2	14.4	11.4	18.3	14.6	17.6	14.7
2	22.1	17.6	16.3	14.1	16.8	13.9	15.6	11.3	18.5	15.3	17.4	14.8
3	23.0	17.6	15.4	12.8	17.0	13.4	16.2	11.6	16.5	11.9	16.7	14.1
4	23.3	17.6	15.8	13.8	16.8	12.9	15.6	11.2	14.5	9.8	16.6	14.4
5	22.6	16.9	14.9	12.3	16.4	12.9	15.5	10.4	15.5	9.3	17.6	13.7
6	22.9	17.2	14.4	11.6	16.4	12.1	14.3	11.2	13.5	8.0	18.4	14.0
7	23.4	17.2	13.7	11.3	16.1	13.6	15.7	12.5	14.4	9.3	19.4	13.3
8	21.6	17.2	14.8	13.2	16.1	12.3	16.1	13.4	15.7	11.5	22.1	14.8
9	19.1	15.3	16.4	14.8	15.4	13.1	16.6	14.0	16.6	9.6	21.5	15.5
10	19.4	16.8	17.1	15.6	15.5	12.4	15.6	13.6	13.6	9.7	22.3	16.3
11	19.3	17.0	16.0	14.5	16.6	12.7	15.2	13.2	15.7	12.9	22.3	17.2
12	18.1	16.1	16.4	14.2	15.8	12.2	15.6	13.6	15.1	13.6	24.3	19.8
13	18.4	15.9	15.3	13.2	15.1	11.6	15.2	13.8	15.6	14.6	22.3	17.9
14	19.1	17.1	18.2	12.4	14.2	11.8	15.4	13.2	18.2	15.2	21.3	16.2
15	18.2	16.9	18.0	15.4	16.5	13.0	---	---	17.1	15.1	17.5	15.4
16	17.3	16.6	17.9	14.1	16.6	14.2	14.7	11.9	17.7	15.7	19.1	14.2
17	16.9	16.1	16.4	13.2	15.8	13.4	14.9	11.8	17.4	15.6	20.0	13.0
18	17.5	16.0	16.8	13.5	14.1	11.8	15.0	11.9	18.4	14.4	15.9	12.9
19	16.8	14.5	16.4	13.0	12.8	10.3	16.0	13.1	19.3	14.6	17.6	13.2
20	17.2	15.0	16.5	14.2	13.6	10.9	16.5	14.0	17.3	14.6	23.7	14.5
21	17.1	15.7	16.9	14.6	14.6	13.3	17.5	14.3	19.2	12.0	24.7	14.2
22	18.0	16.1	16.8	13.4	15.0	13.8	16.3	12.8	19.8	13.6	24.7	15.2
23	18.0	15.8	16.2	14.0	14.8	11.6	16.0	13.5	19.0	16.0	23.8	15.5
24	17.8	15.9	16.3	12.7	13.9	10.4	16.0	12.2	19.3	16.0	21.9	16.2
25	17.2	15.3	16.9	13.4	13.1	9.8	16.3	14.3	17.6	14.5	24.2	15.7
26	16.8	15.4	15.8	12.1	13.4	9.6	17.3	14.6	17.2	13.0	26.8	15.9
27	17.1	14.8	15.2	13.2	12.7	10.1	16.6	13.6	16.9	12.5	24.1	16.5
28	16.1	13.4	14.3	12.2	14.4	11.0	16.2	13.6	20.1	12.9	21.7	14.6
29	16.4	15.0	15.6	13.7	15.1	12.9	17.9	14.8	---	---	24.0	13.2
30	16.8	14.8	17.6	14.4	14.2	11.1	17.1	14.5	---	---	24.1	13.4
31	15.9	14.3	---	---	14.2	11.5	18.0	14.3	---	---	26.3	13.7
MONTH	23.4	13.4	18.2	11.3	17.2	9.6	---	---	20.1	8.0	26.8	12.9
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	24.5	14.5	24.7	13.8	25.5	19.3	29.9	20.4	31.7	22.4	25.5	22.6
2	24.1	15.1	25.6	15.6	21.9	19.3	31.0	21.3	30.7	21.8	25.2	22.3
3	25.6	13.5	24.8	16.7	21.2	18.7	31.5	20.9	30.0	22.0	25.9	20.3
4	23.1	13.0	25.8	17.4	23.7	19.2	32.5	20.9	29.1	23.2	27.1	21.1
5	22.0	12.9	26.0	17.6	23.9	20.8	31.1	21.9	29.6	23.8	29.0	22.4
6	22.2	12.3	25.0	18.7	25.1	20.4	27.3	23.2	28.6	23.5	29.8	21.3
7	24.0	13.4	23.4	18.7	22.9	20.0	28.8	21.9	30.2	23.4	30.9	21.6
8	26.7	17.3	24.5	16.7	23.4	19.8	26.7	22.3	29.8	22.9	29.6	21.6
9	27.8	19.3	24.6	18.1	22.6	18.9	25.1	21.6	30.9	21.9	28.2	20.7
10	26.7	18.5	25.2	14.3	25.2	19.5	25.9	21.9	32.3	22.6	28.8	20.5
11	25.9	17.8	26.0	15.1	28.3	20.3	29.8	21.5	28.5	21.2	28.6	20.6
12	26.5	16.7	25.7	15.1	26.6	19.4	30.5	22.2	31.9	20.9	27.7	21.6
13	26.5	16.0	23.0	16.6	29.5	19.5	30.4	21.1	31.0	21.5	28.7	21.5
14	19.2	14.0	24.2	16.4	28.8	19.0	29.9	22.1	30.1	21.0	25.6	22.0
15	25.4	11.9	27.6	15.2	26.9	18.5	27.1	21.3	27.8	22.2	24.9	21.5
16	22.9	13.3	28.4	14.6	23.8	18.7	28.7	21.8	30.4	22.1	27.3	21.8
17	20.6	14.5	24.6	17.3	24.2	18.5	27.8	22.1	29.7	23.6	27.8	22.4
18	21.0	13.9	26.9	17.0	22.7	18.7	25.2	21.8	30.9	24.4	27.1	21.7
19	24.2	15.7	26.1	16.6	20.8	18.4	31.7	21.7	30.0	24.5	26.8	21.5
20	25.1	14.6	25.8	18.4	24.5	17.6	31.0	24.4	30.6	25.0	26.3	21.8
21	21.4	16.0	25.3	16.9	24.0	19.0	28.0	24.2	29.4	24.9	24.3	20.0
22	20.4	14.1	25.2	19.4	26.6	19.6	24.2	22.8	26.6	23.6	23.2	19.4
23	23.8	15.8	22.6	18.8	25.6	19.0	29.3	21.7	28.8	21.6	21.8	18.2
24	24.7	17.6	22.4	17.9	27.4	19.4	27.8	23.4	29.3	21.8	25.9	18.3
25	24.3	14.2	24.1	17.4	28.7	19.6	27.2	22.4	28.6	20.8	26.4	19.0
26	24.1	13.8	25.6	18.1	26.6	19.6	27.5	22.8	29.6	20.5	22.9	18.5
27	23.9	14.0	23.3	18.6	26.5	21.1	29.8	21.7	30.2	20.8	22.7	18.4
28	25.7	15.3	23.5	19.4	26.6	20.9	27.3	22.1	30.5	21.5	21.8	19.4
29	24.6	14.6	23.2	18.8	28.5	21.0	32.3	21.4	30.2	21.1	22.0	19.4
30	25.3	13.8	23.9	19.1	28.7	20.8	32.9	22.4	27.9	21.4	21.6	19.8
31	---	---	23.8	19.6	---	---	32.2	22.1	28.9	21.3	---	---
MONTH	27.8	11.9	28.4	13.8	29.5	17.6	32.9	20.4	32.3	20.5	30.9	18.2

## 11046062 COCKLEBURR CREEK LAGOON AT MOUTH, NEAR OCEANSIDE, CA

LOCATION.—Lat 33° 15'02", long 117° 25'53", in SW 1/4 NW 1/4 sec.5, T.11 S., R.5 W., San Diego County, Hydrologic Unit 18070301, at the mouth of unnamed creek draining Cockleburrr Canyon at the Pacific Ocean and 4.70 mi northwest of Oceanside.

DRAINAGE AREA.—1.60 mi<sup>2</sup>.

PERIOD OF RECORD.—June 2003 to September 2003.

DISSOLVED OXYGEN: June 2003 to September 2003.

pH: June 2003 to September 2003.

SPECIFIC CONDUCTANCE: June 2003 to September 2003.

WATER TEMPERATURE: June 2003 to September 2003.

PERIOD OF DAILY RECORD.—June 2003 to September 2003.

DISSOLVED OXYGEN: June 2003 to September 2003.

pH: June 2003 to September 2003.

SPECIFIC CONDUCTANCE: June 2003 to September 2003.

WATER TEMPERATURE: June 2003 to September 2003.

INSTRUMENTATION.—Water-quality monitor since June 2003.

REMARKS.—Dissolved oxygen records rated fair. pH records rated good. Specific conductance records rated good. Temperature records rated good. Interruption of records at times due to malfunction of recording equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.—

DISSOLVED OXYGEN: Maximum recorded, 17.4 mg/L, June 25, 2003; minimum recorded, 1.7 mg/L, Sept. 18, 2003.

pH: Maximum recorded, 8.4 standard units, Sept. 8, 12, 13, 19, 20, 2003; minimum recorded, 7.4 standard units, June 19–22, 2003.

SPECIFIC CONDUCTANCE: Maximum recorded, 23,600 microsiemens, June 14, 2003; minimum recorded, 2,510 microsiemens, July 6, 2003.

WATER TEMPERATURE: Maximum recorded, 24.5°C, July 20, Aug. 19, 2003; minimum recorded, 16.8°C, July 4, 2003.

EXTREMES FOR CURRENT YEAR.—

DISSOLVED OXYGEN: Maximum recorded, 17.4 mg/L, June 25; minimum recorded, 1.7 mg/L, Sept. 18.

pH: Maximum recorded, 8.4 standard units, Sept. 8, 12, 13, 19, 20; minimum recorded, 7.4 standard units, June 19–22.

SPECIFIC CONDUCTANCE: Maximum recorded, 23,600 microsiemens, June 14; minimum recorded, 2,510 microsiemens, July 6.

WATER TEMPERATURE: Maximum recorded, 24.5°C, July 20, Aug. 19; minimum recorded, 16.8°C, July 4.

## DISSOLVED OXYGEN, MG/L, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	10.8	8.3	10.4	7.9	12.2	5.4	---	---
2	---	---	---	---	10.0	6.6	14.0	7.9	11.2	4.7	---	---
3	---	---	---	---	9.1	6.5	13.2	8.1	11.2	4.5	---	---
4	---	---	---	---	10.9	6.0	11.6	7.8	10.6	5.6	---	---
5	---	---	---	---	11.5	6.5	9.8	6.5	12.4	4.3	15.0	9.3
6	---	---	---	---	11.2	6.8	7.8	5.5	13.0	5.2	14.1	8.5
7	---	---	---	---	10.3	6.6	9.4	4.3	12.4	4.7	14.6	7.4
8	---	---	---	---	10.9	6.0	10.0	5.0	11.1	4.1	14.7	4.8
9	---	---	---	---	9.7	5.9	10.9	5.4	11.8	4.8	8.3	3.3
10	---	---	---	---	---	---	9.3	6.0	12.7	5.9	8.0	2.8
11	---	---	---	---	---	---	12.8	5.8	10.9	6.1	7.7	2.4
12	---	---	---	---	---	---	13.2	6.1	12.2	5.7	7.5	2.2
13	---	---	---	---	---	---	13.5	5.7	12.4	5.4	7.2	2.2
14	---	---	---	---	15.1	9.2	12.7	5.4	---	---	10.2	2.1
15	---	---	---	---	15.4	11.6	11.3	6.0	---	---	9.8	5.1
16	---	---	---	---	15.3	11.3	9.9	7.0	---	---	8.8	3.5
17	---	---	---	---	15.3	10.3	8.7	6.1	---	---	11.8	1.9
18	---	---	---	---	12.9	8.8	7.9	5.3	---	---	9.4	1.7
19	---	---	---	---	10.0	7.3	9.4	5.2	---	---	14.8	2.9
20	---	---	---	---	12.3	5.4	10.7	5.3	---	---	16.9	7.4
21	---	---	---	---	11.3	6.6	10.3	5.7	---	---	14.6	7.3
22	---	---	---	---	13.9	7.2	8.6	4.6	---	---	12.5	6.7
23	---	---	---	---	15.8	9.0	14.4	3.9	---	---	10.6	6.6
24	---	---	---	---	17.0	11.2	14.1	7.8	---	---	12.0	5.6
25	---	---	---	---	17.4	13.4	13.1	8.0	---	---	13.6	6.3
26	---	---	---	---	16.6	13.2	11.6	7.4	---	---	11.5	6.4
27	---	---	---	---	15.2	13.1	13.2	6.8	---	---	10.3	5.3
28	---	---	---	---	15.1	11.6	12.5	7.3	---	---	9.3	5.3
29	---	---	---	---	13.0	10.7	14.7	7.8	---	---	9.9	4.8
30	---	---	---	---	11.5	9.0	14.0	7.5	---	---	10.5	5.4
31	---	---	---	---	---	---	12.7	6.2	---	---	---	---
MONTH	---	---	---	---	---	---	14.7	3.9	---	---	---	---

## PACIFIC OCEAN

11046062 COCKLEBURR CREEK LAGOON AT MOUTH, NEAR OCEANSIDE, CA—Continued

pH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	7.7	7.5	8.2	7.9	8.0	7.8	8.2	8.0
2	---	---	---	---	7.6	7.5	8.1	7.9	8.0	7.8	8.3	8.0
3	---	---	---	---	7.6	7.5	8.1	7.9	8.1	7.8	8.3	8.0
4	---	---	---	---	7.6	7.5	8.1	8.0	8.1	7.9	8.3	8.0
5	---	---	---	---	7.7	7.5	8.0	7.9	8.1	7.8	8.3	8.1
6	---	---	---	---	7.7	7.5	7.9	7.8	8.2	7.9	8.3	8.0
7	---	---	---	---	7.7	7.5	8.0	7.7	8.2	7.9	8.3	8.0
8	---	---	---	---	7.7	7.5	8.1	7.9	8.1	7.9	8.4	8.1
9	---	---	---	---	7.7	7.6	8.2	7.8	8.1	7.9	8.3	8.1
10	---	---	---	---	---	---	8.1	7.9	8.2	8.0	8.3	8.1
11	---	---	---	---	---	---	8.2	7.9	8.1	8.0	8.3	8.1
12	---	---	---	---	---	---	8.3	7.8	8.2	8.0	8.4	8.1
13	---	---	---	---	---	---	8.3	7.8	8.2	7.9	8.4	8.0
14	---	---	---	---	8.1	7.7	8.2	7.9	8.2	8.0	8.2	8.0
15	---	---	---	---	8.0	7.8	8.2	7.9	8.1	7.9	8.2	7.9
16	---	---	---	---	8.0	7.7	8.1	8.0	8.2	7.9	8.2	8.0
17	---	---	---	---	7.9	7.6	8.1	7.9	8.2	7.9	8.2	7.9
18	---	---	---	---	7.7	7.5	8.1	7.9	8.3	7.9	8.3	8.0
19	---	---	---	---	7.6	7.4	8.2	8.0	8.3	8.0	8.4	8.0
20	---	---	---	---	7.6	7.4	8.2	8.0	8.3	8.1	8.4	8.0
21	---	---	---	---	7.6	7.4	8.3	8.0	8.3	8.0	8.3	8.0
22	---	---	---	---	7.7	7.4	8.2	8.0	8.2	8.0	8.2	8.0
23	---	---	---	---	7.8	7.5	8.2	7.9	8.2	8.0	8.1	8.0
24	---	---	---	---	8.1	7.6	8.0	7.8	8.2	8.0	8.2	7.9
25	---	---	---	---	8.3	7.9	8.0	7.9	8.2	8.0	8.2	8.0
26	---	---	---	---	8.3	8.0	8.0	7.9	8.2	8.0	8.2	8.0
27	---	---	---	---	8.3	8.0	8.1	7.8	8.2	8.0	8.1	7.9
28	---	---	---	---	8.3	8.0	8.1	7.9	8.2	8.0	8.1	7.9
29	---	---	---	---	8.3	8.0	8.1	7.9	8.2	8.0	8.1	7.9
30	---	---	---	---	8.2	8.0	8.1	7.9	8.2	8.0	8.1	7.9
31	---	---	---	---	---	---	8.0	7.9	8.3	8.0	---	---
MONTH	---	---	---	---	---	---	8.3	7.7	8.3	7.8	8.4	7.9

SPECIFIC CONDUCTANCE, MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	9080	5850	5470	4930	3300	3140	3830	3760
2	---	---	---	---	8740	6760	4970	4330	3500	3280	4080	3810
3	---	---	---	---	8340	7050	4410	3790	3640	3470	4310	4070
4	---	---	---	---	7520	6600	3790	2960	3860	3600	4420	4310
5	---	---	---	---	6660	5690	3140	2660	4020	3790	4380	4270
6	---	---	---	---	5940	5170	2730	2510	4160	3950	4320	4140
7	---	---	---	---	5230	5050	3250	2630	4260	2700	4250	4050
8	---	---	---	---	5140	5020	3570	3110	4510	2660	4140	4080
9	---	---	---	---	5210	5030	3930	3360	4510	4390	4220	4120
10	---	---	---	---	---	---	4010	3700	4400	4160	4160	4100
11	---	---	---	---	---	---	4180	3750	4210	4120	4170	3940
12	---	---	---	---	---	---	5570	4010	4290	4130	3980	3480
13	---	---	---	---	---	---	6880	4240	4310	4180	3840	3260
14	---	---	---	---	23600	21600	6670	4920	4210	4040	3620	2950
15	---	---	---	---	22100	20800	5810	5030	4320	4120	3290	3040
16	---	---	---	---	23100	20900	5030	4720	4490	4320	3510	3180
17	---	---	---	---	22200	20000	4740	4530	4560	4350	3680	3470
18	---	---	---	---	20000	18400	4840	4630	4600	4400	3840	3680
19	---	---	---	---	18400	17100	5020	4710	4710	3600	4130	3810
20	---	---	---	---	17100	15300	5130	4970	4760	3230	4330	3970
21	---	---	---	---	15300	13600	5260	5100	4670	4460	4540	4220
22	---	---	---	---	13600	11500	5310	5200	4470	4140	4700	4400
23	---	---	---	---	11500	9830	5510	5290	4240	4140	4890	4650
24	---	---	---	---	9830	7780	5470	5200	4410	4230	5070	4870
25	---	---	---	---	7930	6410	5230	4570	4590	4400	5160	4940
26	---	---	---	---	6410	6040	4590	4220	4750	4570	5240	5060
27	---	---	---	---	6120	5560	4260	3990	4800	4520	5380	4900
28	---	---	---	---	5630	5550	4050	3960	4690	4400	5460	5320
29	---	---	---	---	5570	5400	4140	3740	4440	4080	5520	5420
30	---	---	---	---	5570	5300	4180	3540	4160	3860	5610	5500
31	---	---	---	---	---	---	3540	3020	3940	3660	---	---
MONTH	---	---	---	---	---	---	6880	2510	4800	2660	5610	2950

## 11046062 COCKLEBURR CREEK LAGOON AT MOUTH, NEAR OCEANSIDE, CA—Continued

## TEMPERATURE, WATER, DEGREES C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	21.6	19.0	22.6	20.5	23.7	21.6	21.7	20.5
2	---	---	---	---	20.8	19.9	22.1	20.1	23.7	21.6	22.4	20.4
3	---	---	---	---	20.3	19.5	22.3	17.8	23.4	21.5	22.6	20.1
4	---	---	---	---	20.6	19.2	21.3	16.8	23.5	21.4	22.2	20.3
5	---	---	---	---	20.4	19.0	21.6	17.4	23.5	21.2	22.6	20.2
6	---	---	---	---	20.2	19.2	21.0	19.3	23.4	20.7	22.6	20.1
7	---	---	---	---	20.0	18.7	22.1	20.0	23.6	21.0	22.8	20.0
8	---	---	---	---	19.7	18.6	22.0	20.9	23.6	21.2	22.3	20.5
9	---	---	---	---	19.5	18.4	21.4	19.9	23.6	21.1	22.2	20.2
10	---	---	---	---	---	---	20.7	19.3	23.5	21.1	22.3	20.1
11	---	---	---	---	---	---	22.7	19.6	22.4	21.0	21.9	19.5
12	---	---	---	---	---	---	22.7	19.8	23.0	20.2	21.3	20.3
13	---	---	---	---	---	---	22.8	20.7	22.5	20.4	21.8	20.0
14	---	---	---	---	23.4	22.3	23.0	20.5	22.4	20.1	21.2	19.8
15	---	---	---	---	23.4	22.8	21.9	20.9	22.6	20.8	20.7	19.7
16	---	---	---	---	23.2	22.9	21.8	20.7	23.4	20.9	21.8	20.0
17	---	---	---	---	23.0	22.6	22.1	20.9	23.4	20.8	22.4	20.1
18	---	---	---	---	22.7	22.3	21.7	21.1	23.6	21.1	22.2	19.7
19	---	---	---	---	22.3	21.8	23.3	20.8	24.5	21.6	22.3	19.5
20	---	---	---	---	22.6	21.5	24.5	21.6	24.0	21.6	22.5	20.1
21	---	---	---	---	22.2	21.7	23.7	22.3	23.9	22.0	21.3	19.4
22	---	---	---	---	22.4	21.5	22.9	21.6	23.0	21.5	20.1	18.7
23	---	---	---	---	22.4	21.4	24.1	20.6	22.7	20.1	19.7	18.8
24	---	---	---	---	23.0	21.4	23.9	22.2	23.0	20.4	21.1	18.8
25	---	---	---	---	22.2	20.6	23.4	21.6	23.3	21.0	21.9	19.7
26	---	---	---	---	21.4	19.6	22.8	21.5	23.5	21.0	21.0	20.0
27	---	---	---	---	21.6	20.0	23.1	20.6	23.1	21.1	20.7	19.7
28	---	---	---	---	22.2	20.0	22.4	21.0	23.3	20.9	20.1	19.6
29	---	---	---	---	22.6	20.0	23.8	20.9	22.6	20.1	20.4	19.2
30	---	---	---	---	22.8	20.2	23.8	21.4	21.9	19.9	20.4	19.4
31	---	---	---	---	---	---	23.4	21.2	22.7	20.0	---	---
MONTH	---	---	---	---	---	---	24.5	16.8	24.5	19.9	22.8	18.7

## 11046072 ALISO CREEK LAGOON AT MOUTH, NEAR OCEANSIDE, CA

LOCATION.—Lat 33° 15' 52", long 117° 26' 32", in SW 1/4 NE 1/4 sec.31, T.10 S., R.5 W., San Diego County, Hydrologic Unit 18070301, at mouth of unnamed creek draining Aliso Canyon at the Pacific Ocean and 5.80 mi northwest of Oceanside.

DRAINAGE AREA.—9.19 mi<sup>2</sup>.

PERIOD OF RECORD.—June 2003 to September 2003.

DISSOLVED OXYGEN: June 2003 to September 2003.

pH: June 2003 to September 2003.

SPECIFIC CONDUCTANCE: June 2003 to September 2003.

WATER TEMPERATURE: June 2003 to September 2003.

PERIOD OF DAILY RECORD.—June 2003 to September 2003.

DISSOLVED OXYGEN: June 2003 to September 2003.

pH: June 2003 to September 2003.

SPECIFIC CONDUCTANCE: June 2003 to September 2003.

WATER TEMPERATURE: June 2003 to September 2003.

INSTRUMENTATION.—Water-quality monitor since June 2003.

REMARKS.—Dissolved oxygen records rated fair. pH records rated good. Specific conductance records rated good. Temperature records rated excellent.

EXTREMES FOR PERIOD OF DAILY RECORD.—

DISSOLVED OXYGEN: Maximum recorded, 15.1 mg/L, June 22, 2003; minimum recorded, 0.1 mg/L, Sept. 8, 14, 24, 29, 2003.

pH: Maximum recorded, 9.9 standard units, July 21, 22, 2003; minimum recorded, 8.3 standard units, June 1, 2003.

SPECIFIC CONDUCTANCE: Maximum recorded, 41,000 microsiemens, Sept. 19, 2003; minimum recorded, 32,800 microsiemens, June 11, 2003.

WATER TEMPERATURE: Maximum recorded, 28.3°C, July 3, 2003; minimum recorded, 19.8°C, June 20, Sept. 23, 2003.

EXTREMES FOR CURRENT YEAR.—

DISSOLVED OXYGEN: Maximum recorded, 15.1 mg/L, June 22; minimum recorded, 0.1 mg/L, Sept. 8, 14, 24, 29.

pH: Maximum recorded, 9.9 standard units, July 21, 22; minimum recorded, 8.3 standard units, June 1.

SPECIFIC CONDUCTANCE: Maximum recorded, 41,000 microsiemens, Sept. 19; minimum recorded, 32,800 microsiemens, June 11.

WATER TEMPERATURE: Maximum recorded, 28.3°C, July 3; minimum recorded, 19.8°C, June 20, Sept. 23.

## DISSOLVED OXYGEN, MG/L, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	12.0	5.7	10.9	3.6	9.1	1.7	4.5	0.8
2	---	---	---	---	11.5	7.0	11.8	1.9	9.3	1.7	5.1	0.3
3	---	---	---	---	13.0	6.3	13.2	2.0	8.5	1.6	6.2	0.2
4	---	---	---	---	13.3	6.9	12.2	1.8	8.9	1.3	5.0	0.8
5	---	---	---	---	13.4	6.4	11.9	0.8	8.4	2.0	4.2	0.5
6	---	---	---	---	14.1	8.9	11.3	1.0	8.2	2.6	4.7	0.3
7	---	---	---	---	14.3	7.5	11.3	0.6	8.8	2.2	4.4	0.2
8	---	---	---	---	13.8	7.8	11.6	1.1	8.3	1.5	4.6	0.1
9	---	---	---	---	14.5	6.0	10.0	2.8	8.4	1.7	6.4	0.3
10	---	---	---	---	14.0	8.8	7.7	0.7	8.1	1.2	6.2	1.3
11	---	---	---	---	14.2	9.2	12.0	2.6	6.8	1.3	4.7	1.1
12	---	---	---	---	14.0	9.5	11.0	2.2	8.5	0.5	5.1	1.3
13	---	---	---	---	14.3	7.5	8.5	2.0	7.8	0.6	6.4	0.5
14	---	---	---	---	13.8	8.7	8.9	0.6	5.5	0.5	7.0	0.1
15	---	---	---	---	14.1	7.1	9.3	2.3	4.6	0.3	8.8	0.3
16	---	---	---	---	13.8	5.1	7.4	0.8	4.5	<0.2	6.2	0.6
17	---	---	---	---	13.8	6.2	8.9	1.7	4.8	<0.2	6.7	1.1
18	---	---	---	---	13.0	5.4	9.0	1.1	5.7	0.3	7.1	1.4
19	---	---	---	---	14.8	4.6	8.1	1.3	5.4	0.5	5.9	1.0
20	---	---	---	---	14.2	5.5	10.0	1.5	5.8	1.4	6.9	0.6
21	---	---	---	---	12.7	6.2	13.8	1.5	6.0	1.2	6.4	0.3
22	---	---	---	---	15.1	6.5	11.6	2.2	6.1	0.4	7.8	0.9
23	---	---	---	---	14.9	7.4	9.0	0.2	5.6	0.7	6.2	0.4
24	---	---	---	---	13.8	3.7	9.2	1.1	5.1	0.7	7.5	0.1
25	---	---	---	---	14.2	4.9	9.3	1.9	4.7	0.4	9.6	0.7
26	---	---	---	---	13.3	3.3	9.5	1.7	4.8	0.6	9.5	0.2
27	---	---	---	---	13.8	2.4	9.6	0.3	4.7	0.2	6.6	0.3
28	---	---	---	---	14.0	2.6	9.7	0.9	5.0	0.4	4.8	0.2
29	---	---	---	---	13.9	2.9	9.1	1.4	4.3	0.3	3.7	0.1
30	---	---	---	---	13.5	3.2	7.2	1.4	4.9	0.3	5.9	0.6
31	---	---	---	---	---	---	8.2	1.2	4.6	0.4	---	---
MONTH	---	---	---	---	15.1	2.4	13.8	0.2	9.3	0.2	9.6	0.1

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



## 11046072 ALISO CREEK LAGOON AT MOUTH, NEAR OCEANSIDE, CA—Continued

## PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	8.5	8.3	9.3	8.8	9.3	9.0	9.4	9.3
2	---	---	---	---	8.5	8.4	9.3	8.8	9.3	9.0	9.4	9.2
3	---	---	---	---	8.5	8.4	9.4	8.9	9.3	9.1	9.4	9.2
4	---	---	---	---	8.5	8.4	9.3	8.9	9.3	9.1	9.4	9.1
5	---	---	---	---	8.6	8.4	9.3	9.0	9.3	9.1	9.2	9.1
6	---	---	---	---	8.6	8.4	9.4	9.0	9.3	9.1	9.2	9.1
7	---	---	---	---	8.7	8.5	9.4	9.0	9.3	9.2	9.2	9.0
8	---	---	---	---	8.7	8.5	9.4	9.0	9.3	9.2	9.2	9.1
9	---	---	---	---	8.7	8.5	9.3	8.8	9.3	9.2	9.3	9.1
10	---	---	---	---	8.7	8.5	9.3	8.9	9.3	9.2	9.3	9.2
11	---	---	---	---	8.7	8.5	9.3	9.1	9.3	9.2	9.3	9.2
12	---	---	---	---	8.7	8.6	9.4	9.1	9.4	9.2	9.2	9.1
13	---	---	---	---	8.8	8.5	9.4	9.1	9.4	9.2	9.2	9.1
14	---	---	---	---	8.8	8.6	9.5	9.2	9.4	9.2	9.2	9.0
15	---	---	---	---	8.8	8.6	9.6	9.1	9.3	9.2	9.2	9.0
16	---	---	---	---	8.8	8.5	9.6	9.2	9.3	9.2	9.2	9.0
17	---	---	---	---	8.8	8.6	9.6	9.3	9.3	9.3	9.2	9.0
18	---	---	---	---	8.8	8.6	9.7	9.3	9.4	9.3	9.2	9.0
19	---	---	---	---	9.0	8.6	9.6	9.3	9.4	9.3	9.3	9.0
20	---	---	---	---	8.9	8.6	9.6	9.4	9.4	9.3	9.3	9.0
21	---	---	---	---	8.9	8.7	9.9	9.4	9.5	9.3	9.2	9.0
22	---	---	---	---	9.1	8.8	9.9	9.6	9.5	9.3	9.2	9.0
23	---	---	---	---	9.2	8.9	9.7	8.9	9.4	9.3	9.1	8.9
24	---	---	---	---	9.3	8.8	9.3	9.0	9.3	9.3	9.1	8.9
25	---	---	---	---	9.2	8.9	9.3	9.0	9.3	9.2	9.3	8.9
26	---	---	---	---	9.2	8.9	9.3	8.9	9.3	9.2	9.2	9.0
27	---	---	---	---	9.3	8.9	9.2	9.0	9.3	9.2	9.2	8.9
28	---	---	---	---	9.3	8.7	9.3	9.0	9.4	9.2	9.0	8.8
29	---	---	---	---	9.4	8.8	9.2	9.0	9.4	9.2	9.2	8.7
30	---	---	---	---	9.5	8.8	9.2	9.0	9.4	9.2	9.0	8.8
31	---	---	---	---	---	---	9.2	9.0	9.4	9.2	---	---
MONTH	---	---	---	---	9.5	8.3	9.9	8.8	9.5	9.0	9.4	8.7

## SPECIFIC CONDUCTANCE, MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	34000	33100	33400	33000	34600	34000	38200	37700
2	---	---	---	---	33800	33200	33600	33200	34600	34000	38000	37600
3	---	---	---	---	34000	33700	34000	33200	34600	34100	38300	37600
4	---	---	---	---	34000	33400	33600	33200	34700	34200	38300	37700
5	---	---	---	---	34000	33600	33900	33300	34800	34300	38400	37800
6	---	---	---	---	34000	33500	33800	33500	35000	34400	38600	38100
7	---	---	---	---	33700	33200	34100	33600	35100	34600	38900	38200
8	---	---	---	---	33200	33000	34100	33700	35100	34700	38900	38300
9	---	---	---	---	33500	33200	34000	33500	35300	34800	39400	38500
10	---	---	---	---	33500	32900	33700	33400	35400	34900	39500	38400
11	---	---	---	---	33400	32800	34000	33400	35500	35000	40800	39000
12	---	---	---	---	33400	33000	34100	33500	35400	35000	40300	39000
13	---	---	---	---	33400	33000	34100	33100	35600	35200	39700	39000
14	---	---	---	---	33400	33100	34000	33500	35600	35300	39700	39100
15	---	---	---	---	33600	33200	34100	33600	35900	35200	39500	39100
16	---	---	---	---	33700	33300	34000	33400	35600	35200	39800	39100
17	---	---	---	---	33700	33200	33900	33600	36200	35500	39700	39100
18	---	---	---	---	33700	33300	33900	33600	36300	35700	39800	39200
19	---	---	---	---	33700	33500	33900	33500	36600	35900	41000	39500
20	---	---	---	---	33700	33200	34200	33700	36900	36300	40400	39600
21	---	---	---	---	33700	33400	34600	33700	37100	36700	40200	39700
22	---	---	---	---	33700	33400	34000	33800	37100	36700	40400	39700
23	---	---	---	---	33700	33400	33900	33500	37100	36600	39900	39500
24	---	---	---	---	33600	33100	34200	33600	37300	36800	40400	39500
25	---	---	---	---	33500	33100	34200	33900	37600	36900	40800	39800
26	---	---	---	---	33500	33200	34200	33700	37600	37100	40300	39800
27	---	---	---	---	33500	33200	34500	33700	37700	37200	40600	39700
28	---	---	---	---	33400	33100	34200	33800	37700	37200	40000	39500
29	---	---	---	---	33400	33100	34200	33800	38100	37300	39900	39200
30	---	---	---	---	33500	33000	34300	33900	38100	37500	39800	39000
31	---	---	---	---	---	---	34400	33800	38200	37600	---	---
MONTH	---	---	---	---	34000	32800	34600	33000	38200	34000	41000	37600

## 11046072 ALISO CREEK LAGOON AT MOUTH, NEAR OCEANSIDE, CA—Continued

## TEMPERATURE, WATER, DEGREE C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	24.3	20.8	27.5	24.1	26.4	23.4	24.8	22.8
2	---	---	---	---	22.8	21.4	27.5	24.0	26.1	22.7	23.6	22.4
3	---	---	---	---	22.0	20.6	28.3	23.4	25.9	22.4	24.1	21.0
4	---	---	---	---	23.0	20.0	28.1	23.5	25.8	22.8	24.0	21.5
5	---	---	---	---	23.5	21.5	28.0	23.8	25.4	22.3	24.4	22.2
6	---	---	---	---	23.8	21.7	27.1	24.3	25.1	21.7	24.9	22.3
7	---	---	---	---	22.7	20.8	27.2	23.4	25.6	22.0	25.3	22.0
8	---	---	---	---	23.0	20.5	26.6	23.6	25.8	22.7	25.3	22.4
9	---	---	---	---	22.0	20.3	25.0	22.4	26.6	22.9	23.8	21.6
10	---	---	---	---	24.6	20.2	25.1	22.7	26.7	23.4	23.8	21.1
11	---	---	---	---	26.4	22.4	26.5	22.6	25.9	23.1	24.9	20.8
12	---	---	---	---	26.3	23.1	26.6	23.2	26.1	22.5	25.0	22.0
13	---	---	---	---	26.9	22.7	26.3	22.9	25.7	22.7	24.6	22.1
14	---	---	---	---	26.6	23.5	26.6	24.1	25.5	22.3	24.2	22.4
15	---	---	---	---	25.6	23.4	25.7	23.6	25.5	23.8	23.3	21.8
16	---	---	---	---	23.8	22.6	25.2	23.1	25.8	23.2	24.0	21.3
17	---	---	---	---	24.0	21.9	25.5	23.2	25.8	23.0	23.3	21.4
18	---	---	---	---	23.1	21.6	24.7	23.4	25.8	23.4	23.3	20.4
19	---	---	---	---	21.9	21.0	25.8	22.8	25.2	23.2	24.9	20.7
20	---	---	---	---	23.7	19.8	27.0	23.8	25.6	23.0	23.8	21.0
21	---	---	---	---	23.3	20.7	26.6	24.4	25.4	23.5	22.7	19.9
22	---	---	---	---	23.9	20.8	24.6	23.3	24.4	22.8	22.1	19.9
23	---	---	---	---	25.1	21.0	25.9	22.4	24.6	21.2	21.2	19.8
24	---	---	---	---	26.0	21.6	25.5	23.6	25.2	22.4	22.9	19.9
25	---	---	---	---	26.3	22.2	25.4	23.3	25.4	23.0	25.4	21.1
26	---	---	---	---	26.4	22.7	25.0	23.3	25.5	22.8	23.1	21.8
27	---	---	---	---	26.3	23.7	25.3	21.9	25.4	23.3	23.4	20.9
28	---	---	---	---	26.5	23.8	24.9	22.3	25.3	23.0	22.5	21.2
29	---	---	---	---	27.1	23.6	26.0	22.6	25.4	22.2	22.7	20.7
30	---	---	---	---	27.2	24.1	26.3	23.2	24.6	22.4	22.7	21.0
31	---	---	---	---	---	---	26.6	23.4	25.0	22.4	---	---
MONTH	---	---	---	---	27.2	19.8	28.3	21.9	26.7	21.2	25.4	19.8

## 11046082 HIDDEN CREEK LAGOON AT MOUTH, NEAR OCEANSIDE, CA

LOCATION.—Lat 33° 16'31", long 117° 27'05", in NE 1/4 SE 1/4 sec.25, T.10 S., R.6 W., San Diego County, Hydrologic Unit 18070301, at mouth of unnamed creek, 0.8 mi north of Aliso Creek Lagoon at the Pacific Ocean, and 6.70 mi northwest of Oceanside.

DRAINAGE AREA.—2.17 mi<sup>2</sup>.

PERIOD OF RECORD.—June 2003 to September 2003.

DISSOLVED OXYGEN: June 2003 to September 2003.

pH: June 2003 to September 2003.

SPECIFIC CONDUCTANCE: June 2003 to September 2003.

WATER TEMPERATURE: June 2003 to September 2003.

PERIOD OF DAILY RECORD.—June 2003 to September 2003.

DISSOLVED OXYGEN: June 2003 to September 2003.

pH: June 2003 to September 2003.

SPECIFIC CONDUCTANCE: June 2003 to September 2003.

WATER TEMPERATURE: June 2003 to September 2003.

INSTRUMENTATION.—Water-quality monitor since June 2003.

REMARKS.—Dissolved oxygen records rated poor. pH records rated good. Specific conductance records rated good. Temperature records rated good. Interruption of records at times due to malfunction of recording equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.—

DISSOLVED OXYGEN: Maximum recorded, 15.4 mg/L, June 4, 2003; minimum recorded, 0.4 mg/L, several days in June, July, and August 2003.

pH: Maximum recorded, 8.7 standard units, Sept. 26, 2003; minimum recorded, 7.6 standard units, Aug. 24, 25, 2003.

SPECIFIC CONDUCTANCE: Maximum recorded, 85,400 microsiemens, Sept. 11, 12, 2003; minimum recorded, 47,000 microsiemens, June 1, 2003.

WATER TEMPERATURE: Maximum recorded, 28.7° C, Aug. 10, 2003; minimum recorded, 19.6° C, June 7, 2003.

EXTREMES FOR CURRENT YEAR.—

DISSOLVED OXYGEN: Maximum recorded, 15.4 mg/L, June 4; minimum recorded, 0.4 mg/L, several days in June, July, and August.

pH: Maximum recorded, 8.7 standard units, Sept. 26; minimum recorded, 7.6 standard units, Aug. 24, 25.

SPECIFIC CONDUCTANCE: Maximum recorded, 85,400 microsiemens, Sept. 11, 12; minimum recorded, 47,000 microsiemens, June 1.

WATER TEMPERATURE: Maximum recorded, 28.7° C, Aug. 10; minimum recorded, 19.6° C, June 7.

## DISSOLVED OXYGEN, MG/L, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	---	---	13.9	2.4	0.5	0.5	2.8	0.6	---	---
2	---	---	---	---	10.7	2.9	0.6	0.5	3.5	0.8	---	---
3	---	---	---	---	11.0	1.7	0.6	0.5	3.0	0.8	---	---
4	---	---	---	---	15.4	2.6	1.2	0.5	3.6	0.9	---	---
5	---	---	---	---	13.3	4.0	1.4	0.7	2.7	1.0	---	---
6	---	---	---	---	13.9	5.1	1.1	0.7	3.0	1.1	---	---
7	---	---	---	---	11.6	3.7	1.3	0.8	3.2	1.2	---	---
8	---	---	---	---	12.3	3.5	3.0	0.9	2.8	1.2	---	---
9	---	---	---	---	12.4	5.3	4.1	0.4	2.7	1.1	---	---
10	---	---	---	---	13.9	4.7	3.6	0.5	2.5	1.0	---	---
11	---	---	---	---	14.2	4.0	5.7	0.4	2.0	1.0	---	---
12	---	---	---	---	11.8	1.6	5.6	0.8	3.2	1.0	---	---
13	---	---	---	---	11.7	1.2	6.6	0.8	3.0	1.0	---	---
14	---	---	---	---	10.4	0.8	4.0	1.1	1.5	0.4	---	---
15	---	---	---	---	7.9	1.3	2.7	0.6	---	---	---	---
16	---	---	---	---	7.7	0.9	2.3	0.7	---	---	---	---
17	---	---	---	---	8.1	1.2	1.0	0.7	---	---	---	---
18	---	---	---	---	7.2	1.2	1.1	0.8	---	---	---	---
19	---	---	---	---	5.5	1.1	1.7	1.1	---	---	---	---
20	---	---	---	---	9.6	0.4	2.7	1.2	---	---	---	---
21	---	---	---	---	6.5	1.5	1.4	1.2	---	---	---	---
22	---	---	---	---	6.0	0.9	1.6	1.4	---	---	---	---
23	---	---	---	---	5.8	0.5	1.7	0.4	---	---	---	---
24	---	---	---	---	6.8	0.6	0.5	0.4	---	---	---	---
25	---	---	---	---	6.0	0.5	0.7	0.4	---	---	---	---
26	---	---	---	---	7.3	0.5	1.1	0.6	---	---	---	---
27	---	---	---	---	3.7	0.4	2.8	0.6	---	---	---	---
28	---	---	---	---	2.0	0.5	1.0	0.6	---	---	---	---
29	---	---	---	---	0.9	0.5	2.5	0.5	---	---	---	---
30	---	---	---	---	0.8	0.5	1.3	0.5	---	---	---	---
31	---	---	---	---	---	---	2.0	0.6	---	---	---	---
MONTH	---	---	---	---	15.4	0.4	6.6	0.4	---	---	---	---

## 11046082 HIDDEN CREEK LAGOON AT MOUTH, NEAR OCEANSIDE, CA—Continued

## PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	8.5	7.9	8.2	8.0	8.4	8.2	8.1	7.9
2	---	---	---	---	8.3	8.0	8.3	8.0	8.4	8.2	8.0	7.9
3	---	---	---	---	8.4	7.9	8.3	8.0	8.5	8.3	8.1	7.9
4	---	---	---	---	8.5	8.0	8.3	8.1	8.5	8.3	8.4	8.0
5	---	---	---	---	8.5	8.1	8.2	8.1	8.5	8.3	8.5	8.4
6	---	---	---	---	8.6	8.2	8.2	8.1	8.5	8.4	8.5	8.3
7	---	---	---	---	8.5	8.1	8.2	8.1	8.6	8.4	8.4	8.3
8	---	---	---	---	8.5	8.1	8.2	8.1	8.6	8.4	8.4	8.3
9	---	---	---	---	8.6	8.2	8.2	8.2	8.6	8.4	8.5	8.3
10	---	---	---	---	8.6	8.1	8.2	8.2	8.6	8.4	8.5	8.3
11	---	---	---	---	8.5	8.1	8.3	8.1	8.5	8.4	8.4	8.3
12	---	---	---	---	8.5	8.1	8.3	8.2	8.6	8.4	8.5	8.4
13	---	---	---	---	8.5	8.1	8.4	8.2	8.6	8.4	8.4	8.3
14	---	---	---	---	8.5	8.1	8.4	8.2	8.6	8.3	8.4	8.3
15	---	---	---	---	8.5	8.1	8.3	8.2	8.4	8.3	8.4	8.3
16	---	---	---	---	8.4	8.2	8.3	8.2	8.4	8.3	---	---
17	---	---	---	---	8.5	8.2	8.4	8.2	8.4	8.3	---	---
18	---	---	---	---	8.5	8.2	8.5	8.3	8.4	8.3	---	---
19	---	---	---	---	8.4	8.2	8.4	8.3	8.4	8.2	---	---
20	---	---	---	---	8.5	8.2	8.4	8.3	8.3	8.3	---	---
21	---	---	---	---	8.4	8.2	8.4	8.3	8.3	8.2	---	---
22	---	---	---	---	8.4	8.1	8.3	8.2	8.3	8.0	---	---
23	---	---	---	---	8.2	8.1	8.3	8.2	8.2	7.9	---	---
24	---	---	---	---	8.4	8.1	8.4	8.1	8.1	7.6	---	---
25	---	---	---	---	8.4	8.1	8.3	8.2	8.0	7.6	---	---
26	---	---	---	---	8.3	8.0	8.3	8.1	8.0	7.7	8.7	8.4
27	---	---	---	---	8.2	8.1	8.3	8.1	8.2	7.8	8.6	8.4
28	---	---	---	---	8.2	8.1	8.3	8.2	8.1	7.9	8.6	8.3
29	---	---	---	---	8.3	8.1	8.3	8.1	8.0	7.9	8.6	8.3
30	---	---	---	---	8.3	8.1	8.3	8.1	8.0	7.8	8.5	8.3
31	---	---	---	---	---	---	8.3	8.2	8.1	7.8	---	---
MONTH	---	---	---	---	8.6	7.9	8.5	8.0	8.6	7.6	---	---

## SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	47500	47000	52500	51500	60700	58900	73100	72200
2	---	---	---	---	47500	47300	52800	51800	62300	59700	73100	72400
3	---	---	---	---	47600	47400	53500	51900	63000	61200	73600	71800
4	---	---	---	---	47800	47200	53800	52700	63400	61500	80000	73000
5	---	---	---	---	47800	47500	54100	53100	63900	61600	81900	80000
6	---	---	---	---	47900	47400	54600	54000	64500	62400	82400	80800
7	---	---	---	---	47900	47200	55000	54100	65000	62600	83300	81900
8	---	---	---	---	47900	47400	55400	54800	65400	63000	84000	82400
9	---	---	---	---	48100	47800	55700	55100	65900	64000	84700	83400
10	---	---	---	---	48300	47800	56000	55400	66200	64300	85000	84400
11	---	---	---	---	48100	47300	56500	55600	67000	66000	85400	84000
12	---	---	---	---	48400	47700	56900	56200	67200	64900	85400	82100
13	---	---	---	---	48400	47900	57700	56700	67400	65300	85200	83900
14	---	---	---	---	49400	48200	58800	57500	68000	66900	85300	78300
15	---	---	---	---	49600	48800	59600	58100	68600	67600	85200	83600
16	---	---	---	---	49900	49200	59900	59300	68200	66700	---	---
17	---	---	---	---	50200	49900	59900	59000	68400	66800	---	---
18	---	---	---	---	50400	50100	59900	59500	69900	68000	---	---
19	---	---	---	---	50500	50400	59900	59300	70400	69000	---	---
20	---	---	---	---	50500	50100	59700	59200	71100	69600	---	---
21	---	---	---	---	50600	50300	59900	59100	71200	69900	---	---
22	---	---	---	---	50500	50100	60400	59900	71700	70200	---	---
23	---	---	---	---	50400	49900	60600	57400	71600	69800	---	---
24	---	---	---	---	50500	49900	59400	58300	71800	70000	---	---
25	---	---	---	---	50900	50100	59300	58000	71900	70300	---	---
26	---	---	---	---	51100	50000	59400	58500	72300	70700	76300	75300
27	---	---	---	---	51300	50000	59900	58300	72600	71100	76300	75200
28	---	---	---	---	51500	50500	60000	58300	73100	71100	75900	75200
29	---	---	---	---	51700	50600	59700	57100	73100	71300	75500	74400
30	---	---	---	---	52100	51400	59400	57500	73400	72100	75300	74100
31	---	---	---	---	---	---	60000	58500	73100	71900	---	---
MONTH	---	---	---	---	52100	47000	60600	51500	73400	58900	---	---

## 11046082 HIDDEN CREEK LAGOON AT MOUTH, NEAR OCEANSIDE, CA—Continued

## TEMPERATURE, WATER, DEGREE C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	23.3	20.7	25.6	23.5	27.9	23.7	25.1	23.4
2	---	---	---	---	22.3	21.1	25.9	23.5	27.3	23.3	25.1	23.2
3	---	---	---	---	21.4	20.6	26.6	22.5	26.8	23.1	25.5	22.0
4	---	---	---	---	22.7	20.4	25.7	22.5	27.3	23.4	26.0	22.4
5	---	---	---	---	22.3	20.8	25.8	22.9	27.2	23.2	26.7	23.4
6	---	---	---	---	22.7	20.7	25.5	24.2	27.8	22.4	27.0	22.9
7	---	---	---	---	21.4	19.6	25.9	23.9	28.1	22.8	26.7	22.7
8	---	---	---	---	21.8	19.8	25.6	23.9	28.2	23.3	26.1	23.3
9	---	---	---	---	22.1	20.6	24.8	22.5	28.0	23.2	24.8	22.6
10	---	---	---	---	23.8	20.2	24.5	23.0	28.7	23.6	24.7	21.7
11	---	---	---	---	25.6	20.9	27.2	22.8	26.1	23.4	24.5	21.4
12	---	---	---	---	25.0	21.0	27.0	23.8	28.1	22.9	24.6	22.9
13	---	---	---	---	25.3	20.6	26.9	23.5	27.8	22.9	25.1	22.9
14	---	---	---	---	25.4	21.5	26.3	25.2	26.6	22.6	24.7	23.3
15	---	---	---	---	24.6	21.9	26.0	24.8	25.9	23.8	24.3	22.9
16	---	---	---	---	23.3	21.9	25.8	25.0	27.2	24.2	---	---
17	---	---	---	---	23.1	21.8	25.8	25.0	27.3	23.4	---	---
18	---	---	---	---	22.5	21.4	25.7	25.1	27.4	23.6	---	---
19	---	---	---	---	21.8	21.1	25.8	24.7	26.9	23.9	---	---
20	---	---	---	---	22.9	20.3	26.5	25.5	26.8	23.8	---	---
21	---	---	---	---	23.0	21.7	26.4	25.3	26.6	24.2	---	---
22	---	---	---	---	23.8	21.9	25.6	24.8	25.7	23.7	---	---
23	---	---	---	---	24.2	21.7	26.2	24.5	26.3	22.2	---	---
24	---	---	---	---	24.6	21.3	25.6	24.6	27.0	23.1	---	---
25	---	---	---	---	24.6	21.7	25.6	24.2	27.1	23.6	---	---
26	---	---	---	---	24.6	21.3	25.1	24.1	27.3	23.5	23.2	21.1
27	---	---	---	---	24.7	23.2	26.4	23.3	27.6	23.9	22.8	20.6
28	---	---	---	---	24.9	23.1	25.3	23.3	27.7	23.7	22.0	20.6
29	---	---	---	---	25.1	23.0	27.4	23.3	26.5	23.1	23.1	20.8
30	---	---	---	---	25.3	23.4	27.2	23.9	25.6	23.0	22.9	20.9
31	---	---	---	---	---	---	28.0	24.1	26.0	23.1	---	---
MONTH	---	---	---	---	25.6	19.6	28.0	22.5	28.7	22.2	---	---

## 11046090 LAS FLORES CREEK AT LAS PULGAS CANYON, NEAR OCEANSIDE, CA

LOCATION.—Lat 33° 19'07", long 117° 26'13", in NE 1/4 SE 1/4 sec.7, T.10 S., R.5 W., San Diego County, Hydrologic Unit 18070301, on Camp Joseph H. Pendleton Naval Reservation, on right bank, 2.7 mi upstream from mouth, and 9.7 mi northwest of Oceanside.

DRAINAGE AREA.—15.6 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1998 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 110 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Some pumping upstream from station for irrigation. Camp Pendleton Water Treatment Plant No. 9 discharges to the channel at a point approximately 0.5 mi upstream from gage.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 135 ft<sup>3</sup>/s, Feb. 25, 2003, gage height, 8.43 ft, from rating curve extended above 22.5 ft<sup>3</sup>/s; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 25	1245	135	8.43	Mar. 15	2315	130	8.37

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.10	0.11	e2.7	0.71	0.66	0.23	0.04	0.00	0.00
2	0.00	0.00	0.00	0.08	0.11	e2.3	0.69	0.66	0.23	0.03	0.00	0.00
3	0.00	0.00	0.00	0.06	0.08	e2.0	0.62	0.81	0.32	0.01	0.00	0.00
4	0.00	0.00	0.00	0.01	0.09	e1.8	0.59	0.73	0.30	0.00	0.00	0.00
5	0.00	0.00	0.00	0.03	0.10	e1.6	0.56	0.60	0.23	0.00	0.00	0.00
6	0.00	0.00	0.00	0.01	0.08	1.1	0.54	0.55	0.25	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.08	0.90	0.51	0.55	0.31	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.07	0.76	0.45	0.48	0.35	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.06	0.70	0.44	0.44	0.44	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.09	0.62	0.41	0.41	0.41	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	3.1	0.57	0.43	0.36	0.32	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	12	0.52	0.42	0.35	0.25	0.00	0.00	0.00
13	0.00	0.00	0.00	0.01	20	0.48	0.57	0.35	0.19	0.00	0.00	0.00
14	0.00	0.00	0.00	0.05	8.3	0.46	12	0.35	0.18	0.00	0.00	0.00
15	0.00	0.00	0.00	0.06	4.7	24	12	0.35	0.19	0.00	0.00	0.00
16	0.00	0.00	1.5	0.05	4.0	63	2.8	0.33	0.22	0.00	0.00	0.00
17	0.00	0.00	4.0	0.05	3.7	14	2.1	0.37	0.35	0.00	0.00	0.00
18	0.00	0.00	0.00	0.05	3.6	7.0	1.8	0.37	0.48	0.00	0.00	0.00
19	0.00	0.00	0.00	0.05	3.2	3.7	1.7	0.32	0.56	0.00	0.00	0.00
20	0.00	0.00	7.0	0.06	2.6	2.3	1.5	0.36	0.59	0.00	0.00	0.00
21	0.00	0.00	1.5	0.07	1.8	1.9	1.4	0.36	0.58	0.00	0.00	0.00
22	0.00	0.00	0.53	0.07	2.1	1.6	1.3	0.34	0.63	0.00	0.00	0.00
23	0.00	0.00	0.22	0.10	1.8	1.5	0.94	0.38	0.64	0.00	0.00	0.00
24	0.00	0.00	0.10	0.12	2.9	1.4	0.72	0.40	0.46	0.00	0.00	0.00
25	0.00	0.00	0.08	0.10	50	1.2	0.71	0.37	0.28	0.00	0.00	0.00
26	0.00	0.00	0.06	0.08	e11	1.1	0.69	0.28	0.20	0.00	0.00	0.00
27	0.00	0.00	0.06	0.09	e5.0	1.0	0.67	0.22	0.14	0.00	0.00	0.00
28	0.00	0.00	0.07	0.08	e3.1	0.87	0.65	0.22	0.10	0.00	0.00	0.00
29	0.00	0.00	0.29	0.08	---	0.80	0.63	0.25	0.07	0.00	0.00	0.00
30	0.00	0.00	0.11	0.10	---	0.77	0.63	0.24	0.06	0.00	0.00	0.00
31	0.00	---	0.10	0.11	---	0.74	---	0.25	---	0.00	0.00	---
TOTAL	0.00	0.00	15.62	1.67	143.77	143.39	49.18	12.71	9.56	0.08	0.00	0.00
MEAN	0.000	0.000	0.50	0.054	5.13	4.63	1.64	0.41	0.32	0.003	0.000	0.000
MAX	0.00	0.00	7.0	0.12	50	63	12	0.81	0.64	0.04	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.06	0.46	0.41	0.22	0.06	0.00	0.00	0.00
AC-FT	0.00	0.00	31	3.3	285	284	98	25	19	0.2	0.00	0.00

e Estimated.

11046090 LAS FLORES CREEK AT LAS PULGAS CANYON, NEAR OCEANSIDE, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.40	0.56	0.67	0.82	2.13	1.86	0.99	0.45	0.13	0.039	0.047	0.046
MAX	1.86	2.52	2.15	2.09	5.13	4.63	1.85	1.29	0.32	0.19	0.24	0.23
(WY)	1999	1999	1999	1999	2003	2003	1999	1999	2003	1999	1999	1999
MIN	0.000	0.000	0.13	0.054	0.30	0.30	0.19	0.000	0.000	0.000	0.000	0.000
(WY)	2001	2003	2002	2003	2002	2002	2002	2002	2002	2000	2000	2000

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1999 - 2003	
ANNUAL TOTAL	49.09		375.98			
ANNUAL MEAN	0.13		1.03		0.67	
HIGHEST ANNUAL MEAN					1.36 1999	
LOWEST ANNUAL MEAN					0.10 2002	
HIGHEST DAILY MEAN	7.0	Dec 20	63	Mar 16	63	Mar 16 2003
LOWEST DAILY MEAN	0.00	May 2	0.00	Oct 1	0.00	Jun 4 2000
ANNUAL SEVEN-DAY MINIMUM	0.00	May 2	0.00	Oct 1	0.00	Jun 4 2000
MAXIMUM PEAK FLOW			135	Feb 25	135	Feb 25 2003
MAXIMUM PEAK STAGE			8.43	Feb 25	8.43	Feb 25 2003
ANNUAL RUNOFF (AC-FT)	97		746		485	
10 PERCENT EXCEEDS	0.32		1.7		1.8	
50 PERCENT EXCEEDS	0.00		0.05		0.21	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 11046100 LAS FLORES CREEK NEAR OCEANSIDE, CA

LOCATION.—Lat 33° 17' 32", long 117° 27' 21", in NW 1/4 SE 1/4 sec.24, T.10 S., R.6 W., San Diego County, Hydrologic Unit 18070301, on Camp Joseph H. Pendleton Naval Reservation, on upstream side and at center of Southern Pacific Railroad bridge, 0.5 mi upstream from mouth, and 8.5 mi northwest of Oceanside.

DRAINAGE AREA.—26.6 mi<sup>2</sup>.

PERIOD OF RECORD.—May 1951 to September 1967, October 1969 to September 1979, and October 1993 to current year. Discharge records for October 1967 to September 1969 and October 1979 to September 1993 available in files of U.S. Marine Corps at Camp Pendleton.

REVISED RECORDS.—WDR CA-72-1: 1971(M).

GAGE.—Water-stage recorder and multiple concrete culvert control. Elevation of gage is 35 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair except for estimated daily discharges, which are poor. No regulation upstream from station. Camp Pendleton Water Treatment Plant No. 9 discharges to the channel at a point approximately 2.7 mi upstream from gage. Some pumping upstream from station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,300 ft<sup>3</sup>/s, estimated, Mar. 4, 1978, gage height, 13.67 ft, from floodmarks, based on culvert computation of peak flow; no flow for several days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Feb. 25, 1969, reached a stage of 7.25 ft, from floodmarks, discharge, 4,200 ft<sup>3</sup>/s.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.01	0.00	0.01	0.03	0.01	e0.26	0.07	0.03	0.00	0.00	0.00	0.02
2	0.00	0.00	0.01	0.03	0.01	e0.22	0.07	0.03	0.00	0.00	0.00	0.00
3	0.00	0.00	0.01	0.03	0.00	e0.18	0.07	0.04	0.00	0.00	0.00	0.00
4	0.00	0.00	0.01	0.03	0.01	e0.15	0.08	0.03	0.00	0.00	0.00	0.00
5	0.00	0.00	0.01	0.03	0.01	0.13	0.06	0.02	0.00	0.00	0.00	0.00
6	0.00	0.00	0.01	0.02	0.01	0.11	0.06	0.02	0.00	0.00	0.00	0.00
7	0.00	0.00	0.01	0.02	0.01	0.08	0.05	0.02	0.00	0.00	0.00	0.00
8	0.01	0.01	0.01	0.02	0.01	0.06	0.05	0.02	0.00	0.00	0.01	0.00
9	0.00	0.00	0.01	0.02	0.01	0.06	0.05	0.01	0.00	0.00	0.00	0.00
10	0.00	0.00	0.01	0.02	0.01	0.07	0.04	0.01	0.00	0.00	0.01	0.00
11	0.00	0.00	0.01	0.02	0.01	0.07	0.04	0.01	0.00	0.00	0.01	0.00
12	0.01	0.00	0.01	0.01	7.8	0.07	0.05	0.01	0.00	0.00	0.01	0.00
13	0.01	0.00	0.01	0.01	17	0.07	0.05	0.01	0.00	0.00	0.00	0.00
14	0.00	0.00	0.01	0.01	0.05	0.07	5.3	0.01	0.00	0.00	0.00	0.00
15	0.00	0.00	0.01	0.01	0.01	38	5.4	0.01	0.00	0.00	0.01	0.00
16	0.00	0.00	0.04	0.01	0.01	153	e0.19	0.01	0.00	0.00	0.01	0.00
17	0.00	0.00	0.10	0.01	0.01	14	e0.16	0.00	0.00	0.00	0.01	0.00
18	0.00	0.00	0.03	0.01	0.01	e0.17	e0.13	0.00	0.00	0.01	0.01	0.00
19	0.00	0.00	0.02	0.01	0.01	e0.15	e0.10	0.00	0.00	0.01	0.01	0.00
20	0.00	0.00	1.5	0.01	0.01	e0.13	e0.08	0.00	0.00	0.00	0.01	0.00
21	0.00	0.00	0.06	0.01	0.01	e0.13	e0.08	0.00	0.00	0.01	0.01	0.00
22	0.00	0.00	0.04	0.01	0.01	e0.11	e0.07	0.00	0.00	0.01	0.02	0.00
23	0.00	0.00	0.04	0.01	0.01	e0.11	e0.07	0.00	0.00	0.01	0.02	0.00
24	0.00	0.00	0.03	0.01	0.01	e0.10	0.06	0.00	0.00	0.01	0.01	0.00
25	0.00	0.00	0.03	0.01	94	e0.10	0.06	0.00	0.00	0.00	0.02	0.00
26	0.00	0.00	0.03	0.01	25	0.10	0.05	0.00	0.00	0.00	0.02	0.00
27	0.00	0.00	0.03	0.01	6.6	0.09	0.05	0.00	0.00	0.00	0.03	0.00
28	0.00	0.00	0.03	0.01	e0.30	0.08	0.04	0.00	0.00	0.00	0.03	0.00
29	0.00	0.00	0.03	0.01	---	0.08	0.04	0.00	0.00	0.00	0.03	0.00
30	0.00	0.01	0.03	0.01	---	0.08	0.03	0.00	0.00	0.00	0.03	0.00
31	0.00	---	0.03	0.01	---	0.07	---	0.00	---	0.00	0.03	---
TOTAL	0.04	0.02	2.22	0.47	150.95	208.10	12.65	0.29	0.00	0.06	0.35	0.02
MEAN	0.001	0.001	0.072	0.015	5.39	6.71	0.42	0.009	0.000	0.002	0.011	0.001
MAX	0.01	0.01	1.5	0.03	94	153	5.4	0.04	0.00	0.01	0.03	0.02
MIN	0.00	0.00	0.01	0.01	0.00	0.06	0.03	0.00	0.00	0.00	0.00	0.00
AC-FT	0.08	0.04	4.4	0.9	299	413	25	0.6	0.00	0.1	0.7	0.04

e Estimated.



11046100 LAS FLORES CREEK NEAR OCEANSIDE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.080	0.26	0.72	3.74	6.36	8.57	1.94	0.39	0.15	0.11	0.099	0.11
MAX	0.94	4.81	12.9	35.6	146	143	29.3	8.95	2.32	1.27	1.17	1.15
(WY)	1999	1966	1967	1995	1998	1978	1958	1998	1998	1998	1998	1998
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1952	1954	1954	1963	1961	1955	1953	1953	1952	1952	1952	1952

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1952 - 2003	
ANNUAL TOTAL	27.71		375.17			
ANNUAL MEAN	0.076		1.03		1.86	
HIGHEST ANNUAL MEAN					17.9	
LOWEST ANNUAL MEAN					0.006	
HIGHEST DAILY MEAN	1.5	Dec 20	153	Mar 16	1050	Feb 24 1998
LOWEST DAILY MEAN	0.00	Aug 14	0.00	Oct 2	0.00	Oct 1 1951
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 14	0.00	Oct 14	0.00	Oct 1 1951
MAXIMUM PEAK FLOW			239	Mar 15	e7300	Mar 4 1978
MAXIMUM PEAK STAGE			1.92	Mar 15	13.67	Mar 4 1978
ANNUAL RUNOFF (AC-FT)	55		744		1350	
10 PERCENT EXCEEDS	0.16		0.08		0.70	
50 PERCENT EXCEEDS	0.06		0.01		0.01	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated.



## 11046102 LAS FLORES CREEK LAGOON AT MOUTH, NEAR OCEANSIDE, CA—Continued

## PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	8.7	8.3	7.4	7.3	8.7	8.2	7.0	6.8
2	---	---	---	---	8.7	8.4	7.4	7.1	8.8	8.2	7.0	6.8
3	---	---	---	---	8.6	8.5	7.3	7.1	9.1	8.2	7.1	6.8
4	---	---	---	---	8.5	8.2	7.3	7.1	8.9	8.2	7.4	6.9
5	---	---	---	---	8.5	8.2	7.4	7.2	8.9	8.3	7.4	7.2
6	---	---	---	---	8.4	8.2	7.4	7.2	8.9	8.3	7.4	7.1
7	---	---	---	---	8.4	8.1	7.5	7.2	8.9	8.1	7.3	7.1
8	---	---	---	---	8.5	8.1	7.5	7.2	8.6	8.1	7.2	7.0
9	---	---	---	---	8.2	7.8	7.4	7.2	8.5	8.0	7.2	7.0
10	---	---	---	---	8.1	7.8	7.4	7.2	8.7	8.0	7.3	7.0
11	---	---	---	---	8.7	7.7	7.4	7.3	8.8	8.4	7.5	7.2
12	---	---	---	---	8.8	8.3	7.5	7.3	8.8	8.5	7.6	7.3
13	---	---	---	---	8.4	8.1	7.5	7.3	8.8	8.4	7.9	7.3
14	---	---	---	---	8.5	8.3	7.3	7.3	9.0	6.8	8.4	7.6
15	---	---	---	---	8.5	8.3	7.4	7.3	7.0	6.8	8.6	7.9
16	---	---	---	---	8.5	8.4	7.4	7.4	7.0	6.7	8.8	8.4
17	---	---	---	---	8.5	8.4	7.5	7.4	7.1	6.7	8.8	8.3
18	---	---	---	---	8.6	8.4	7.4	7.4	7.1	6.8	8.8	8.4
19	---	---	---	---	8.5	8.4	7.5	7.4	6.9	6.7	8.8	8.4
20	---	---	---	---	8.5	8.4	7.5	7.4	7.0	6.7	8.8	8.4
21	---	---	---	---	8.5	8.4	7.6	7.5	7.0	6.8	8.8	8.4
22	---	---	---	---	8.5	8.4	7.6	7.5	6.9	6.8	8.8	8.5
23	---	---	---	---	8.5	8.4	8.2	7.1	7.0	6.8	8.7	8.5
24	---	---	---	---	8.6	8.3	8.3	8.1	7.0	6.9	8.7	8.2
25	---	---	---	---	8.5	8.3	8.3	8.1	7.0	6.8	8.6	8.3
26	---	---	---	---	8.3	7.9	8.5	8.1	6.9	6.7	8.6	8.5
27	---	---	---	---	8.1	7.8	8.7	8.2	6.9	6.7	8.6	8.5
28	---	---	---	---	7.8	7.6	8.6	8.3	6.9	6.7	8.6	8.5
29	---	---	---	---	7.7	7.5	8.7	8.2	6.9	6.7	8.6	8.5
30	---	---	---	---	7.6	7.4	8.6	8.1	7.0	6.9	8.6	8.5
31	---	---	---	---	---	---	8.7	8.1	6.9	6.7	---	---
MONTH	---	---	---	---	8.8	7.4	8.7	7.1	9.1	6.7	8.8	6.8

## SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	36900	36100	31300	30800	15200	13200	17800	17200
2	---	---	---	---	36900	36200	31400	30700	14900	13500	17400	16700
3	---	---	---	---	36500	36100	31600	30400	15000	13500	17000	15900
4	---	---	---	---	36200	35800	31000	30000	14700	13400	17100	15500
5	---	---	---	---	35900	35400	31100	30100	14400	13200	17000	16200
6	---	---	---	---	35800	35200	31200	30600	14300	6250	16600	15800
7	---	---	---	---	35400	34800	30900	30600	14400	12600	15900	15400
8	---	---	---	---	35300	34600	30800	30600	14000	12500	15600	14900
9	---	---	---	---	34700	34300	30700	30600	13700	12700	15100	14700
10	---	---	---	---	34500	34200	30700	30400	13900	12400	14700	13100
11	---	---	---	---	34600	34100	30600	30200	12900	4460	13200	12400
12	---	---	---	---	34600	34100	30300	29900	12800	4810	12600	11300
13	---	---	---	---	36900	31900	30000	28100	12800	4700	11600	10500
14	---	---	---	---	36900	33100	28100	27700	23900	11900	10500	9170
15	---	---	---	---	34100	33100	27900	27600	23500	21700	9330	8480
16	---	---	---	---	33500	33000	27700	27400	22900	21800	8480	8260
17	---	---	---	---	33200	32800	27500	27200	23200	21400	8310	8040
18	---	---	---	---	33000	32800	27200	27000	23000	21400	8280	8130
19	---	---	---	---	33300	32800	27000	26700	23500	21600	8180	7940
20	---	---	---	---	33300	32800	26800	26500	22800	20900	8020	7870
21	---	---	---	---	33200	32900	26500	26300	22400	20800	7900	7810
22	---	---	---	---	33400	32900	26300	26000	22400	20600	7810	7620
23	---	---	---	---	33400	32900	26100	16100	21700	19900	7690	7460
24	---	---	---	---	33500	32700	16600	15000	20600	19300	7620	3340
25	---	---	---	---	32900	32600	16300	14700	20200	18900	7590	4810
26	---	---	---	---	32700	32000	16200	14100	20000	18600	7390	7350
27	---	---	---	---	32300	31700	16500	14000	19600	18400	7380	3120
28	---	---	---	---	32000	31500	15500	14200	19600	18000	7300	3720
29	---	---	---	---	31800	31400	15600	13700	19500	17900	7240	3050
30	---	---	---	---	31500	31100	15500	13400	19000	17900	6950	2280
31	---	---	---	---	---	---	15600	13200	18400	17200	---	---
MONTH	---	---	---	---	36900	31100	31600	13200	23900	4460	17800	2280

## PACIFIC OCEAN

11046102 LAS FLORES CREEK LAGOON AT MOUTH, NEAR OCEANSIDE, CA—Continued

TEMPERATURE, WATER, DEGREE C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	31.7	30.1	29.3	28.6	26.8	23.2	26.9	26.5
2	---	---	---	---	31.6	30.6	29.0	28.5	26.7	22.4	26.7	26.3
3	---	---	---	---	31.4	31.0	29.2	28.7	26.7	21.6	26.4	25.1
4	---	---	---	---	31.8	30.7	29.2	28.5	26.7	22.8	26.0	25.4
5	---	---	---	---	31.4	30.6	29.0	28.6	26.3	22.0	26.7	25.7
6	---	---	---	---	31.3	30.6	29.1	28.6	26.0	21.5	26.9	25.7
7	---	---	---	---	30.9	30.3	28.8	28.4	26.7	21.7	26.6	25.6
8	---	---	---	---	30.5	30.0	28.8	28.5	26.5	22.6	26.8	25.6
9	---	---	---	---	30.3	29.4	28.5	28.3	27.8	23.5	26.1	25.5
10	---	---	---	---	31.4	29.4	28.3	28.0	27.7	23.6	25.6	24.1
11	---	---	---	---	33.2	30.1	28.0	27.9	26.1	22.0	25.0	23.2
12	---	---	---	---	33.0	22.6	28.0	27.8	26.5	22.5	24.8	22.5
13	---	---	---	---	25.3	22.6	29.1	27.8	26.4	22.5	25.0	23.0
14	---	---	---	---	24.8	22.1	29.0	28.7	27.4	21.7	24.9	23.1
15	---	---	---	---	25.3	23.2	28.8	28.4	27.6	26.8	24.5	21.8
16	---	---	---	---	25.8	25.2	28.5	28.1	27.6	26.8	24.9	21.6
17	---	---	---	---	26.1	25.6	28.2	27.9	28.3	26.9	24.4	21.7
18	---	---	---	---	26.2	26.0	28.2	27.9	28.7	27.6	24.7	21.8
19	---	---	---	---	26.2	26.1	28.3	27.7	29.2	27.4	24.5	21.5
20	---	---	---	---	26.5	26.1	28.9	28.1	28.8	27.0	24.5	21.2
21	---	---	---	---	26.6	26.4	28.9	28.7	28.6	27.0	22.8	20.4
22	---	---	---	---	27.2	26.6	28.8	27.8	28.6	27.0	22.4	20.2
23	---	---	---	---	27.9	27.0	27.8	27.1	28.3	26.5	21.8	20.0
24	---	---	---	---	28.3	27.5	27.6	26.0	27.0	26.2	22.9	20.5
25	---	---	---	---	28.3	27.7	27.4	25.6	27.1	26.3	25.1	21.2
26	---	---	---	---	28.3	27.7	26.6	24.9	27.6	26.3	24.0	21.8
27	---	---	---	---	28.3	27.8	25.9	23.0	27.4	26.5	23.3	21.7
28	---	---	---	---	28.5	28.0	26.4	23.1	27.6	26.4	22.3	21.2
29	---	---	---	---	29.0	28.2	27.6	24.2	27.9	26.5	23.1	20.9
30	---	---	---	---	29.2	28.7	27.8	24.0	27.4	26.7	22.6	21.1
31	---	---	---	---	---	---	28.1	23.5	27.2	26.6	---	---
MONTH	---	---	---	---	33.2	22.1	29.3	23.0	29.2	21.5	26.9	20.0

## 11046250 SAN ONOFRE CREEK AT SAN ONOFRE, CA

LOCATION.—Lat 33° 23'02", long 117° 34'24", in SE 1/4 SE 1/4 sec.14, T.9 S., R.7 W., San Diego County, Hydrologic Unit 18070301, on Camp Joseph H. Pendleton Naval Reservation, on left bank, 0.2 mi north of San Onofre, 0.3 mi upstream from Interstate Highway 5, and 0.5 mi upstream from mouth.

DRAINAGE AREA.—42.2 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1946 to September 1967, January to September 1989, October 1998 to current year. Previous periods of gage operation were at site 250 ft upstream and at different datum.

WATER TEMPERATURE: Water years 1982–83, 1988–89.

SEDIMENT DATA: Water years 1982–83, 1988–89.

GAGE.—Water-stage recorder, crest-stage gage, and concrete road crossing. Elevation of gage is 15 ft above NGVD of 1929, from topographic map.

REMARKS.—Records poor. No regulation upstream from station. Detention basins upstream from station for ground-water recharge. Pumping upstream from station for irrigation and water supply.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,600 ft<sup>3</sup>/s, Apr. 1, 1958, gage height, 6.90 ft, site and datum then in use; no flow for all or part of most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 150 ft<sup>3</sup>/s, or maximum, from rating curve extended above 54 ft<sup>3</sup>/s, on basis of critical-depth computations:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 25	1545	unknown	4.64	Mar. 16	0715	unknown	6.01

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.14	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	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	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	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	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	22	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	17	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	e15	0.07	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	e341	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	47	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	2.7	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.63	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	0.00	e143	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	e13	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	7.6	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	3.2	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	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	0.00	---
TOTAL	0.00	0.00	0.00	0.00	205.80	406.47	0.07	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	7.35	13.1	0.002	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	143	341	0.07	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	408	806	0.1	0.00	0.00	0.00	0.00	0.00

e Estimated.

## SAN ONOFRE CREEK BASIN

## 11046250 SAN ONOFRE CREEK AT SAN ONOFRE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.000	0.47	2.84	2.80	2.61	3.46	2.63	0.004	0.000	0.000	0.000	0.000
MAX	0.000	12.3	63.6	37.1	32.2	41.9	62.6	0.10	0.000	0.000	0.000	0.000
(WY)	1947	1966	1967	1952	1962	1952	1958	1958	1947	1947	1947	1947
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947	1947

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1947 - 2003	
ANNUAL TOTAL	0.00		612.34			
ANNUAL MEAN	0.000		1.68		1.26	
HIGHEST ANNUAL MEAN					8.48 1958	
LOWEST ANNUAL MEAN					0.000 1947	
HIGHEST DAILY MEAN	0.00	Jan 1	341	Mar 16	887	Dec 6 1966
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1946
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1946
MAXIMUM PEAK FLOW			unknown	Mar 16	2600	Apr 1 1958
MAXIMUM PEAK STAGE			6.01	Mar 16	6.90	Apr 1 1958
ANNUAL RUNOFF (AC-FT)	0.00		1210		910	
10 PERCENT EXCEEDS	0.00		0.00		0.00	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	



## 11046252 SAN ONOFRE CREEK LAGOON AT MOUTH, NEAR SAN CLEMENTE, CA—Continued

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	7.7	7.4	7.6	7.4	7.4	7.3	7.4	7.3
2	---	---	---	---	7.6	7.4	7.6	7.4	7.4	7.3	7.4	7.3
3	---	---	---	---	7.6	7.4	7.6	7.2	7.4	7.3	7.3	7.2
4	---	---	---	---	7.6	7.3	7.6	7.2	7.5	7.3	7.3	7.2
5	---	---	---	---	7.5	7.3	7.6	7.2	7.5	7.3	7.3	7.2
6	---	---	---	---	7.5	7.3	7.6	7.2	7.6	7.2	7.3	7.1
7	---	---	---	---	7.5	7.3	7.5	7.2	7.6	7.3	7.4	7.1
8	---	---	---	---	7.5	7.3	7.5	7.2	7.6	7.3	7.4	7.1
9	---	---	---	---	7.4	7.3	7.5	7.2	7.6	7.3	7.4	7.2
10	---	---	---	---	7.6	7.3	7.6	7.3	7.6	7.2	7.4	7.3
11	---	---	---	---	7.5	7.3	7.6	7.3	7.6	7.2	7.4	7.2
12	---	---	---	---	7.4	7.1	7.5	7.1	7.4	7.2	7.4	7.3
13	---	---	---	---	7.4	7.0	7.3	7.0	7.4	7.3	7.4	7.2
14	---	---	---	---	7.2	7.0	7.2	7.0	7.4	7.2	7.4	7.2
15	---	---	---	---	7.0	7.0	7.1	7.0	7.3	7.2	7.4	7.2
16	---	---	---	---	7.1	7.0	7.3	7.1	7.3	7.2	7.3	7.2
17	---	---	---	---	7.3	7.1	7.3	7.2	7.3	7.2	7.3	7.2
18	---	---	---	---	7.4	7.3	7.3	7.2	7.5	7.2	7.3	7.1
19	---	---	---	---	7.4	7.4	7.4	7.2	7.5	7.2	7.4	7.1
20	---	---	---	---	7.6	7.4	7.5	7.2	7.5	7.2	7.4	7.2
21	---	---	---	---	7.5	7.4	7.5	7.2	7.5	7.2	7.4	7.2
22	---	---	---	---	7.5	7.4	7.4	7.2	7.4	7.2	7.3	7.2
23	---	---	---	---	7.6	7.4	7.7	7.3	7.5	7.2	7.4	7.2
24	---	---	---	---	7.6	7.3	7.6	7.2	7.6	7.2	7.4	7.3
25	---	---	---	---	7.6	7.3	7.6	7.2	7.6	7.2	7.4	7.3
26	---	---	---	---	7.7	7.3	7.6	7.3	7.6	7.2	7.5	7.2
27	---	---	---	---	7.6	7.2	7.6	7.2	7.5	7.2	7.5	7.3
28	---	---	---	---	7.7	7.3	7.6	7.3	7.5	7.3	7.5	7.3
29	---	---	---	---	7.6	7.3	7.7	7.3	7.4	7.3	7.4	7.3
30	---	---	---	---	7.6	7.4	7.7	7.3	7.5	7.2	7.5	7.3
31	---	---	---	---	---	---	7.6	7.3	7.4	7.2	---	---
MONTH	---	---	---	---	7.7	7.0	7.7	7.0	7.6	7.2	7.5	7.1

## SPECIFIC CONDUCTANCE, MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	1210	1140	1220	1200	1140	1110	1180	1160
2	---	---	---	---	1200	1130	1220	1190	1140	1130	1180	1160
3	---	---	---	---	1170	1140	1210	1180	1150	1130	1190	1170
4	---	---	---	---	1180	1140	1210	1180	1150	1120	1200	1170
5	---	---	---	---	1200	1130	1210	1170	1160	1130	1220	1180
6	---	---	---	---	1220	1150	1210	1180	1160	1130	1260	1190
7	---	---	---	---	1230	1170	1240	1140	1160	1130	1270	1220
8	---	---	---	---	1250	1140	1280	1200	1160	1130	1250	1220
9	---	---	---	---	1270	1210	1270	1160	1150	1130	1230	1200
10	---	---	---	---	1250	1210	1250	1210	1150	1130	1220	1190
11	---	---	---	---	1250	1190	1210	1090	1170	1130	1220	1180
12	---	---	---	---	1360	1180	10700	1170	1190	1160	1200	1180
13	---	---	---	---	11700	1200	10700	2990	1180	1150	1220	1180
14	---	---	---	---	14500	4430	10800	3340	1170	1150	1220	1180
15	---	---	---	---	14500	7800	11000	4590	1170	1140	1270	1200
16	---	---	---	---	9930	3710	4640	1370	1160	1120	1360	1270
17	---	---	---	---	3710	1320	1370	1200	1150	1130	1430	1300
18	---	---	---	---	1460	1180	1210	1150	1150	1120	---	---
19	---	---	---	---	1200	1160	1220	1150	1150	1120	---	---
20	---	---	---	---	1180	1140	1200	1160	1160	1120	---	---
21	---	---	---	---	1190	977	1200	1150	1200	1120	---	---
22	---	---	---	---	1200	1150	1190	1160	1200	1170	1300	1250
23	---	---	---	---	1230	1100	1200	1170	1220	1180	1270	1210
24	---	---	---	---	1280	1100	1230	1170	1220	1170	1240	1200
25	---	---	---	---	1340	1240	1200	1170	1210	1170	1230	1190
26	---	---	---	---	1390	1260	1200	1150	1200	1170	1220	1190
27	---	---	---	---	1390	1240	1200	1150	1190	1180	1200	1180
28	---	---	---	---	1300	1240	1180	1140	1190	1170	1200	1190
29	---	---	---	---	1280	1230	1150	1010	1190	1170	1200	1180
30	---	---	---	---	1240	1210	1160	1130	1190	1160	1200	1180
31	---	---	---	---	---	---	1140	1070	1190	1170	---	---
MONTH	---	---	---	---	14500	977	11000	1010	1220	1110	---	---



## 11046252 SAN ONOFRE CREEK LAGOON AT MOUTH, NEAR SAN CLEMENTE, CA—Continued

## TEMPERATURE, WATER, DEGREE C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	18.6	17.4	21.1	19.2	22.2	20.7	20.5	19.9
2	---	---	---	---	17.8	17.3	22.3	19.0	21.8	20.3	20.4	20.0
3	---	---	---	---	17.6	17.1	22.5	19.4	21.5	19.7	20.2	19.5
4	---	---	---	---	18.3	17.1	22.8	19.0	21.4	19.5	20.1	19.1
5	---	---	---	---	17.9	17.5	22.3	19.1	21.3	19.2	20.7	19.1
6	---	---	---	---	18.3	17.2	21.6	19.6	21.0	18.9	20.8	19.0
7	---	---	---	---	18.6	17.3	21.9	19.3	20.9	18.8	20.8	19.0
8	---	---	---	---	18.1	17.3	20.7	19.0	20.9	19.1	20.2	19.2
9	---	---	---	---	18.0	17.1	19.7	18.5	21.5	19.4	20.0	19.2
10	---	---	---	---	18.8	17.0	20.2	18.7	21.7	19.8	20.4	19.2
11	---	---	---	---	21.0	17.2	22.1	19.2	21.4	19.9	20.0	18.8
12	---	---	---	---	20.2	18.0	21.3	20.0	20.4	19.4	20.3	19.5
13	---	---	---	---	20.0	18.3	21.3	20.3	20.4	19.7	20.4	19.6
14	---	---	---	---	19.8	19.0	21.1	20.7	20.4	19.5	20.4	19.6
15	---	---	---	---	20.0	19.6	21.1	20.7	20.9	20.2	20.1	19.4
16	---	---	---	---	19.6	18.8	20.8	20.5	21.6	20.5	19.8	19.0
17	---	---	---	---	18.8	18.5	20.9	20.6	21.5	20.2	19.6	18.7
18	---	---	---	---	18.5	18.0	20.9	20.6	21.1	19.8	19.7	17.4
19	---	---	---	---	18.1	17.6	21.8	20.3	21.5	20.1	20.1	16.6
20	---	---	---	---	18.8	17.5	22.7	20.5	21.6	19.9	19.3	16.6
21	---	---	---	---	18.6	17.8	22.3	20.7	21.6	20.2	18.8	15.9
22	---	---	---	---	18.5	17.5	20.9	19.7	20.9	19.9	19.1	17.6
23	---	---	---	---	19.8	17.4	22.3	19.4	20.6	19.0	18.8	18.0
24	---	---	---	---	21.0	17.4	21.3	20.2	20.9	19.2	19.3	18.3
25	---	---	---	---	21.1	17.4	21.6	20.0	20.9	19.5	19.7	18.6
26	---	---	---	---	21.8	17.1	21.4	20.1	21.0	19.7	19.3	18.5
27	---	---	---	---	21.4	18.2	22.1	19.7	20.9	19.9	19.1	18.8
28	---	---	---	---	20.6	18.4	21.3	20.3	20.8	19.8	19.0	18.8
29	---	---	---	---	21.7	18.3	22.5	20.2	20.5	19.3	19.4	18.7
30	---	---	---	---	21.2	19.2	22.4	20.8	20.1	19.1	19.4	19.1
31	---	---	---	---	---	---	22.4	21.1	20.6	19.3	---	---
MONTH	---	---	---	---	21.8	17.0	22.8	18.5	22.2	18.8	20.8	15.9

## 11046300 SAN MATEO CREEK NEAR SAN CLEMENTE, CA

LOCATION.—Lat 33° 28' 15", long 117° 28' 20", in SE 1/4 NE 1/4 sec.23, T.8 S., R.6 W., San Diego County, Hydrologic Unit 18070301, on Camp Joseph H. Pendleton Naval Reservation, on left bank, 0.4 mi downstream from mouth of Devil Canyon, and 8.6 miles northeast of San Clemente.

DRAINAGE AREA.—80.8 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1952 to September 1967, October 1993 to current year. Discharge records for October 1967 to September 1977 and October 1989 to September 1993 available in files of U.S. Marine Corps at Camp Pendleton.

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 405 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, 12,500 ft<sup>3</sup>/s, Feb. 23, 1998, gage height, 12.83 ft, on basis of slope-area measurement of peak flow; no flow for several days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 9,240 ft<sup>3</sup>/s, gage height, 11.12 ft, Jan. 25, 1969.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 150 ft<sup>3</sup>/s, or maximum, from rating curve extended above 167 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 13	1630	313	4.58	Mar. 15	unknown	1,760	6.92
Feb. 25	1215	1,280	6.34				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.50	0.43	35	8.0	5.5	1.2	0.38	0.00	0.00
2	0.00	0.00	0.04	0.48	0.42	23	7.5	5.2	1.2	0.32	0.00	0.00
3	0.00	0.00	0.10	0.47	0.41	18	7.1	5.6	1.2	0.26	0.00	0.00
4	0.00	0.00	0.10	0.45	0.39	16	6.4	8.7	1.2	0.21	0.00	0.00
5	0.00	0.00	0.11	0.45	0.42	15	6.2	8.4	1.4	0.18	0.00	0.00
6	0.00	0.00	0.11	0.43	0.42	12	5.9	6.9	1.5	0.14	0.00	0.00
7	0.00	0.00	0.11	0.45	0.42	10	5.5	6.1	1.7	0.10	0.00	0.00
8	0.00	0.00	0.11	0.46	0.43	8.8	4.9	6.3	1.8	0.05	0.00	0.00
9	0.00	0.00	0.11	0.53	0.45	7.7	4.2	6.0	1.9	0.00	0.00	0.00
10	0.00	0.00	0.11	0.56	0.45	6.8	3.8	5.2	2.0	0.00	0.00	0.00
11	0.00	0.00	0.11	0.56	0.62	6.0	3.4	4.7	1.9	0.00	0.00	0.00
12	0.00	0.00	0.11	0.56	12	5.5	3.3	4.2	1.8	0.00	0.00	0.00
13	0.00	0.00	0.11	0.54	190	5.0	3.1	3.8	1.6	0.00	0.00	0.00
14	0.00	0.00	0.11	0.52	56	4.6	11	3.9	1.4	0.00	0.00	0.00
15	0.00	0.00	0.11	0.52	19	e274	77	3.9	1.2	0.00	0.00	0.00
16	0.00	0.00	0.17	0.52	13	e816	26	3.7	1.0	0.00	0.00	0.00
17	0.00	0.00	1.7	0.52	8.2	246	18	3.6	0.90	0.00	0.00	0.00
18	0.00	0.00	1.6	0.52	5.5	103	15	3.2	0.83	0.00	0.00	0.00
19	0.00	0.00	0.71	0.49	4.0	62	14	2.8	0.79	0.00	0.00	0.00
20	0.00	0.00	0.72	0.48	3.1	43	12	2.6	0.80	0.00	0.00	0.00
21	0.00	0.00	1.9	0.48	2.4	34	11	2.4	0.87	0.00	0.00	0.00
22	0.00	0.00	1.7	0.48	2.0	27	10	2.0	0.95	0.00	0.00	0.00
23	0.00	0.00	1.0	0.48	1.7	23	9.9	1.9	1.0	0.00	0.00	0.00
24	0.00	0.00	0.76	0.48	1.6	20	9.3	1.8	0.99	0.00	0.00	0.00
25	0.00	0.00	0.65	0.48	332	18	8.6	2.0	0.87	0.00	0.00	0.00
26	0.00	0.00	0.58	0.48	268	15	8.2	2.0	0.73	0.00	0.00	0.00
27	0.00	0.00	0.54	0.47	126	14	7.7	2.0	0.61	0.00	0.00	0.00
28	0.00	0.00	0.52	0.45	69	12	7.1	1.7	0.53	0.00	0.00	0.00
29	0.00	0.00	0.52	0.45	---	11	6.6	1.5	0.47	0.00	0.00	0.00
30	0.00	0.00	0.52	0.45	---	9.9	6.0	1.5	0.43	0.00	0.00	0.00
31	0.00	---	0.52	0.45	---	9.1	---	1.3	---	0.00	0.00	---
TOTAL	0.00	0.00	15.56	15.16	1118.36	1910.4	326.7	120.4	34.77	1.64	0.00	0.00
MEAN	0.000	0.000	0.50	0.49	39.9	61.6	10.9	3.88	1.16	0.053	0.000	0.000
MAX	0.00	0.00	1.9	0.56	332	816	77	8.7	2.0	0.38	0.00	0.00
MIN	0.00	0.00	0.00	0.43	0.39	4.6	3.1	1.3	0.43	0.00	0.00	0.00
AC-FT	0.00	0.00	31	30	2220	3790	648	239	69	3.3	0.00	0.00

e Estimated.

## 11046300 SAN MATEO CREEK NEAR SAN CLEMENTE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.13	3.14	9.59	15.8	37.2	34.6	22.6	5.57	1.98	0.57	0.14	0.074
MAX	1.57	69.4	164	131	488	371	270	53.9	21.2	6.94	2.09	1.21
(WY)	1999	1966	1967	1995	1998	1995	1958	1998	1998	1998	1998	1998
MIN	0.000	0.000	0.000	0.000	0.089	0.035	0.007	0.000	0.000	0.000	0.000	0.000
(WY)	1953	1954	1954	1963	1961	1961	1961	1961	1960	1953	1953	1953

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1953 - 2003	
ANNUAL TOTAL	57.79		3542.99			
ANNUAL MEAN	0.16		9.71		10.8	
HIGHEST ANNUAL MEAN					65.7 1998	
LOWEST ANNUAL MEAN					0.019 1961	
HIGHEST DAILY MEAN	1.9	Dec 21	816	Mar 16	3150	Feb 24 1998
LOWEST DAILY MEAN	0.00	May 8	0.00	Oct 1	0.00	Oct 1 1952
ANNUAL SEVEN-DAY MINIMUM	0.00	May 8	0.00	Oct 1	0.00	Oct 1 1952
MAXIMUM PEAK FLOW			1760	Mar 15	12500	Feb 23 1998
MAXIMUM PEAK STAGE			6.92	Mar 15	12.83	Feb 23 1998
ANNUAL RUNOFF (AC-FT)	115		7030		7820	
10 PERCENT EXCEEDS	0.48		11		12	
50 PERCENT EXCEEDS	0.00		0.45		0.20	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 11046360 CRISTIANITOS CREEK ABOVE SAN MATEO CREEK, NEAR SAN CLEMENTE, CA

LOCATION.—Lat 33° 25' 35", long 117° 34' 10", in SW 1/4 SW 1/4 sec.36, T.8 S., R.7 W., San Diego County, Hydrologic Unit 18070301, on Camp Joseph H. Pendleton Naval Reservation, on left bank, at San Mateo Creek Road crossing, 0.5 mi upstream from confluence with San Mateo Creek, and 2.3 mi east of San Clemente.

DRAINAGE AREA.—31.6 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1993 to current year.

GAGE.—Water-stage recorder, crest-stage gage, and culvert control. Elevation of gage is 90 ft above NGVD of 1929, from topographic map.

October 1993 to Feb. 23, 1998, two water-stage recorders (one on each of two main channels) at same site at different datums. Gage destroyed by flood of Feb. 23, 1998, and was out of operation until Sept. 30, 1999, when it was relocated at present site.

REMARKS.—Records fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,800 ft<sup>3</sup>/s, estimated, Feb. 23, 1998, gage height unknown, on basis of drainage area relation with the peak on San Mateo Creek near San Clemente (station 11046300) and slope-area measurement of peak flow; no flow most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Jan. 16, 1952, reached a discharge of 1,800 ft<sup>3</sup>/s, gage height, 8.86 ft, datum then in use, at site 1.8 mi upstream (station 11046350), on basis of slope-area measurement.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended above 162 ft<sup>3</sup>/s:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1745	268	5.19	Feb. 25	1000	468	5.46
Dec. 20	0700	149	4.96	Mar. 15	1215	1,510	6.25

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.50	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	1.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.13	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	1.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	7.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	10	0.00	2.2	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.46	12	7.1	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	273	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	18	0.00	0.00	10	0.07	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.75	0.00	0.00	0.05	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	13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	1.2	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	115	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	2.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.04	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.05	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	1.68	32.95	0.00	137.98	295.05	9.37	0.54	0.00	0.00	0.00	0.00
MEAN	0.000	0.056	1.06	0.000	4.93	9.52	0.31	0.017	0.000	0.000	0.000	0.000
MAX	0.00	1.0	18	0.00	115	273	7.1	0.50	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	3.3	65	0.00	274	585	19	1.1	0.00	0.00	0.00	0.00

## 11046360 CRISTIANITOS CREEK ABOVE SAN MATEO CREEK, NEAR SAN CLEMENTE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.010	0.087	0.41	4.44	29.1	17.1	4.29	1.10	0.25	0.017	0.000	0.000
MAX	0.072	0.51	1.58	24.6	249	128	31.2	7.36	1.92	0.084	0.000	0.000
(WY)	2001	1997	1997	1995	1998	1995	1998	1998	1998	1997	1994	1994
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1994	1994	1994	1994	1999	1999	1994	1994	1994	1994	1994	1994

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1994 - 2003	
ANNUAL TOTAL	37.08		477.57			
ANNUAL MEAN	0.10		1.31		4.59	
HIGHEST ANNUAL MEAN					25.2 1998	
LOWEST ANNUAL MEAN					0.000 1999	
HIGHEST DAILY MEAN	18	Dec 16	273	Mar 15	1400	Feb 24 1998
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1993
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1993
MAXIMUM PEAK FLOW			1510	Mar 15	e5800	Feb 23 1998
MAXIMUM PEAK STAGE			6.25	Mar 15	a	Feb 23 1998
ANNUAL RUNOFF (AC-FT)	74		947		3320	
10 PERCENT EXCEEDS	0.00		0.00		1.2	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated.

a Peak stage is unknown but is known to have occurred on Feb. 23, 1998.

## 11046370 SAN MATEO CREEK AT SAN ONOFRE, CA

LOCATION.—Lat 33° 23' 28", long 117° 35' 23", in SW 1/4 NW 1/4 sec.14, T.9 S., R.7 W., [San Diego County](#), Hydrologic Unit 18070301, on Camp Joseph H. Pendleton Naval Reservation, at bridge on Interstate Highway 5, 0.5 mi upstream from mouth, and 2.6 mi downstream from Cristianitos Creek.

DRAINAGE AREA.—132 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1946 to September 1967 and October 1984 to September 1985. Discharge measurements only, October 1998 to January 2003 (discontinued).

SEDIMENT DATA: Water years 1982–85.

GAGE.—None. Elevation of station is 20 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow partly regulated by small detention reservoirs.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,000 ft<sup>3</sup>/s, estimated, Dec. 5, 1966, gage height, 10.42 ft, datum then in use; maximum gage height, 12.9 ft, Mar. 1, 1983 (backwater from channel vegetation), datum then in use; no flow at times in some years

## DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 2002 TO JANUARY 2003

Date	Time	Discharge (ft <sup>3</sup> /s)
Oct. 3	0828	.08
Nov. 13	1055	.08
Dec. 5	1141	.05
Jan. 6	1200	.04

## 11046372 SAN MATEO CREEK LAGOON AT MOUTH, NEAR SAN CLEMENTE, CA

LOCATION.—Lat 33° 23' 12", long 117° 35' 38", in NE 1/4 SE 1/4 sec.15, T.9 S., R.7 W., San Diego County, Hydrologic Unit 18070301, at the mouth of San Mateo Creek near San Clemente, 0.40 mi downstream of Interstate 5 freeway, and 3.0 mi downstream from Cristianitos Creek.

DRAINAGE AREA.—139 mi<sup>2</sup>.

PERIOD OF RECORD.—June 2003 to September 2003.

DISSOLVED OXYGEN: June 2003 to September 2003.

pH: June 2003 to September 2003.

SPECIFIC CONDUCTANCE: June 2003 to September 2003.

WATER TEMPERATURE: June 2003 to September 2003.

PERIOD OF DAILY RECORD.—June 2003 to September 2003.

DISSOLVED OXYGEN: June 2003 to September 2003.

pH: June 2003 to September 2003.

SPECIFIC CONDUCTANCE: June 2003 to September 2003.

WATER TEMPERATURE: June 2003 to September 2003.

INSTRUMENTATION.—Water-quality monitor since June 2003.

REMARKS.—Dissolved oxygen records rated fair. pH records rated good. Specific conductance records rated good. Temperature records rated excellent.

EXTREMES FOR PERIOD OF DAILY RECORD.—

DISSOLVED OXYGEN: Maximum recorded, 17.1 mg/L, June 13, 2003; minimum recorded, 2.3 mg/L, June 7, 2003.

pH: Maximum recorded, 8.2 standard units, June 13, 14, 2003; minimum recorded, 7.2 standard units, many days July to September 2003.

SPECIFIC CONDUCTANCE: Maximum recorded, 10,200 microsiemens, June 14, 2003; minimum recorded, 1,520 microsiemens, June 11, 2003.

WATER TEMPERATURE: Maximum recorded, 26.1°C, July 13, 31, 2003; minimum recorded, 18.7°C, June 9, 2003.

EXTREMES FOR CURRENT YEAR.—

DISSOLVED OXYGEN: Maximum recorded, 17.1 mg/L, June 13; minimum recorded, 2.3 mg/L, June 7.

pH: Maximum recorded, 8.2 standard units, June 13, 14; minimum recorded, 7.2 standard units, many days July to September.

SPECIFIC CONDUCTANCE: Maximum recorded, 10,200 microsiemens, June 11; minimum recorded, 1,520 microsiemens, June 11.

WATER TEMPERATURE: Maximum recorded, 26.1°C, July 13, 31; minimum recorded, 18.7°C, June 9.

## DISSOLVED OXYGEN, MG/L, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	7.2	3.9	6.0	3.1	7.8	4.8	8.1	2.6
2	---	---	---	---	7.8	3.9	6.1	4.1	7.8	4.7	8.5	3.2
3	---	---	---	---	7.3	3.6	6.6	4.2	7.8	5.1	9.8	4.2
4	---	---	---	---	6.8	3.5	6.4	4.2	7.4	5.0	9.3	3.5
5	---	---	---	---	7.1	4.1	6.5	4.4	7.2	5.1	8.8	3.7
6	---	---	---	---	6.9	4.1	6.8	3.8	7.6	5.6	9.3	6.0
7	---	---	---	---	6.4	2.3	6.5	3.8	7.9	5.8	10.2	5.9
8	---	---	---	---	6.3	2.8	6.2	3.3	8.0	5.3	9.8	5.4
9	---	---	---	---	7.6	4.0	6.0	3.9	8.4	5.3	10.0	4.8
10	---	---	---	---	7.1	3.5	6.2	3.5	8.2	5.7	9.4	5.1
11	---	---	---	---	7.0	4.0	6.5	3.5	7.6	5.0	9.6	5.5
12	---	---	---	---	14.1	5.0	12.0	4.0	7.8	4.7	8.9	2.7
13	---	---	---	---	17.1	3.8	13.6	3.6	8.2	5.9	9.1	4.2
14	---	---	---	---	16.0	5.6	12.7	7.7	8.3	5.9	9.1	3.6
15	---	---	---	---	15.1	7.3	14.3	8.6	8.0	3.9	8.9	3.4
16	---	---	---	---	10.9	4.3	14.9	6.3	8.4	5.2	9.4	4.2
17	---	---	---	---	6.7	4.0	6.4	4.6	8.5	5.5	9.6	5.0
18	---	---	---	---	6.6	3.5	6.8	4.4	8.4	4.7	9.5	6.6
19	---	---	---	---	7.6	4.3	7.2	3.9	8.3	5.7	9.4	6.5
20	---	---	---	---	7.8	4.4	7.1	4.8	8.3	4.7	8.9	6.8
21	---	---	---	---	8.0	3.7	6.9	5.0	9.4	3.3	8.9	5.3
22	---	---	---	---	8.1	3.4	6.3	4.5	9.7	4.3	9.6	6.0
23	---	---	---	---	8.8	4.2	6.7	4.8	9.8	6.1	9.2	5.7
24	---	---	---	---	8.8	5.9	8.2	4.3	9.6	4.4	9.4	4.7
25	---	---	---	---	8.9	6.1	8.2	5.3	9.4	3.5	9.6	5.2
26	---	---	---	---	8.4	5.2	8.2	5.4	9.9	4.9	10.3	5.6
27	---	---	---	---	8.8	4.4	8.6	5.0	10.5	2.9	8.9	5.0
28	---	---	---	---	8.4	4.1	8.1	5.0	9.3	4.3	9.3	4.5
29	---	---	---	---	6.9	3.7	8.3	5.3	8.8	4.7	9.3	5.1
30	---	---	---	---	6.7	3.6	7.5	5.3	9.0	4.2	9.2	5.5
31	---	---	---	---	---	---	7.8	3.7	8.5	2.9	---	---
MONTH	---	---	---	---	17.1	2.3	14.9	3.1	10.5	2.9	10.3	2.6

## 11046372 SAN MATEO CREEK LAGOON AT MOUTH, NEAR SAN CLEMENTE, CA—Continued

## PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	7.6	7.4	7.6	7.4	7.4	7.2	7.4	7.2
2	---	---	---	---	7.8	7.4	7.6	7.4	7.4	7.2	7.4	7.2
3	---	---	---	---	7.7	7.4	7.6	7.4	7.4	7.3	7.6	7.2
4	---	---	---	---	7.6	7.4	7.6	7.4	7.5	7.3	7.5	7.2
5	---	---	---	---	7.6	7.4	7.6	7.4	7.4	7.4	7.5	7.2
6	---	---	---	---	7.6	7.4	7.6	7.4	7.5	7.3	7.5	7.3
7	---	---	---	---	7.5	7.3	7.5	7.4	7.5	7.3	7.6	7.4
8	---	---	---	---	7.6	7.3	7.5	7.4	7.5	7.4	7.6	7.4
9	---	---	---	---	7.8	7.4	7.5	7.4	7.4	7.3	7.8	7.5
10	---	---	---	---	7.6	7.4	7.5	7.4	7.5	7.3	7.8	7.5
11	---	---	---	---	7.6	7.4	7.5	7.3	7.5	7.2	7.8	7.5
12	---	---	---	---	7.8	7.5	7.7	7.3	7.4	7.3	7.7	7.4
13	---	---	---	---	8.2	7.3	7.9	7.2	7.5	7.4	7.6	7.4
14	---	---	---	---	8.2	7.5	8.0	7.4	7.5	7.4	7.6	7.4
15	---	---	---	---	8.1	7.6	8.0	7.5	7.4	7.3	7.6	7.4
16	---	---	---	---	7.7	7.4	7.8	7.3	7.5	7.3	7.7	7.3
17	---	---	---	---	7.7	7.5	7.5	7.4	7.4	7.2	7.7	7.4
18	---	---	---	---	7.6	7.4	7.5	7.3	7.4	7.3	7.7	7.5
19	---	---	---	---	7.8	7.5	7.4	7.2	7.6	7.3	7.8	7.5
20	---	---	---	---	7.8	7.4	7.4	7.3	7.5	7.3	7.8	7.5
21	---	---	---	---	7.8	7.4	7.5	7.3	7.5	7.2	7.7	7.5
22	---	---	---	---	7.7	7.5	7.5	7.2	7.5	7.2	7.8	7.4
23	---	---	---	---	7.8	7.4	7.4	7.3	7.6	7.4	7.8	7.5
24	---	---	---	---	7.8	7.6	7.5	7.3	7.5	7.2	7.7	7.4
25	---	---	---	---	7.8	7.6	7.5	7.3	7.5	7.2	7.7	7.4
26	---	---	---	---	7.9	7.5	7.5	7.4	7.5	7.3	7.6	7.4
27	---	---	---	---	7.8	7.5	7.6	7.4	7.5	7.2	7.6	7.4
28	---	---	---	---	7.7	7.5	7.5	7.4	7.4	7.2	7.7	7.3
29	---	---	---	---	7.6	7.4	7.5	7.4	7.4	7.2	7.5	7.4
30	---	---	---	---	7.6	7.4	7.5	7.4	7.4	7.2	7.5	7.3
31	---	---	---	---	---	---	7.5	7.3	7.4	7.2	---	---
MONTH	---	---	---	---	8.2	7.3	8.0	7.2	7.6	7.2	7.8	7.2

## SPECIFIC CONDUCTANCE MICROSIEMENS/CM AT 25 DEG. C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	3080	2730	1780	1770	2050	2020	1740	1720
2	---	---	---	---	2930	2750	1790	1770	2020	1990	1720	1700
3	---	---	---	---	2900	2540	1780	1760	2000	1980	1710	1700
4	---	---	---	---	2640	2310	1770	1760	1990	1970	1710	1700
5	---	---	---	---	2440	2100	1760	1750	1980	1970	1720	1710
6	---	---	---	---	2300	1950	1780	1750	2010	1950	1740	1720
7	---	---	---	---	2130	1970	1830	1780	2030	2000	1750	1740
8	---	---	---	---	2040	1940	1850	1820	2020	1930	1760	1740
9	---	---	---	---	1980	1920	1860	1840	2010	2000	1750	1740
10	---	---	---	---	1970	1800	1850	1830	2000	1980	1750	1720
11	---	---	---	---	1800	1520	3280	1800	2100	1980	1730	1710
12	---	---	---	---	6810	1620	7960	2000	2190	2060	1720	1680
13	---	---	---	---	9320	1850	9380	4760	2240	2150	1680	1650
14	---	---	---	---	10200	6230	9380	6450	2150	2100	1660	1640
15	---	---	---	---	8650	4230	9400	5880	2110	2020	1640	1630
16	---	---	---	---	5210	2510	7510	3430	2030	1980	1640	1630
17	---	---	---	---	2900	2200	4010	3040	1980	1940	1670	1630
18	---	---	---	---	2510	2230	3280	3040	1940	1880	1740	1670
19	---	---	---	---	2420	2180	3320	2740	1880	1870	1810	1720
20	---	---	---	---	2380	2050	2980	2700	1870	1840	1870	1790
21	---	---	---	---	2270	2160	2720	2670	1850	1820	1890	1840
22	---	---	---	---	2200	1930	2700	2450	1840	1820	1920	1890
23	---	---	---	---	2060	1890	2570	2370	1840	1820	1950	1910
24	---	---	---	---	1960	1880	2400	2300	1840	1830	1950	1930
25	---	---	---	---	1890	1820	2320	2290	1840	1820	1930	1870
26	---	---	---	---	1860	1820	2300	2240	1830	1810	1880	1850
27	---	---	---	---	1840	1810	2250	2190	1810	1780	1850	1820
28	---	---	---	---	1820	1780	2200	2120	1780	1770	1830	1810
29	---	---	---	---	1790	1770	2160	2120	1780	1760	1810	1770
30	---	---	---	---	1790	1770	2120	2080	1770	1760	1770	1740
31	---	---	---	---	---	---	2080	2040	1760	1730	---	---
MONTH	---	---	---	---	10200	1520	9400	1750	2240	1730	1950	1630



## 11046372 SAN MATEO CREEK LAGOON AT MOUTH, NEAR SAN CLEMENTE, CA—Continued

## TEMPERATURE, WATER, DEGREE C, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	21.4	19.9	23.7	21.8	25.9	23.5	24.3	22.9
2	---	---	---	---	20.9	19.8	24.6	21.6	25.6	23.0	23.9	22.7
3	---	---	---	---	20.1	19.2	25.0	21.9	25.3	22.4	24.4	21.8
4	---	---	---	---	20.4	19.2	24.9	21.5	25.1	22.1	24.7	21.8
5	---	---	---	---	20.1	19.2	24.6	21.8	24.7	21.3	25.2	22.2
6	---	---	---	---	20.0	18.8	24.7	22.4	24.6	20.9	25.4	22.0
7	---	---	---	---	19.8	19.0	24.8	22.2	24.6	21.0	25.4	21.8
8	---	---	---	---	19.8	19.1	24.2	22.2	24.7	21.8	24.7	22.0
9	---	---	---	---	20.0	18.7	23.1	21.4	25.4	21.8	24.2	21.7
10	---	---	---	---	20.5	18.8	22.6	21.2	26.0	22.6	24.5	21.6
11	---	---	---	---	22.1	19.3	24.4	21.1	24.5	22.3	23.9	21.1
12	---	---	---	---	21.8	19.9	24.8	22.0	24.8	21.5	24.0	22.2
13	---	---	---	---	23.1	20.6	26.1	22.2	24.6	22.0	24.3	22.2
14	---	---	---	---	22.7	21.4	25.8	24.3	24.5	21.6	23.7	22.2
15	---	---	---	---	22.2	21.1	25.8	23.9	25.0	22.6	23.3	21.9
16	---	---	---	---	21.2	20.4	24.3	23.0	25.4	22.9	23.7	21.4
17	---	---	---	---	20.8	19.8	23.9	22.4	25.2	22.8	24.6	21.5
18	---	---	---	---	20.3	19.5	23.1	22.6	25.2	22.6	24.1	20.7
19	---	---	---	---	20.2	18.9	24.7	22.2	25.5	22.4	24.0	20.3
20	---	---	---	---	21.0	18.8	25.2	22.5	25.4	22.8	23.1	20.6
21	---	---	---	---	20.9	19.4	24.4	23.3	25.5	23.2	22.0	19.9
22	---	---	---	---	20.3	19.2	23.5	22.2	24.8	22.9	21.8	19.8
23	---	---	---	---	21.1	19.2	24.3	21.7	25.0	21.6	21.4	20.0
24	---	---	---	---	22.4	19.4	23.9	22.6	25.4	22.3	21.9	20.0
25	---	---	---	---	22.1	19.6	23.9	22.4	25.6	22.8	22.8	20.7
26	---	---	---	---	23.2	19.8	24.1	22.6	25.7	22.9	22.0	20.5
27	---	---	---	---	23.1	21.1	24.8	22.0	25.4	23.0	21.5	20.6
28	---	---	---	---	22.7	21.2	24.5	22.7	25.5	23.0	21.1	20.5
29	---	---	---	---	23.7	21.0	25.8	22.8	25.1	22.3	21.7	20.3
30	---	---	---	---	24.2	21.7	26.0	23.4	24.3	22.2	21.3	20.5
31	---	---	---	---	---	---	26.1	23.6	25.0	22.4	---	---
MONTH	---	---	---	---	24.2	18.7	26.1	21.1	26.0	20.9	25.4	19.8





## 11046530 SAN JUAN CREEK AT LA NOVIA STREET BRIDGE, AT SAN JUAN CAPISTRANO, CA

LOCATION.—Lat 33° 30' 09", long 117° 38' 50", in NW 1/4 SE 1/4 sec.6, T.8 S., R.8 W., Orange County, Hydrologic Unit 18070301, on right bank, 20 ft downstream from La Novia Street Bridge, 1.3 mi upstream from Arroyo Trabuco Creek, and 0.8 mi east of San Juan Capistrano.

DRAINAGE AREA.—109 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1985 to current year. October 1985 to September 1986, published as "San Juan Creek at San Juan Capistrano."

WATER TEMPERATURE: Water years 1986–88.

SEDIMENT DATA: Water years 1986–93.

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

REMARKS.—Records fair. No regulation upstream from station. Capistrano Water Co. diverts water 2.0 mi upstream. Various amounts of diverted water reach station as irrigation return flow. October 1928 to September 1969 and October 1969 to September 1985, data published as "San Juan Creek near San Juan Capistrano" (station 11046500) and "San Juan Creek at San Juan Capistrano" (station 11046550), which are located approximately 1.9 mi upstream and 1.0 mi downstream, respectively. Data for these sites are roughly equivalent.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 25,600 ft<sup>3</sup>/s, estimated, Mar. 5, 1995, gage height, 20.66 ft, from rating curve extended above 3,420 ft<sup>3</sup>/s; no flow for many days most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 22,400 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 5.60 ft, from floodmark, at site and datum then in use.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s, from rating curve extended above 3,510 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)
Feb. 25	1130	701	13.18	Apr. 14	2315	315	12.29
Mar. 16	0430	2,300	13.95				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.88	0.56	30	7.1	5.7	3.2	1.4	1.2	0.00
2	0.00	0.00	0.00	0.88	0.66	13	7.0	6.9	3.2	1.2	1.1	0.00
3	0.00	0.00	0.00	0.87	0.70	7.6	6.7	24	3.1	0.84	1.1	0.00
4	0.00	0.00	0.00	0.75	0.70	7.4	6.5	17	3.1	0.58	1.2	0.00
5	0.00	0.00	0.00	0.70	0.70	7.0	6.8	13	3.0	0.50	0.95	0.00
6	0.00	0.00	0.00	0.70	0.70	5.2	6.7	10	2.8	0.63	0.83	0.00
7	0.00	0.00	0.00	e0.55	0.72	4.4	6.3	9.1	2.8	0.24	0.33	0.00
8	0.00	1.5	0.00	e0.47	0.74	3.6	5.7	9.8	3.2	0.03	0.08	0.00
9	0.00	1.2	0.00	0.50	0.70	3.1	5.1	10	3.4	0.44	0.00	0.00
10	0.00	0.03	0.00	0.54	0.70	2.6	4.4	9.2	3.3	0.16	0.00	0.00
11	0.00	0.00	0.00	0.52	6.8	2.2	4.1	8.1	3.4	0.07	0.00	0.00
12	0.00	0.00	0.00	0.52	39	1.8	4.2	7.7	3.2	0.07	0.00	0.00
13	0.00	0.00	0.00	0.53	105	1.7	4.6	7.8	2.8	0.07	0.00	0.00
14	0.00	0.00	0.00	0.58	27	1.7	69	7.6	2.5	0.07	0.00	0.00
15	0.00	0.00	0.00	0.64	8.6	318	132	6.6	2.4	0.06	0.00	0.00
16	0.00	0.00	19	0.53	5.4	1250	40	6.5	2.4	0.08	0.00	0.00
17	0.00	0.00	35	0.61	4.0	255	24	6.2	2.4	0.12	0.00	0.00
18	0.00	0.00	2.7	0.54	3.4	117	18	5.1	2.3	0.26	0.00	0.00
19	0.00	0.00	0.92	0.53	2.9	76	13	4.6	2.1	0.20	0.00	0.00
20	0.00	0.00	19	0.61	2.8	53	13	4.5	2.1	0.39	0.00	0.00
21	0.00	0.00	7.5	0.62	2.5	38	9.8	3.8	2.1	0.37	0.00	0.00
22	0.00	0.00	2.8	0.69	2.3	30	7.8	3.3	2.6	0.12	0.00	0.00
23	0.00	0.00	1.9	0.70	2.4	25	6.8	3.5	2.8	0.64	0.00	0.00
24	0.00	0.00	1.4	0.70	3.0	20	6.4	4.3	2.6	0.33	0.00	0.00
25	0.00	0.00	1.0	0.70	237	18	6.0	4.3	2.4	0.24	0.00	0.00
26	0.00	0.00	0.83	0.70	109	15	5.9	3.9	2.0	0.23	0.00	0.00
27	0.00	0.00	0.70	0.51	138	14	6.2	3.9	1.8	0.73	0.00	0.00
28	0.00	0.00	0.74	e0.44	75	11	6.0	3.4	1.6	0.97	0.00	0.00
29	0.00	0.13	1.3	0.48	---	8.5	5.3	3.4	1.5	1.1	0.00	0.00
30	0.00	0.00	1.1	0.52	---	7.3	5.1	3.4	1.4	3.5	0.00	0.00
31	0.00	---	1.0	0.52	---	7.1	---	3.4	---	1.3	0.00	---
TOTAL	0.00	2.86	96.89	19.03	780.98	2354.2	449.5	220.0	77.5	16.94	6.79	0.00
MEAN	0.000	0.095	3.13	0.61	27.9	75.9	15.0	7.10	2.58	0.55	0.22	0.000
MAX	0.00	1.5	35	0.88	237	1250	132	24	3.4	3.5	1.2	0.00
MIN	0.00	0.00	0.00	0.44	0.56	1.7	4.1	3.3	1.4	0.03	0.00	0.00
AC-FT	0.00	5.7	192	38	1550	4670	892	436	154	34	13	0.00

e Estimated.

## 11046530 SAN JUAN CREEK AT LA NOVIA STREET BRIDGE, AT SAN JUAN CAPISTRANO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.52	2.31	4.60	55.2	95.3	70.7	18.4	10.2	3.41	1.14	0.51	0.40
MAX	3.26	9.45	16.8	590	816	663	121	94.9	25.5	8.93	3.83	3.33
(WY)	1999	1997	1997	1993	1998	1995	1998	1998	1998	1998	1998	1998
MIN	0.000	0.000	0.000	0.50	0.77	0.55	0.037	0.000	0.000	0.000	0.000	0.000
(WY)	1987	1987	1990	2000	2002	1990	1989	1987	1986	1986	1986	1986

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1986 - 2003	
ANNUAL TOTAL	269.57		4024.69			
ANNUAL MEAN	0.74		11.0		21.5	
HIGHEST ANNUAL MEAN					106 1993	
LOWEST ANNUAL MEAN					0.61 1989	
HIGHEST DAILY MEAN	35	Dec 17	1250	Mar 16	5700	Mar 5 1995
LOWEST DAILY MEAN	0.00	Feb 6	0.00	Oct 1	0.00	May 20 1986
ANNUAL SEVEN-DAY MINIMUM	0.00	May 10	0.00	Oct 1	0.00	May 20 1986
MAXIMUM PEAK FLOW			2300	Mar 16	e25600	Mar 5 1995
MAXIMUM PEAK STAGE			13.95	Mar 16	20.66	Mar 5 1995
ANNUAL RUNOFF (AC-FT)	535		7980		15580	
10 PERCENT EXCEEDS	2.1		10		22	
50 PERCENT EXCEEDS	0.00		0.70		0.93	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated.

## 11047300 ARROYO TRABUCO AT SAN JUAN CAPISTRANO, CA

LOCATION.—Lat 33° 29' 54", long 117° 39' 54", on line between secs.1 and 12, T.8 S., R.8 W., Orange County, Hydrologic Unit 18070301, on left bank, 30 ft downstream from Del Obispo Street Bridge, in San Juan Capistrano.

DRAINAGE AREA.—54.1 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1972 to September 1977, October 1983 to September 1989, October 1995 to current year.

WATER TEMPERATURE: Water years 1971–77, 1984.

SEDIMENT DATA: Water Years 1971–77, 1984–93.

GAGE.—Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 80 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair. No regulation or diversion upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,000 ft<sup>3</sup>/s, Feb. 23, 1998, gage height, 19.81 ft, from rating curve extended above 1,600 ft<sup>3</sup>/s; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 800 ft<sup>3</sup>/s, from rating curve extended above 1,600 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. 16	1730	2,890	14.88	Feb. 25	0630	2,750	14.75
Dec. 20	0730	958	12.81	Mar. 16	0645	1,460	13.41
Feb. 12	1730	838	12.82				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	2.3	7.7	4.4	3.9	56	12	9.9	9.6	4.9	4.1	3.4
2	2.0	2.2	5.5	4.5	3.9	47	12	10	10	4.8	4.0	3.4
3	2.1	2.1	4.9	4.5	4.0	46	9.6	115	11	4.7	3.8	2.9
4	1.8	2.0	4.5	4.5	4.0	48	9.4	44	12	4.4	3.9	3.3
5	1.8	2.1	4.6	4.5	4.0	36	9.6	18	13	4.4	3.8	3.4
6	1.8	2.1	4.3	4.2	4.1	20	9.3	13	14	4.4	3.6	3.3
7	1.8	2.0	4.2	4.5	4.2	17	10	13	12	4.6	3.6	3.3
8	1.8	209	4.4	30	4.1	14	13	23	11	3.7	3.4	3.1
9	1.8	287	4.2	14	4.4	13	12	12	15	3.3	3.4	3.2
10	1.6	79	4.4	6.0	4.4	12	11	11	15	3.1	3.2	3.2
11	1.7	9.5	4.5	6.0	132	13	11	11	12	3.2	3.3	3.1
12	1.7	7.2	4.6	5.7	261	12	10	11	10	3.2	3.4	3.1
13	1.8	5.9	4.6	5.2	258	12	11	12	8.5	3.1	3.3	3.0
14	1.9	5.0	4.6	5.1	56	12	293	12	7.8	3.0	3.2	3.0
15	2.0	4.6	4.6	4.4	15	311	165	12	7.2	3.0	3.3	3.0
16	2.1	4.2	459	4.5	7.9	725	31	13	7.2	3.1	3.3	3.0
17	2.2	4.0	69	4.1	7.0	195	25	13	7.0	3.4	3.2	3.0
18	2.2	4.0	12	4.5	6.8	84	22	15	5.9	3.7	3.3	2.8
19	2.2	3.8	6.0	4.5	6.9	59	20	16	5.9	3.8	3.3	2.4
20	2.2	3.8	228	4.8	5.2	49	19	17	6.2	3.6	3.6	2.6
21	2.3	3.7	15	5.2	4.7	43	20	15	6.3	3.4	3.1	2.6
22	2.3	3.6	7.3	5.2	4.6	40	20	14	6.6	3.5	3.1	2.6
23	2.3	3.8	5.5	5.4	4.4	52	19	12	9.1	3.7	3.2	2.7
24	2.3	3.8	5.0	5.5	6.1	32	20	12	8.9	3.6	2.9	2.7
25	2.4	3.8	4.7	5.6	897	55	17	11	5.9	3.6	2.8	2.6
26	2.4	3.4	4.5	8.1	262	32	13	11	5.7	3.7	2.8	2.8
27	2.3	3.5	4.7	6.5	228	24	12	12	5.4	3.6	3.2	2.6
28	2.3	3.6	4.9	4.1	61	22	12	10	5.5	3.7	3.4	2.7
29	2.3	40	13	3.9	---	17	12	9.0	5.6	4.4	3.4	2.9
30	2.3	58	5.0	4.2	---	17	12	9.4	5.2	22	3.3	2.8
31	2.3	---	4.6	3.9	---	14	---	9.5	---	6.1	3.4	---
TOTAL	63.9	769.0	919.8	187.5	2264.6	2129	871.9	525.8	264.5	136.7	104.6	88.5
MEAN	2.06	25.6	29.7	6.05	80.9	68.7	29.1	17.0	8.82	4.41	3.37	2.95
MAX	2.4	287	459	30	897	725	293	115	15	22	4.1	3.4
MIN	1.6	2.0	4.2	3.9	3.9	12	9.3	9.0	5.2	3.0	2.8	2.4
AC-FT	127	1530	1820	372	4490	4220	1730	1040	525	271	207	176

## 11047300 ARROYO TRABUCO AT SAN JUAN CAPISTRANO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.79	12.3	20.6	19.8	72.8	25.9	12.8	6.64	3.17	1.70	1.65	2.37
MAX	16.7	37.8	91.8	120	481	129	59.8	56.9	22.1	7.99	8.90	7.81
(WY)	2001	1997	1998	1997	1998	1998	1998	1998	1998	1998	1977	1986
MIN	0.052	0.81	1.73	0.85	2.84	3.74	0.92	0.71	0.007	0.055	0.019	0.000
(WY)	1974	1975	1973	1976	1977	1988	1977	1988	1973	1973	1973	1973

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1973 - 2003	
ANNUAL TOTAL	2880.2		8325.8			
ANNUAL MEAN	7.89		22.8		15.0	
HIGHEST ANNUAL MEAN					74.1 1998	
LOWEST ANNUAL MEAN					3.17 1976	
HIGHEST DAILY MEAN	459	Dec 16	897	Feb 25	2560	Feb 23 1998
LOWEST DAILY MEAN	1.1	Aug 9	1.6	Oct 10	0.00	Oct 1 1972
ANNUAL SEVEN-DAY MINIMUM	1.2	Aug 29	1.7	Oct 6	0.00	Oct 1 1972
MAXIMUM PEAK FLOW			2890	Dec 16	10000	Feb 23 1998
MAXIMUM PEAK STAGE			14.88	Dec 16	19.81	Feb 23 1998
ANNUAL RUNOFF (AC-FT)	5710		16510		10830	
10 PERCENT EXCEEDS	5.8		32		18	
50 PERCENT EXCEEDS	3.2		4.7		2.3	
90 PERCENT EXCEEDS	1.3		2.4		0.46	





11048200 AGUA CHINON WASH NEAR IRVINE, CA

LOCATION.—Lat 33° 40' 44", long 117° 42' 48", in Lomas De Santiago Grant, Orange County, Hydrologic Unit 18070204, on right bank, 4.8 mi upstream from confluence with San Diego Creek, and 4.0 mi east of Irvine.

DRAINAGE AREA.—2.85 mi<sup>2</sup>.

PERIOD OF RECORD.—July 2002 to current year.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 440 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair except for estimated daily discharges, which are poor. No diversion upstream from station. Irrigation return flow can cause low-flow fluctuations in discharge at times.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 144 ft<sup>3</sup>/s, Mar. 16, 2003, gage height, 2.17 ft; no flow for many 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)
Mar. 16	0115	144	2.17

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
3	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.00
4	0.00	e0.00	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	e0.00	0.00	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00
8	0.00	0.20	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	1.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.36	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	1.0	0.00	0.00	0.00	0.00	0.00	0.00	0.01
12	0.00	0.00	0.00	0.00	1.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	2.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.13	0.00	3.8	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	9.2	0.63	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	2.0	0.00	0.00	13	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.08	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	2.8	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	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.06	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	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	6.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	1.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.36	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	e0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.05	0.00	0.00
31	e0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	2.42	5.56	0.66	14.29	22.49	4.43	0.35	0.00	0.05	0.00	0.01
MEAN	0.000	0.081	0.18	0.021	0.51	0.73	0.15	0.011	0.000	0.002	0.000	0.000
MAX	0.00	1.5	2.8	0.50	6.2	13	3.8	0.33	0.00	0.05	0.00	0.01
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	4.8	11	1.3	28	45	8.8	0.7	0.00	0.1	0.00	0.02

e Estimated.

## SAN DIEGO CREEK BASIN

## 11048200 AGUA CHINON WASH NEAR IRVINE, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.000	0.081	0.18	0.021	0.51	0.73	0.15	0.011	0.000	0.001	0.005	0.000
MAX	0.000	0.081	0.18	0.021	0.51	0.73	0.15	0.011	0.000	0.002	0.010	0.000
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2002	2002
MIN	0.000	0.081	0.18	0.021	0.51	0.73	0.15	0.011	0.000	0.000	0.000	0.000
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2002	2003	2002

## SUMMARY STATISTICS

## FOR 2003 WATER YEAR

## WATER YEARS 2002 - 2003

ANNUAL TOTAL	50.26		
ANNUAL MEAN	0.14		0.14
HIGHEST ANNUAL MEAN			0.14 2003
LOWEST ANNUAL MEAN			0.14 2003
HIGHEST DAILY MEAN	13	Mar 16	13 Mar 16 2003
LOWEST DAILY MEAN	0.00	Oct 1	0.00 Jul 1 2002
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 1	0.00 Jul 1 2002
MAXIMUM PEAK FLOW	144	Mar 16	144 Mar 16 2003
MAXIMUM PEAK STAGE	2.17	Mar 16	2.17 Mar 16 2003
ANNUAL RUNOFF (AC-FT)	100		100
10 PERCENT EXCEEDS	0.00		0.00
50 PERCENT EXCEEDS	0.00		0.00
90 PERCENT EXCEEDS	0.00		0.00

## 11048400 MARSHBURN CHANNEL NEAR IRVINE, CA

LOCATION.—Lat 33° 41' 02", long 117° 44' 40", in Lomas De Santiago Grant, Orange County, Hydrologic Unit 18070204, on left bank, 2.1 mi upstream from confluence with San Diego Creek, and 1.9 mi east of Irvine.

DRAINAGE AREA.—Indeterminate.

PERIOD OF RECORD.—July 2002 to current year.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 275 ft above NGVD of 1929, from topographic map.

REMARKS.—Records poor. No diversion upstream from station. Irrigation return flow can cause low-flow fluctuations in discharge at times.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 374 ft<sup>3</sup>/s, Mar. 16, 2003, gage height, 2.86 ft, from rating curve extended above 1.90 ft<sup>3</sup>/s; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended above 1.90 ft<sup>3</sup>/s:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1630	102	1.98	Mar. 16	0100	374	2.86
Dec. 20	0445	138	2.14	Apr. 14	0845	102	1.98

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.13	0.00	0.00	0.00	0.03	0.00	0.01	0.02	0.05	0.00	0.00	0.00
2	0.15	0.09	0.00	0.00	0.00	0.00	0.01	0.07	0.02	0.00	0.00	0.01
3	0.05	0.00	0.05	0.03	0.00	0.00	0.03	3.5	0.04	0.00	0.00	0.05
4	0.10	0.11	0.05	0.03	0.06	4.0	0.03	0.00	0.03	0.00	0.00	0.05
5	0.06	0.09	0.00	0.00	0.00	0.24	0.02	0.00	0.03	0.00	0.00	0.01
6	0.01	0.00	0.00	0.03	0.00	0.05	0.00	0.00	0.03	0.00	0.00	0.05
7	0.05	0.12	0.01	0.01	0.04	0.00	0.03	0.11	0.00	0.00	0.00	0.06
8	0.04	7.1	0.00	1.0	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00
9	0.02	9.8	0.02	0.42	0.00	0.00	0.03	0.00	0.03	0.00	0.00	0.04
10	0.05	0.59	0.00	0.00	0.00	0.04	0.01	0.03	0.00	0.00	0.00	0.06
11	0.08	0.00	0.00	0.00	8.5	0.00	0.00	0.00	0.00	0.00	0.00	0.02
12	0.00	0.00	0.03	0.00	11	0.00	0.04	0.01	0.06	0.00	0.00	0.00
13	0.00	0.03	0.02	0.05	11	0.05	0.01	0.02	0.00	0.00	0.00	0.00
14	0.02	0.02	0.00	0.00	0.87	0.00	21	0.02	0.04	0.00	0.16	0.00
15	0.03	0.03	0.00	0.00	0.05	29	2.3	0.03	0.00	0.00	0.00	0.00
16	0.06	0.02	10	0.00	0.00	37	0.00	0.02	0.05	0.00	0.02	0.00
17	0.00	0.00	0.58	0.03	0.00	1.1	0.00	0.02	0.04	0.00	0.00	0.01
18	0.18	0.04	0.00	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00
19	0.07	0.03	0.00	0.00	0.02	0.00	0.01	0.01	0.00	0.00	0.00	0.23
20	0.00	0.00	14	0.78	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.06
21	0.06	0.05	0.19	0.21	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00
22	0.00	0.21	0.17	0.01	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
23	0.06	0.02	0.04	0.02	0.00	0.00	0.00	0.03	0.05	0.00	0.00	0.09
24	0.07	0.00	0.00	0.05	0.12	0.00	0.02	0.02	0.00	0.00	0.00	0.15
25	0.00	0.05	0.00	0.00	18	0.04	0.01	0.00	0.00	0.00	0.00	0.18
26	0.05	0.04	0.00	0.00	2.0	0.04	0.00	0.02	0.04	0.00	0.00	0.14
27	0.00	0.00	0.06	0.05	4.4	0.02	0.02	0.03	0.00	0.00	0.00	0.23
28	0.11	0.01	0.01	0.01	0.21	0.03	0.01	0.05	0.00	0.00	0.00	0.17
29	0.11	3.7	0.35	0.08	---	0.03	0.01	0.06	0.00	0.00	0.00	0.05
30	0.00	0.21	0.00	0.04	---	0.05	0.02	0.05	0.02	0.38	0.00	0.18
31	0.10	---	0.00	0.00	---	0.02	---	0.04	---	0.00	0.03	---
TOTAL	1.66	22.36	25.58	2.85	56.34	71.76	23.65	4.25	0.62	0.38	0.21	1.84
MEAN	0.054	0.75	0.83	0.092	2.01	2.31	0.79	0.14	0.021	0.012	0.007	0.061
MAX	0.18	9.8	14	1.0	18	37	21	3.5	0.09	0.38	0.16	0.23
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	3.3	44	51	5.7	112	142	47	8.4	1.2	0.8	0.4	3.6

## SAN DIEGO CREEK BASIN

## 11048400 MARSHBURN CHANNEL NEAR IRVINE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.054	0.75	0.83	0.092	2.01	2.31	0.79	0.14	0.021	0.017	0.029	0.055
MAX	0.054	0.75	0.83	0.092	2.01	2.31	0.79	0.14	0.021	0.022	0.050	0.061
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2002	2002	2003
MIN	0.054	0.75	0.83	0.092	2.01	2.31	0.79	0.14	0.021	0.012	0.007	0.048
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2002

## SUMMARY STATISTICS

## FOR 2003 WATER YEAR

## WATER YEARS 2002 - 2003

ANNUAL TOTAL	211.50		
ANNUAL MEAN	0.58		0.58
HIGHEST ANNUAL MEAN			0.58 2003
LOWEST ANNUAL MEAN			0.58 2003
HIGHEST DAILY MEAN	37	Mar 16	37 Mar 16 2003
LOWEST DAILY MEAN	0.00	Oct 12	0.00 Jul 1 2002
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 1	0.00 Jul 1 2002
MAXIMUM PEAK FLOW	374	Mar 16	374 Mar 16 2003
MAXIMUM PEAK STAGE	2.86	Mar 16	2.86 Mar 16 2003
ANNUAL RUNOFF (AC-FT)	420		420
10 PERCENT EXCEEDS	0.18		0.18
50 PERCENT EXCEEDS	0.01		0.01
90 PERCENT EXCEEDS	0.00		0.00

## 11048553 SAND CANYON CREEK AT IRVINE, CA

LOCATION.—Lat 33° 39'26", long 117° 49'36", in San Joaquin Grant, Orange County, Hydrologic Unit 18070204, on right bank, at culvert on Culver Drive, and 0.85 mi upstream from mouth, at Irvine.

DRAINAGE AREA.—7.06 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—July 2001 to current year.

GAGE.—Water-stage recorder, culvert control, and crest-stage gage. Elevation of gage is 50 ft above NGVD of 1929, from topographic map.

REMARKS.—Records poor. No diversion upstream from station. Releases of treated wastewater from Sand Canyon Reservoir may occur at times. Irrigation return flow can cause low-flow fluctuations in discharge at times.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 280 ft<sup>3</sup>/s, Mar. 16, 2003, gage height, 5.94 ft, from rating curve extended above 0.58 ft<sup>3</sup>/s; no flow at times on Sept. 11–14, 2002.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft<sup>3</sup>/s, or maximum, from rating curve extended above 0.58 ft<sup>3</sup>/s:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1745	111	4.86	Feb. 25	0245	90	4.70
Dec. 20	0615	120	4.92	Mar. 16	0200	280	5.94
Feb. 13	0700	62	4.48	Apr. 14	1815	61	4.47

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.09	0.21	0.29	0.31	0.51	1.0	0.80	0.65	0.48	0.08	0.13	0.13
2	0.09	0.17	0.25	0.31	0.36	0.86	0.81	0.67	0.57	0.09	0.13	0.11
3	0.08	0.15	0.22	0.38	0.35	0.95	0.81	5.2	0.70	0.10	0.11	0.11
4	0.08	0.17	0.24	0.31	0.37	1.5	0.83	0.57	0.48	0.11	0.11	0.11
5	0.12	0.13	0.24	0.31	0.37	0.90	1.0	0.42	0.53	0.12	0.10	0.11
6	0.10	0.13	0.30	0.31	0.36	0.82	0.84	0.41	0.59	0.14	0.11	0.09
7	0.08	0.11	0.24	0.31	0.39	0.88	0.80	0.43	0.61	0.13	0.14	0.07
8	0.08	2.6	0.23	0.37	0.41	0.86	1.1	0.47	0.54	0.10	0.13	0.10
9	0.11	8.3	0.27	0.31	0.40	0.87	0.84	0.42	0.53	0.10	0.12	0.08
10	0.12	0.71	0.26	0.33	0.40	0.90	0.83	0.39	0.43	0.13	0.10	0.09
11	0.11	0.37	0.26	0.35	7.6	0.88	0.85	0.39	0.39	0.16	0.13	0.09
12	0.12	0.24	0.24	0.33	20	0.93	0.99	0.38	0.32	0.11	0.11	0.12
13	0.13	0.22	0.26	0.34	20	0.89	0.75	0.41	0.31	0.11	0.11	0.10
14	0.14	0.21	0.23	0.32	1.9	0.91	25	0.45	0.29	0.13	0.12	0.10
15	0.14	0.19	0.26	0.38	0.80	33	9.6	0.42	0.26	0.13	0.11	0.11
16	0.16	0.18	18	0.36	0.63	39	0.97	0.48	0.26	0.15	0.11	0.11
17	0.11	0.18	1.7	0.39	0.57	1.8	0.74	0.41	0.24	0.15	0.09	0.12
18	0.13	0.19	0.55	0.38	0.64	1.0	0.74	0.57	0.26	0.18	0.11	0.13
19	0.22	0.15	0.42	0.38	0.64	0.84	0.72	0.43	0.33	0.16	0.12	0.12
20	0.20	0.14	23	0.38	0.72	0.76	0.77	0.42	0.33	0.13	0.14	0.12
21	0.18	0.15	0.64	0.35	0.58	0.76	0.73	0.46	0.26	0.12	0.15	0.12
22	0.14	0.15	0.45	0.40	0.62	0.76	0.77	0.45	0.27	0.14	0.15	0.12
23	0.14	0.45	0.33	0.40	0.64	0.78	0.74	0.49	0.26	0.14	0.12	0.11
24	0.16	0.17	0.31	0.40	1.2	0.76	0.86	0.54	0.17	0.16	0.14	0.15
25	0.14	0.17	0.31	0.38	38	0.78	0.81	0.71	0.14	0.15	0.17	0.14
26	0.16	0.13	0.31	0.38	3.0	0.77	0.73	0.56	0.12	0.12	0.12	0.12
27	0.16	0.16	0.31	0.37	11	0.83	0.70	0.50	0.10	0.10	0.12	0.17
28	0.15	0.19	0.31	0.37	1.6	0.75	0.68	0.54	0.09	0.12	0.13	0.13
29	0.19	0.51	0.42	0.35	---	0.75	0.78	0.52	0.08	0.16	0.12	0.14
30	0.22	0.70	0.31	0.37	---	0.79	0.64	0.57	0.10	0.19	0.13	0.12
31	0.18	---	0.31	0.36	---	0.75	---	0.51	---	0.13	0.13	---
TOTAL	4.23	17.53	51.47	10.99	114.06	98.03	57.23	19.84	10.04	4.04	3.81	3.44
MEAN	0.14	0.58	1.66	0.35	4.07	3.16	1.91	0.64	0.33	0.13	0.12	0.11
MAX	0.22	8.3	23	0.40	38	39	25	5.2	0.70	0.19	0.17	0.17
MIN	0.08	0.11	0.22	0.31	0.35	0.75	0.64	0.38	0.08	0.08	0.09	0.07
AC-FT	8.4	35	102	22	226	194	114	39	20	8.0	7.6	6.8

## SAN DIEGO CREEK BASIN

## 11048553 SAND CANYON CREEK AT IRVINE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.12	0.45	1.03	0.33	2.20	1.80	1.03	0.39	0.23	0.16	0.14	0.12
MAX	0.14	0.58	1.66	0.35	4.07	3.16	1.91	0.64	0.33	0.20	0.16	0.14
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2002	2001	2001
MIN	0.096	0.31	0.41	0.30	0.32	0.44	0.16	0.14	0.12	0.13	0.12	0.10
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2003	2003	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	131.63		394.71			
ANNUAL MEAN	0.36		1.08		0.65	
HIGHEST ANNUAL MEAN					1.08 2003	
LOWEST ANNUAL MEAN					0.23 2002	
HIGHEST DAILY MEAN	23	Dec 20	39	Mar 16	39	Mar 16 2003
LOWEST DAILY MEAN	0.03	Sep 12	0.07	Sep 7	0.03	Sep 12 2002
ANNUAL SEVEN-DAY MINIMUM	0.05	Sep 8	0.09	Oct 2	0.05	Sep 8 2002
MAXIMUM PEAK FLOW			280	Mar 16	280	Mar 16 2003
MAXIMUM PEAK STAGE			5.94	Mar 16	5.94	Mar 16 2003
ANNUAL RUNOFF (AC-FT)	261		783		474	
10 PERCENT EXCEEDS	0.37		0.86		0.76	
50 PERCENT EXCEEDS	0.17		0.31		0.18	
90 PERCENT EXCEEDS	0.09		0.11		0.10	

11048553 SAND CANYON CREEK AT IRVINE, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—October 2001 to current year.

SEDIMENT DATA: October 2001 to current year.

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 load, tons/d (80155)
NOV						
08...	1250	1.5	15.5	82	26	.11
DEC						
17...	1300	.93	13.7	77	22	.06
20...	1310	9.1	13.0	96	62	1.5
FEB						
12...	1450	34	15.0	76	22	2.0
13...	0930	36	14.5	72	28	2.7
25...	1435	42	13.5	88	26	2.9
MAR						
16...	1320	12	16.3	96	54	1.7
APR						
15...	1445	2.4	16.0	--	6	.04

## 11048600 BONITA CREEK AT IRVINE, CA

LOCATION.—Lat 33° 38' 42", long 117° 51' 37", in San Joaquin Grant, Orange County, Hydrologic Unit 18070204, on right bank, at downstream side of unnamed service road bridge, and 0.45 mi upstream from mouth, at Irvine.

DRAINAGE AREA.—5.39 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—July 2001 to current year.

GAGE.—Water-stage recorder, concrete control, and crest-stage gage. Elevation of gage is 30 ft above NGVD of 1929, from topographic map.

REMARKS.—Records poor. No diversion upstream from station. Slight regulation from small storage reservoir upstream from station. Irrigation return flow can cause low-flow fluctuations in discharge at times.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 610 ft<sup>3</sup>/s, Mar. 16, 2003, gage height, 11.20 ft, from rating curve extended above 2.0 ft<sup>3</sup>/s, on basis of critical-depth computations; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft<sup>3</sup>/s, or maximum, from rating curve extended above 2.0 ft<sup>3</sup>/s, as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1715	269	10.73	Mar. 16	0130	610	11.20
Dec. 20	0530	313	10.80				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.12	3.9	0.00	5.8	8.0	3.5	5.7	0.64	0.52	0.47	0.04	1.5
2	0.19	2.0	0.00	6.2	7.9	3.5	4.8	0.40	0.59	0.19	0.13	1.3
3	0.12	1.6	0.01	6.9	7.7	3.7	4.7	4.3	0.34	0.29	0.08	1.4
4	0.22	1.6	0.05	7.5	8.5	4.1	4.9	0.23	0.57	0.12	0.20	1.4
5	0.35	2.2	0.21	7.6	9.1	4.4	5.3	0.28	0.54	0.13	0.62	0.64
6	0.36	1.9	0.36	7.3	8.7	4.9	5.8	0.31	0.64	0.12	0.49	0.61
7	0.38	1.8	0.53	7.7	9.4	5.3	5.4	0.83	0.80	0.13	0.44	0.45
8	0.46	14	0.60	8.2	11	5.4	6.1	0.84	0.71	0.16	0.58	0.65
9	0.44	21	0.80	8.0	11	5.6	5.8	0.75	0.71	0.26	0.89	0.48
10	0.08	0.43	0.81	8.1	10	5.9	5.5	0.85	0.39	0.26	0.88	0.65
11	0.03	0.06	0.70	8.0	27	6.5	5.8	0.88	0.27	0.31	1.2	0.69
12	0.11	0.00	0.82	7.8	35	6.3	5.3	1.2	0.19	0.26	1.2	0.80
13	0.05	0.00	1.1	7.4	17	6.5	4.9	1.4	0.33	0.28	1.2	0.68
14	0.19	0.00	1.3	7.0	8.2	6.5	38	1.3	0.62	0.35	1.3	1.1
15	0.24	0.00	1.1	7.1	6.3	64	9.7	1.1	0.31	0.47	0.80	1.1
16	0.44	0.00	26	7.0	5.8	60	2.6	1.3	0.46	0.49	0.63	1.3
17	0.58	0.09	1.0	7.1	6.1	5.4	2.3	1.3	0.59	0.47	0.62	1.3
18	0.73	0.23	0.01	7.3	6.5	4.2	2.0	0.69	0.63	0.76	0.61	1.1
19	0.82	0.24	0.00	7.4	6.4	4.0	1.8	0.83	0.71	1.1	0.76	1.2
20	0.81	0.49	39	7.6	6.9	3.6	1.6	0.79	0.64	0.91	0.80	1.2
21	0.93	0.97	5.4	7.6	6.8	3.8	1.5	0.90	0.69	1.0	0.83	1.3
22	0.78	1.7	4.5	7.4	7.1	4.0	1.4	0.82	0.22	1.4	0.77	1.3
23	0.95	2.2	3.9	6.6	6.5	3.6	1.4	1.1	0.39	1.5	1.0	1.5
24	1.1	2.6	3.9	6.5	6.2	3.5	1.2	1.4	0.24	1.2	1.1	1.8
25	1.1	1.5	4.2	6.6	43	4.7	1.1	1.2	0.32	1.5	1.2	1.8
26	1.3	0.59	4.1	6.1	4.4	4.6	0.77	1.4	0.39	1.7	1.5	3.2
27	0.84	0.68	4.9	6.1	15	4.9	0.67	1.1	0.44	1.4	1.4	3.3
28	0.84	0.00	4.7	6.1	4.2	5.0	0.63	0.88	0.54	1.5	1.2	3.2
29	0.99	0.32	7.1	7.0	---	5.3	0.70	0.82	0.36	2.1	1.2	3.3
30	0.95	0.82	5.0	6.8	---	5.4	0.65	0.86	0.34	1.8	1.6	3.2
31	1.6	---	5.5	7.1	---	5.6	---	0.84	---	0.02	1.6	---
TOTAL	18.10	62.92	127.60	220.9	309.7	263.7	138.02	31.54	14.49	22.65	26.87	43.45
MEAN	0.58	2.10	4.12	7.13	11.1	8.51	4.60	1.02	0.48	0.73	0.87	1.45
MAX	1.6	21	39	8.2	43	64	38	4.3	0.80	2.1	1.6	3.3
MIN	0.03	0.00	0.00	5.8	4.2	3.5	0.63	0.23	0.19	0.02	0.04	0.45
AC-FT	36	125	253	438	614	523	274	63	29	45	53	86



## 11048600 BONITA CREEK AT IRVINE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.52	1.48	2.51	3.84	6.36	5.73	2.55	0.69	0.44	0.53	0.54	0.75
MAX	0.58	2.10	4.12	7.13	11.1	8.51	4.60	1.02	0.48	0.73	0.87	1.45
(WY)	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003	2003
MIN	0.45	0.86	0.91	0.56	1.65	2.96	0.50	0.36	0.40	0.35	0.36	0.38
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2001	2002	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	441.67		1279.94			
ANNUAL MEAN	1.21		3.51		2.17	
HIGHEST ANNUAL MEAN					3.51 2003	
LOWEST ANNUAL MEAN					0.82 2002	
HIGHEST DAILY MEAN	39	Dec 20	64	Mar 15	64	Mar 15 2003
LOWEST DAILY MEAN	0.00	Nov 12	0.00	Nov 12	0.00	Nov 12 2002
ANNUAL SEVEN-DAY MINIMUM	0.02	Nov 11	0.02	Nov 11	0.02	Nov 11 2002
MAXIMUM PEAK FLOW			610	Mar 16	610	Mar 16 2003
MAXIMUM PEAK STAGE			11.20	Mar 16	11.20	Mar 16 2003
ANNUAL RUNOFF (AC-FT)	876		2540		1570	
10 PERCENT EXCEEDS	3.1		7.4		5.8	
50 PERCENT EXCEEDS	0.47		1.2		0.63	
90 PERCENT EXCEEDS	0.33		0.22		0.33	

11048600 BONITA CREEK AT IRVINE, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—October 2001 to current year.

SEDIMENT DATA: October 2001 to current year.

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sediment, sieve diameter percent <.063mm (70331)	Suspnd. sediment, sieve diameter percent <.125mm (70332)	Suspnd. sediment, sieve diameter percent <.25mm (70333)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
NOV								
08...	1345	18	15.5	86	--	--	75	3.6
DEC								
20...	1430	10	12.5	98	99	100	368	9.9
FEB								
12...	1600	45	15.0	99	100	--	87	11
13...	1120	21	14.5	99	100	--	220	12
25...	1200	22	12.5	97	98	100	258	15
MAR								
16...	1445	9.0	17.5	99	--	--	126	3.1
APR								
15...	1310	4.2	15.5	86	--	--	19	.22

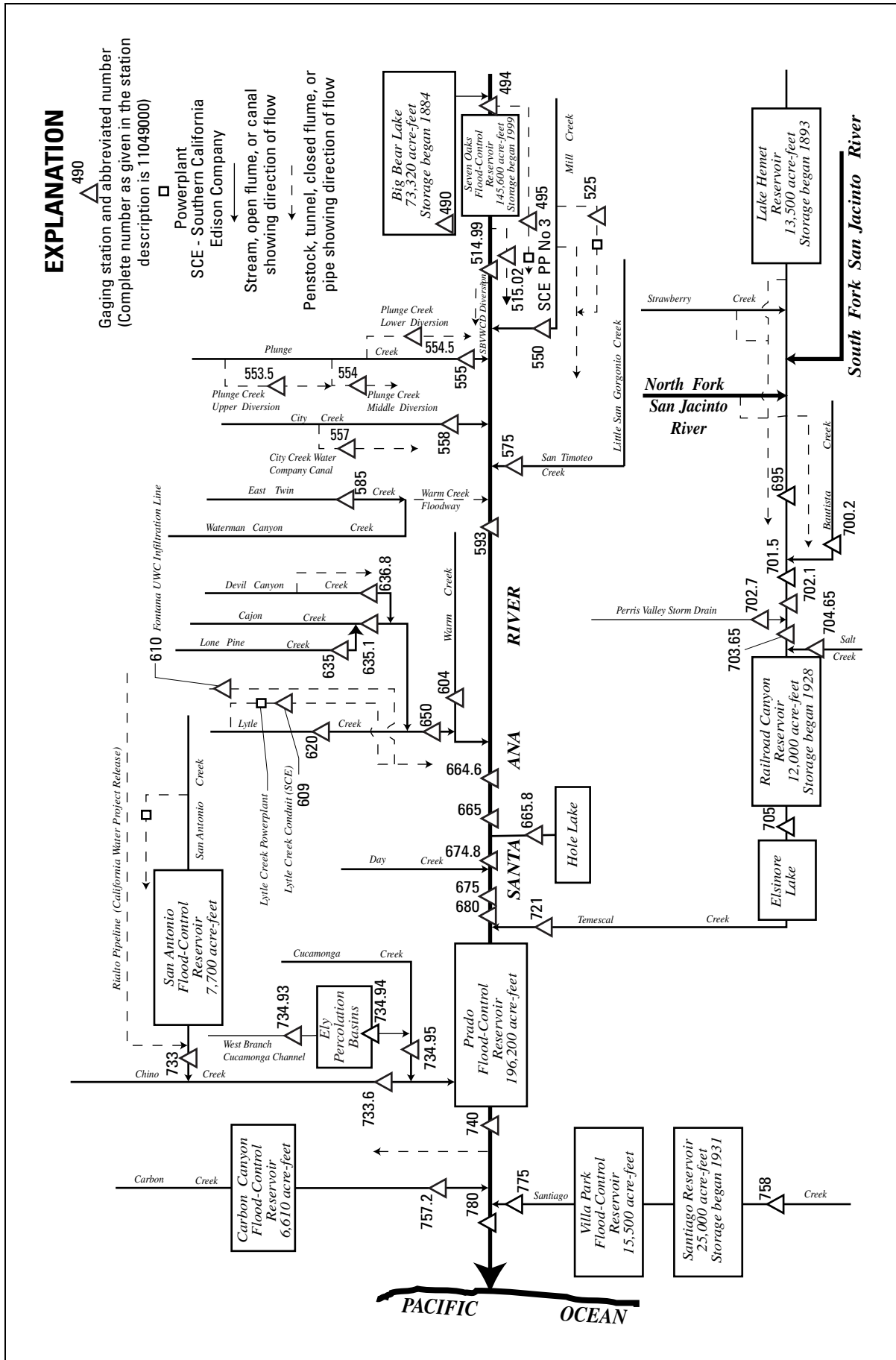


Figure 17. Diversions and storage in Santa Ana River Basin.

## 11049000 BIG BEAR LAKE NEAR BIG BEAR LAKE, CA

LOCATION.—Lat 34° 14' 33", long 116° 58' 33", in SW 1/4 sec.22, T.2 N., R.1 W., [San Bernardino County](#), Hydrologic Unit 18070203, at Big Bear Lake Dam on Bear Creek, 4 mi west of town of Big Bear Lake, and 7.5 mi upstream from mouth.

DRAINAGE AREA.—38.9 mi<sup>2</sup>, excludes Baldwin Lake drainage included in reports prior to 1983.

PERIOD OF RECORD.—October 1950 to current year. February 1884 to September 1950 in files of Bear Valley Mutual Water Co.

REVISED RECORDS.—WDR CA-83-1: Drainage area. WDR CA-99-1: Spillway (top of dam) elevation.

GAGE.—Nonrecording gage. Datum of gage is 6,670.9 ft above NGVD of 1929 (levels by Bear Valley Mutual Water Co.). Prior to 1912 at old dam 200 ft upstream at same datum; spill occurs at elevation 6,743.2 ft.

REMARKS.—Lake is formed by multiple-arch concrete dam, completed in 1912, replacing existing lower dam built in 1884; storage began in spring of 1884. Capacity (based on July 1977 resurvey; present capacity table put into use August 1977), 73,320 acre-ft at elevation 6,743.2 ft, top of dam. No dead storage. During the year, 456 acre-ft was released. Between November 2002 and June 2003, 839 acre-ft was pumped from the lake for snowmaking. See schematic diagram of [Santa Ana River Basin](#).

COOPERATION.—Record of contents provided by Big Bear Municipal Water District; not reviewed by the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents unknown, lake spilled in 1969, 1970, 1980, 1983; minimum contents observed, 530 acre-ft, Nov. 24, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum contents unknown, lake spilled in 1916, 1917, 1922, 1923, 1938, 1939; lake dry October, November 1898, August to November 1899, October, November 1904.

EXTREMES FOR CURRENT YEAR.—Maximum contents observed, 40,950 acre-ft, May 5; minimum contents observed, 35,660 acre-ft, Sept. 30.

## MONTHEND CONTENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Contents (acre-ft)	Change in contents (acre-ft)
Sept. 30 .....	37,990	—
Oct. 31 .....	37,130	-860
Nov. 30 .....	37,170	+40
Dec. 31 .....	37,110	-60
CAL YR 2002 .....	—	-9,710
Jan. 31 .....	37,050	-60
Feb. 28 .....	38,180	+1,130
Mar. 31 .....	40,260	+2,080
Apr. 30 .....	40,780	+520
May 31 .....	40,450	-330
June 30 .....	39,120	-1,330
July 31 .....	37,780	-1,340
Aug. 31 .....	36,780	-1,000
Sept. 30 .....	35,660	-1,120
WTR YR 2003 .....	—	-2,330

## 11049400 SANTA ANA RIVER ABOVE SEVEN OAKS DAM, CA

LOCATION.—Lat 34° 08' 34", long 117° 04' 07", in NW 1/4 SW 1/4 sec.26, T.1 N., R.2 W., San Bernardino County, Hydrologic Unit 18070203, at upstream side of bridge on powerhouse access road, 2.6 mi upstream from Seven Oaks Dam, 5.6 mi northeast of Mentone, and 10 mi southwest of town of Big Bear Lake.

DRAINAGE AREA.—200 mi<sup>2</sup>.

PERIOD OF RECORD.—February 2000, October 2001 to current year.

CHEMICAL DATA: February 2000, October 2001 to current year.

SEDIMENT DATA: February 2000, October 2001 to current year.

REMARKS.—Water-quality data collected for the National Water-Quality Assessment (NAWQA) Program.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd 25 degC uS/cm (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO <sub>3</sub> (39086)
OCT										
16...	1730	1.0	690	8.1	92	8.2	327	14.0	16.5	131
DEC										
12...	1500	1.5	698	9.0	93	8.2	305	14.5	13.0	127
JAN										
16...	1410	1.5	698	9.1	93	8.2	299	18.0	12.5	127
FEB										
14...	1400	110	693	9.8	99	8.0	217	15.0	11.5	86
MAR										
13...	1500	1.8	695	8.3	93	8.2	290	24.5	16.5	118
APR										
17...	1400	61	694	10.0	102	8.2	238	13.5	12.0	104
JUN										
12...	1400	1.1	693	8.3	100	8.3	301	22.5	19.5	126
AUG										
14...	1430	.46	695	8.0	100	8.0	320	38.5	21.5	133

Date	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Chloride, water, fltrd, mg/L (00940)	Sulfate, water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)
OCT									
16...	159	6.57	28.5	<.10	<.04	.18	<.008	e.01	.008
DEC									
12...	154	6.88	23.1	<.10	<.04	.40	<.008	e.01	.009
JAN									
16...	154	6.01	22.0	e.08	<.04	.43	<.008	<.02	.010
FEB									
14...	105	5.68	10.8	.49	<.04	.87	<.008	<.09	.157
MAR									
13...	144	5.05	17.0	e.08	<.04	.75	<.008	e.01	.013
APR									
17...	126	5.74	11.9	.26	<.04	.30	<.008	<.02	.074
JUN									
12...	153	6.24	18.1	e.07	<.04	.36	.011	<.02	.008
AUG									
14...	163	6.53	19.5	e.09	<.04	.31	<.008	<.02	.008

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

e Estimated.

## SANTA ANA RIVER BASIN

## 11049400 SANTA ANA RIVER ABOVE SEVEN OAKS DAM, CA—Continued

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sediment, sieve diameter percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
OCT						
16...SS	1730	1.0	16.5	87	1	<.01
DEC						
12...SS	1500	1.5	13.0	53	2	.01
JAN						
16...SS	1410	1.5	12.5	20	1	<.01
FEB						
14...SS	1400	110	11.5	49	128	38
MAR						
13...SS	1500	1.8	16.5	52	2	.01
APR						
17...SS	1400	61	12.0	68	59	9.7
JUN						
12...SS	1400	1.1	19.5	50	<.5	<.01
AUG						
14...SS	1430	.46	21.5	67	<.5	<.01

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

Date	Time	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, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Location in X-sect. looking dwnstrm ft from l bank (00009)
AUG								
14...*	1451	695	8.0	100	8.0	318	21.5	.30
14...*	1452	695	8.0	100	8.0	319	21.5	.60
14...*	1453	695	8.0	100	8.0	321	21.5	.90
14...*	1454	695	8.0	100	8.0	318	21.5	1.20
14...*	1455	695	8.0	100	8.0	319	21.5	1.50

SS Suspended-sediment data determined from a sample collected and processed according to National Water-Quality Assessment (NAWQA) Program protocol.

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

\* Instantaneous discharge at the time of cross-sectional measurements: Aug. 14, 0.46 ft<sup>3</sup>/s.

## 11051500 SANTA ANA RIVER NEAR MENTONE, CA

LOCATION.—Lat 34° 06' 30", long 117° 05' 59", in SW 1/4 SW 1/4 sec.4, T.1 S., R.2 W., San Bernardino County, Hydrologic Unit 18070203, on right bank, near mouth of canyon, 0.35 mi downstream from Seven Oaks Dam, 1.6 mi upstream from Mill Creek, 3.2 mi northeast of Mentone, and 16 mi downstream from Big Bear Lake.

DRAINAGE AREA.—210 mi<sup>2</sup>, including area tributary to Baldwin Lake at head of Bear Valley.

PERIOD OF RECORD.—July 1896 to current year. Prior to October 1914, records for river only not equivalent owing to Greenspot pipeline diversion between sites and exclusion of discharge from Warm Springs Canyon. Monthly discharge only for January 1910, January and February 1916 published in WSP 1315-B.

CHEMICAL DATA: Water years 1999–2001.

SPECIFIC CONDUCTANCE: Water year 1999.

WATER TEMPERATURE: Water year 1999.

SEDIMENT DATA: Water years 1999–2001.

REVISED RECORDS.—WSP 931: 1940. WSP 1635: 1918, 1920(M), 1922, 1937, 1943(M). WSP 1928: Drainage area. WSP 2128: 1910.

GAGE.—Three water-stage recorders. Main gage on right bank of river (station 11051499), canal gage on powerplant diversion (station 11049500), and since 1970, supplementary gage on left bank of river (station 11051502). Elevation of the main and supplementary gages is 1,950 ft above NGVD of 1929, from topographic map. Prior to Sept. 2, 1917, nonrecording gages at several sites within 1.5 mi upstream at various datums. Sept. 3, 1917, to May 27, 1969, water-stage recorder at site 0.2 mi upstream at different datum. Canal gage at different datum.

REMARKS.—Records good except for estimated daily discharges, which are poor. Flow partly regulated by Big Bear Lake (station 11049000) and, since November 1999, by Seven Oaks Flood-Control Reservoir, capacity, 145,600 acre-ft. The supplementary gage (station 11051502) measures water that is occasionally diverted out of the main channel 250 ft upstream for water distribution. Flow measured by the supplementary gage is included with the river record to maintain equivalence with records prior to 1970. For records of combined discharge of Santa Ana River and Southern California Edison Co.'s Santa Ana River Canal above Powerplant No. 3 (station 11049500), which diverts upstream from station, see station 11051501. Prior to water year 2000, station 11049500 was named "Southern California Edison Co.'s Santa Ana River Canal below Powerplant No. 2". Prior to Oct. 1, 1952, and since Apr. 26, 1976, Bear Valley Mutual Water Co. pumps water into channel above canal gage. See schematic diagram of Santa Ana River Basin.

COOPERATION.—Records for Southern California Edison Co.'s Santa Ana River Canal above Powerplant No. 3 (station 11049500) 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. 1933.

EXTREMES FOR PERIOD OF RECORD.—River only: Maximum discharge, 52,300 ft<sup>3</sup>/s, Mar. 2, 1938, gage height, 14.3 ft, site and datum then in use, on basis of slope-area measurement of peak flow; no flow at times in some years.

Combined river and canal: Maximum discharge, 52,300 ft<sup>3</sup>/s, Mar. 2, 1938; no flow on Feb. 17, 2000.

EXTREMES OUTSIDE PERIOD OF RECORD.—Combined river and canal: Flood of Feb. 23, 1891, 53,700 ft<sup>3</sup>/s, from notes provided by F.C. Finkle, consulting engineer, Los Angeles.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.21	0.31	2.5	2.5	1.4	17	14	4.9	1.8	1.1	0.88	0.50
2	0.17	0.29	2.2	2.4	1.4	17	11	4.5	1.6	1.1	0.84	0.54
3	0.17	0.29	2.0	2.3	1.4	160	6.7	7.5	1.5	1.1	0.76	0.57
4	0.20	0.29	2.0	2.1	1.4	55	6.2	17	1.5	1.1	0.91	0.56
5	0.21	0.28	2.3	2.0	1.5	44	5.9	43	1.6	1.0	0.72	0.56
6	0.21	0.26	2.0	2.3	1.5	11	5.3	48	1.6	1.0	0.68	0.53
7	0.20	0.25	1.8	2.0	1.5	8.8	5.0	34	1.7	0.96	0.65	0.52
8	0.19	e1.7	1.8	1.9	1.5	6.9	4.5	26	1.6	0.96	0.64	0.50
9	0.20	e16	1.3	1.8	1.4	6.0	4.0	10	1.5	0.92	0.61	0.54
10	0.21	e24	1.6	1.8	1.4	5.3	3.9	9.4	1.5	0.86	0.62	0.55
11	0.21	e99	1.5	1.7	2.7	4.8	3.8	8.4	1.5	0.87	0.63	0.48
12	0.24	e237	1.8	1.7	12	4.5	3.5	7.6	1.8	0.83	0.63	0.28
13	0.24	e155	1.6	1.7	14	4.0	3.5	7.0	1.9	0.79	0.62	0.23
14	0.25	e62	1.5	1.6	80	3.8	8.6	6.8	1.9	1.2	0.60	0.43
15	0.26	e47	1.5	1.6	106	10	40	6.7	1.7	1.4	0.60	0.46
16	0.29	e12	4.0	1.6	60	20	54	6.3	1.7	2.5	0.55	0.47
17	0.29	e7.3	16	1.6	191	45	53	6.1	1.6	4.3	0.46	0.47
18	0.29	e5.5	27	1.6	128	67	168	5.9	1.4	4.8	0.55	0.48
19	0.28	5.2	36	1.6	67	295	70	5.8	1.3	5.3	0.52	0.47
20	0.28	4.6	17	1.6	32	390	68	5.0	1.7	5.5	0.45	0.47
21	0.28	3.0	16	1.6	15	117	66	3.6	1.8	2.6	0.50	0.41
22	0.27	2.9	16	1.6	8.1	58	57	2.9	1.7	1.7	0.58	0.39
23	0.26	2.8	15	1.6	4.9	45	12	2.6	1.5	1.4	0.62	0.39
24	0.28	2.6	8.7	1.6	4.3	22	7.8	2.3	1.5	1.2	0.60	3.1
25	0.30	2.4	6.0	1.5	13	16	7.1	2.2	1.4	1.1	0.51	5.6
26	0.29	2.9	5.3	1.5	44	18	8.0	2.3	1.3	0.99	0.50	5.1
27	0.29	2.5	4.5	1.5	31	14	7.0	2.5	1.3	0.95	0.58	5.0
28	0.28	2.3	3.2	1.5	17	13	6.7	2.2	1.2	0.92	0.57	4.9
29	0.29	2.3	4.6	1.5	---	13	7.4	1.8	1.2	0.97	0.43	5.0
30	0.30	2.5	3.6	1.5	---	12	5.8	1.6	1.2	1.1	0.47	5.2
31	0.31	---	2.8	1.4	---	12	---	1.8	---	1.1	0.41	---
TOTAL	7.75	704.47	213.1	54.2	844.4	1515.1	723.7	295.7	46.5	51.62	18.69	44.70
MEAN	0.25	23.5	6.87	1.75	30.2	48.9	24.1	9.54	1.55	1.67	0.60	1.49
MAX	0.31	237	36	2.5	191	390	168	48	1.9	5.5	0.91	5.6
MIN	0.17	0.25	1.3	1.4	1.4	3.8	3.5	1.6	1.2	0.79	0.41	0.23
AC-FT	15	1400	423	108	1670	3010	1440	587	92	102	37	89

e Estimated.

## SANTA ANA RIVER BASIN

## 11051500 SANTA ANA RIVER NEAR MENTONE, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.87	9.12	24.8	40.5	80.3	92.8	61.9	47.5	21.3	11.3	6.21	6.33
MAX	77.8	206	536	646	1052	1405	413	446	278	174	124	134
(WY)	1970	1966	1967	1993	1980	1938	1969	1998	1969	1969	1969	1969
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1934	1934	1949	1936	1961	1951	1959	1959	1959	1934	1934	1933

## SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1915 - 2003

ANNUAL TOTAL	1138.91		4519.93		32.6		1969	
ANNUAL MEAN	3.12		12.4		283		1961	
HIGHEST ANNUAL MEAN					0.012		1961	
LOWEST ANNUAL MEAN					15500		Mar 2 1938	
HIGHEST DAILY MEAN	237	Nov 12	390	Mar 20	0.00		Nov 21 1932	
LOWEST DAILY MEAN	0.13	Sep 23	0.17	Oct 2	0.00		Nov 21 1932	
ANNUAL SEVEN-DAY MINIMUM	0.19	Sep 21	0.19	Oct 2	52300		Mar 2 1938	
MAXIMUM PEAK FLOW			612		14.30		Mar 2 1938	
MAXIMUM PEAK STAGE					23590			
ANNUAL RUNOFF (AC-FT)	2260		8970		70			
10 PERCENT EXCEEDS	2.4		29		1.8			
50 PERCENT EXCEEDS	0.84		1.8		0.30			
90 PERCENT EXCEEDS	0.25		0.30		0.00			



## 11051501 SANTA ANA RIVER NEAR MENTONE, CA—Continued

## SANTA ANA RIVER AND SOUTHERN CALIFORNIA EDISON CO.'S CANAL NEAR MENTONE, CA

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e9.1	11	24	26	19	64	50	42	29	19	17	14
2	e7.2	11	21	25	19	59	49	40	29	20	18	16
3	e6.8	10	21	25	19	197	47	32	28	19	18	16
4	e7.0	10	20	25	19	90	45	17	28	19	16	18
5	e7.0	10	21	25	20	83	46	64	28	19	16	19
6	e6.9	11	21	23	20	54	43	89	28	18	16	17
7	e6.8	12	21	24	20	51	41	74	27	19	16	16
8	e7.2	e15	21	24	20	48	40	66	26	18	16	16
9	e7.2	e24	19	24	19	47	38	49	26	18	15	16
10	e2.3	e24	20	24	19	45	36	46	26	17	14	17
11	e5.4	e99	20	24	15	45	37	44	26	17	14	15
12	e5.8	e248	20	23	12	44	36	43	26	17	15	14
13	e6.3	e179	20	23	14	42	36	42	26	16	14	14
14	e6.5	e84	20	23	80	41	30	42	25	16	14	13
15	e6.5	e66	20	23	106	39	40	42	24	16	14	13
16	e6.8	e30	17	22	60	20	54	39	25	14	14	14
17	e7.3	e25	17	22	191	45	53	38	24	14	13	14
18	8.8	e22	36	22	128	67	168	37	23	15	15	14
19	8.3	22	55	22	77	319	70	37	23	16	14	13
20	8.0	23	38	22	63	436	68	37	26	16	14	13
21	8.0	22	38	22	46	163	66	36	27	12	16	13
22	8.5	21	38	22	43	109	84	35	27	15	16	13
23	9.0	21	36	22	38	95	57	35	26	15	15	12
24	9.2	21	30	22	37	70	54	34	26	14	15	15
25	9.4	19	27	20	44	62	50	33	23	14	17	19
26	9.9	20	26	20	86	63	48	33	22	14	16	17
27	10	20	28	20	88	58	46	32	21	14	16	17
28	9.8	20	26	20	72	54	44	30	21	15	16	17
29	10	20	30	20	---	50	43	30	20	18	15	17
30	10	22	28	20	---	47	44	31	20	17	14	17
31	12	---	27	19	---	47	---	30	---	17	15	---
TOTAL	243.0	1142	806	698	1394	2654	1563	1279	756	508	474	459
MEAN	7.84	38.1	26.0	22.5	49.8	85.6	52.1	41.3	25.2	16.4	15.3	15.3
MAX	12	248	55	26	191	436	168	89	29	20	18	19
MIN	2.3	10	17	19	12	20	30	17	20	12	13	12
AC-FT	482	2270	1600	1380	2760	5260	3100	2540	1500	1010	940	910

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2003, BY WATER YEAR (WY)

MEAN	47.5	44.7	57.2	88.7	121	133	114	99.5	72.0	61.3	54.9	52.4
MAX	122	219	538	1439	1052	1402	413	477	277	175	124	137
(WY)	1984	1966	1967	1916	1980	1938	1969	1998	1969	1922	1969	1969
MIN	7.84	12.5	14.4	19.0	18.3	20.1	16.4	15.3	9.43	6.43	5.83	6.80
(WY)	2003	1991	1991	1991	1991	2002	2002	2002	2002	2002	2002	2002

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1912 - 2003

ANNUAL TOTAL	5860.6	11976.0	
ANNUAL MEAN	16.1	32.8	78.6
HIGHEST ANNUAL MEAN			366
LOWEST ANNUAL MEAN			13.8
HIGHEST DAILY MEAN	248	Nov 12	436
LOWEST DAILY MEAN	2.3	Oct 10	2.3
ANNUAL SEVEN-DAY MINIMUM	5.5	Aug 9	5.7
MAXIMUM PEAK FLOW			660
ANNUAL RUNOFF (AC-FT)	11620	23750	52300
10 PERCENT EXCEEDS	22	61	136
50 PERCENT EXCEEDS	16	22	47
90 PERCENT EXCEEDS	6.0	12	22

e Estimated.

## 11052500 MILL CREEK POWER CANAL NO. 3, NEAR YUCAIPA, CA

LOCATION.—Lat 34° 05'23", long 117° 00'49", in NW 1/4 NW 1/4 sec.17, T.1 S., R.1 W., [San Bernardino County](#), Hydrologic Unit 18070203, on penstock, 100 ft downstream from Mill Creek No. 3 forebay, and 4.2 mi northeast of Yucaipa.

PERIOD OF RECORD.—October 1973 to September 1989, October 1993 to current year. Records for January 1919 to September 1973 available in files of the U.S. Geological Survey.

GAGE.—Acoustic-velocity meter on penstock. Elevation of gage is 4,840 ft above NGVD of 1929, from topographic map. Prior to October 1993, water-stage recorder and Parshall flume below powerplant at terminus of penstock 1.5 mi downstream, at different datum. October 1993 to September 1995, water-stage recorder and Parshall flume at auxiliary gage near Canal No. 3 intake 4.5 mi upstream, at different datum.

REMARKS.—Mill Creek Power Canal No. 3 diverts water from Mill Creek 6 mi upstream from the powerplant. Canal No. 3 also receives up to 1.6 ft<sup>3</sup>/s of additional water, at times, from Crafton Water Company's groundwater well No. 4, located 1 mi downstream of the diversion. Well water would not have been included in flow records from October 1993 to September 1995, when the gage was located near the Canal No. 3 intake. Diversions to Mill Creek Power Canal No. 2, 3 mi upstream from the powerplant, were included with this record until September 1989. Canal No. 2 was damaged during an earthquake in 1992, has not been used since 1992, and has been permanently discontinued. See schematic diagram of [Santa Ana 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. 1934.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 41 ft<sup>3</sup>/s, May 6, 1995; no flow at times in some years.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

## DAILY MEAN VALUES

(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	17	15	16	17	12	18	19	16	14	13	15
2	20	18	16	15	16	13	18	19	16	14	13	15
3	20	18	16	16	16	13	19	18	16	14	13	14
4	19	18	16	17	15	13	19	18	17	14	13	14
5	19	18	16	16	15	14	18	18	18	14	15	14
6	19	18	20	16	15	21	18	18	18	14	15	14
7	19	18	18	17	15	20	12	18	18	14	14	14
8	19	18	16	16	15	19	18	18	16	13	14	13
9	17	18	16	16	17	18	18	17	15	13	14	13
10	17	18	16	16	13	16	19	19	16	13	14	14
11	19	18	16	16	14	16	19	19	17	13	14	13
12	19	18	16	16	14	16	19	19	17	13	14	13
13	19	18	16	14	13	17	20	19	17	12	14	13
14	16	18	16	12	12	16	19	18	17	12	14	13
15	14	18	16	12	12	17	20	18	17	12	14	13
16	14	18	16	12	12	17	20	19	16	12	13	14
17	17	18	16	13	11	17	20	18	16	13	13	14
18	19	10	16	14	11	18	19	18	16	13	13	13
19	18	5.4	16	14	11	18	19	19	16	12	13	12
20	18	5.6	17	14	11	17	19	19	16	12	14	12
21	18	10	16	13	11	17	18	19	16	13	15	12
22	18	16	17	13	11	17	18	18	15	13	15	12
23	18	16	16	13	11	17	18	18	15	13	15	14
24	18	17	16	13	11	17	19	18	15	13	15	12
25	18	16	16	13	12	17	19	19	15	13	15	12
26	18	16	16	13	12	17	19	19	15	13	15	12
27	17	16	16	13	12	17	19	19	15	13	15	12
28	18	16	16	7.7	12	17	19	18	15	14	14	12
29	18	16	16	5.7	---	17	19	18	15	13	15	11
30	17	16	16	11	---	17	18	17	14	13	15	11
31	17	---	16	17	---	17	---	17	---	13	15	---
TOTAL	557	481.0	503	430.4	367	515	557	568	481	405	438	390
MEAN	18.0	16.0	16.2	13.9	13.1	16.6	18.6	18.3	16.0	13.1	14.1	13.0
MAX	20	18	20	17	17	21	20	19	18	14	15	15
MIN	14	5.4	15	5.7	11	12	12	17	14	12	13	11
AC-FT	1100	954	998	854	728	1020	1100	1130	954	803	869	774

## 11052500 MILL CREEK POWER CANAL NO. 3 NEAR YUCAIPA, CA—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1987 TO SEPTEMBER 1988

DAILY MEAN VALUES  
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	3.6	13	12	16	16	15	19	19	13	14	10
2	11	3.6	13	12	17	17	15	19	18	13	14	3.1
3	11	4.3	13	13	16	16	15	19	18	13	14	5.2
4	11	8.2	13	10	16	15	15	15	18	13	13	11
5	11	15	14	11	16	15	15	17	18	13	13	11
6	11	16	14	12	15	15	15	20	18	13	13	10
7	11	18	15	9.6	15	15	16	20	18	13	13	9.3
8	11	17	14	10	15	16	16	19	18	13	13	11
9	11	16	14	12	16	16	16	20	18	13	13	11
10	11	15	13	13	16	16	16	19	17	13	12	11
11	13	14	13	13	16	16	16	19	17	13	12	11
12	13	14	13	13	16	16	16	21	17	13	12	11
13	3.6	14	11	12	16	16	17	20	17	12	12	11
14	6.3	14	12	12	16	16	18	20	16	12	12	11
15	11	14	13	12	16	16	20	20	16	12	12	11
16	11	14	13	13	16	17	19	20	16	12	11	11
17	11	15	14	15	14	16	19	20	16	12	11	11
18	10	14	14	13	14	16	19	20	16	13	11	11
19	11	14	14	14	15	16	19	19	15	12	11	11
20	11	13	13	14	16	16	21	19	15	13	11	11
21	11	14	13	14	16	16	20	19	15	13	11	11
22	9.1	14	13	14	15	16	19	19	15	12	11	11
23	4.2	14	14	14	15	16	20	20	15	12	12	11
24	4.5	14	13	16	15	17	20	20	15	15	13	11
25	4.4	14	13	16	15	17	21	20	15	14	11	11
26	6.3	14	13	16	15	16	21	20	14	14	12	11
27	11	14	13	16	16	17	21	19	14	14	12	11
28	11	14	13	16	16	17	21	19	14	14	13	11
29	11	13	13	16	16	16	20	20	14	11	13	11
30	11	14	13	17	---	15	20	20	13	6.1	13	11
31	8.4	---	12	16	---	15	---	19	---	9.3	12	---
TOTAL	302.8	395.7	409	416.6	452	496	541	600	485	388.4	380	312.6
MEAN	9.77	13.2	13.2	13.4	15.6	16.0	18.0	19.4	16.2	12.5	12.3	10.4
MAX	13	18	15	17	17	17	21	21	19	15	14	11
MIN	3.6	3.6	11	9.6	14	15	15	15	13	6.1	11	3.1
AC-FT	601	785	811	826	897	984	1070	1190	962	770	754	620

## 11052500 MILL CREEK POWER CANAL NO. 3 NEAR YUCAIPA, CA—Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAILY MEAN VALUES  
(NOT PREVIOUSLY PUBLISHED)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	3.8	14	13	12	20	17	13	11	11	10
2	11	11	4.0	13	13	12	20	17	13	11	11	10
3	11	11	3.8	13	13	13	20	17	13	11	11	10
4	11	11	3.9	15	19	13	21	17	13	12	11	10
5	11	11	3.7	14	16	15	20	17	13	12	10	10
6	11	9.4	3.7	16	15	16	20	17	13	12	11	10
7	11	8.3	3.7	14	15	17	20	16	13	12	11	10
8	11	8.4	3.7	14	16	19	21	16	13	12	11	11
9	11	8.4	3.8	14	18	20	21	17	13	12	10	11
10	11	8.4	3.8	14	16	19	20	17	13	12	4.1	11
11	11	8.2	3.7	14	12	18	20	18	13	12	4.3	11
12	11	8.2	3.8	13	11	19	21	17	13	12	4.0	11
13	11	7.9	9.5	13	10	19	20	17	13	12	4.0	10
14	11	9.5	12	13	10	19	19	17	12	12	3.8	10
15	11	8.5	9.8	13	9.9	19	19	17	12	12	2.5	10
16	11	8.6	10	13	9.7	19	19	17	12	12	3.4	11
17	11	8.5	12	13	10	18	19	16	12	12	5.0	12
18	11	8.3	12	14	10	18	19	16	12	12	11	11
19	11	8.3	16	14	11	18	20	16	12	12	11	12
20	11	8.4	15	14	11	19	19	15	12	11	11	11
21	11	8.3	20	14	11	18	20	14	12	11	11	11
22	11	8.3	16	14	12	18	18	14	12	12	11	10
23	11	8.3	16	14	12	18	17	15	12	11	11	10
24	11	8.6	15	14	12	18	14	15	12	11	11	10
25	11	9.1	12	14	12	15	13	15	12	11	11	10
26	11	9.5	15	13	12	12	14	15	12	11	11	10
27	11	7.1	14	13	13	20	13	15	12	11	11	10
28	11	3.9	14	13	12	20	14	15	12	11	11	10
29	11	3.6	14	13	---	20	17	14	12	11	11	10
30	11	3.8	14	13	---	19	17	14	11	11	11	10
31	11	---	14	13	---	19	---	14	---	11	11	---
TOTAL	341	252.8	305.7	423	354.6	539	555	494	372	358	282.1	313
MEAN	11.0	8.43	9.86	13.6	12.7	17.4	18.5	15.9	12.4	11.5	9.10	10.4
MAX	11	11	20	16	19	20	21	18	13	12	11	12
MIN	11	3.6	3.7	13	9.7	12	13	14	11	11	2.5	10
AC-FT	676	501	606	839	703	1070	1100	980	738	710	560	621

11052500 MILL CREEK POWER CANAL NO. 3 NEAR YUCAIPA, CA—Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	4.4	5.6	4.6	4.8	9.9	17	21	20	15	13	15
2	4.1	4.4	e2.8	4.6	4.8	9.8	18	21	20	14	13	12
3	4.2	4.4	e0.00	4.6	4.9	9.8	21	21	20	14	13	0.80
4	4.3	4.4	e0.00	4.6	4.9	9.7	21	21	20	14	13	8.0
5	4.4	4.4	e0.00	4.6	4.9	9.8	21	21	20	14	13	11
6	4.4	4.4	e0.00	4.6	5.0	10	21	21	19	14	13	0.93
7	4.4	4.5	e0.00	4.6	5.0	11	21	21	19	14	14	0.93
8	4.4	3.9	e0.00	4.7	5.0	12	21	21	19	13	14	0.91
9	4.2	0.00	e0.00	4.9	4.9	13	21	21	19	13	13	0.92
10	4.2	0.00	e0.00	4.9	5.1	13	21	21	19	13	13	0.95
11	4.1	0.00	e0.00	4.9	3.8	13	21	21	19	13	13	7.2
12	4.0	0.00	e0.00	4.9	0.03	13	21	21	19	13	13	14
13	4.0	0.13	e0.00	4.7	0.12	13	21	21	19	13	13	14
14	4.0	2.9	e0.00	4.6	0.11	13	12	21	19	12	13	14
15	4.1	5.1	e0.00	4.7	0.19	7.7	0.23	21	18	12	12	14
16	4.2	5.1	e0.00	4.7	0.23	0.00	14	21	6.5	13	12	14
17	4.2	5.1	e0.00	4.7	0.17	0.00	22	21	0.00	14	12	14
18	4.2	5.0	e2.2	4.7	0.08	8.8	22	21	0.00	14	12	14
19	4.3	4.9	4.1	4.7	3.2	17	22	21	0.00	14	7.0	14
20	4.3	5.0	4.4	5.1	8.6	17	22	21	8.6	13	6.1	14
21	4.3	5.1	4.6	5.1	8.5	17	22	21	17	13	0.54	13
22	4.2	5.3	4.6	4.3	8.1	17	22	21	16	13	0.14	13
23	4.3	5.2	4.6	5.6	7.8	17	21	21	16	13	0.76	13
24	4.4	5.1	4.6	4.8	8.2	17	21	21	16	13	5.2	13
25	4.4	4.9	4.6	4.4	10	17	21	21	16	13	8.7	13
26	4.4	5.2	4.6	4.4	11	17	21	21	15	13	12	13
27	4.4	5.6	4.6	4.7	10	17	21	21	15	13	17	13
28	4.4	5.3	4.6	4.8	10	17	21	21	15	13	17	12
29	4.4	5.7	4.6	4.8	---	17	21	21	15	13	16	12
30	4.4	5.8	4.6	4.8	---	17	21	21	15	13	15	13
31	4.4	---	4.6	4.8	---	17	---	21	---	13	15	---
TOTAL	131.9	121.23	69.70	146.9	139.43	397.50	592.23	651	460.10	412	352.44	312.64
MEAN	4.25	4.04	2.25	4.74	4.98	12.8	19.7	21.0	15.3	13.3	11.4	10.4
MAX	4.4	5.8	5.6	5.6	11	17	22	21	20	15	17	15
MIN	3.9	0.00	0.00	4.3	0.03	0.00	0.23	21	0.00	12	0.14	0.80
AC-FT	262	240	138	291	277	788	1170	1290	913	817	699	620

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2003, BY WATER YEAR (WY)

	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					
MEAN	15.3	14.4	13.9	14.2	14.7	17.1	19.5	20.2	19.2	16.6	15.5	14.8																							
MAX	26.8	23.5	23.9	26.6	27.8	30.1	33.3	31.8	28.7	29.2	30.2	27.9																							
(WY)	1981	1979	1979	1979	1979	1979	1995	1995	1979	1980	1980	1978																							
MIN	4.25	4.04	0.000	4.08	4.55	5.33	4.50	5.02	3.67	2.74	3.79	3.01																							
(WY)	2003	2003	2001	2001	2000	2000	2000	2002	2002	1999	2002	1997																							

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR				FOR 2003 WATER YEAR				WATER YEARS 1974 - 2003			
ANNUAL TOTAL	1641.84				3787.07							
ANNUAL MEAN	4.50				10.4				16.3			
HIGHEST ANNUAL MEAN									26.2			
LOWEST ANNUAL MEAN									5.07			
HIGHEST DAILY MEAN	9.7		Feb 26		22		Apr 17		41		May 6 1995	
LOWEST DAILY MEAN	0.00		Jun 11		0.00		Nov 9		0.00		Mar 3 1974	
ANNUAL SEVEN-DAY MINIMUM	0.00		Dec 3		0.00		Dec 3		0.00		Sep 5 1997	
ANNUAL RUNOFF (AC-FT)	3260				7510				11800			
10 PERCENT EXCEEDS	6.0				21				26			
50 PERCENT EXCEEDS	4.5				11				16			
90 PERCENT EXCEEDS	3.7				0.78				6.1			

e Estimated.

## 11055000 MILL CREEK NEAR MENTONE, CA

LOCATION.—Lat 34° 04' 40", long 117° 05' 54", in SE 1/4 SW 1/4 sec.16, T.1 S., R.2 W., [San Bernardino County](#), Hydrologic Unit 18070203, at Garnet Street Bridge, 1.55 mi upstream from mouth, and 1.5 mi northeast of Mentone.

DRAINAGE AREA.—49.1 mi<sup>2</sup>.

PERIOD OF RECORD.—February 1939 to September 1965, October 1997 to current year. Monthly discharge only for February 1939, published in WSP 1315-B. Instantaneous values only, based on discharge measurements, since October 1997.

GAGE.—None. Elevation of station is 2,010 ft above NGVD of 1929, from topographic map. February 1939 to September 1965, water-stage recorder and broad-crested weir at site 1.2 mi downstream.

REMARKS.—No regulation above station. Mill Creek Power Canals Nos. 1 and 3 divert from points 3.8 mi and 9.8 mi above station, respectively, and a varying portion of the remaining flow is sometimes diverted at a point 0.7 mi upstream for ground-water recharge. Power Canal No. 2, which diverted from a point 6.8 mi upstream from station, was damaged during an earthquake in 1992, has not been used since 1992, and has been permanently discontinued. Pumping of wells along stream above station for irrigation. See schematic diagram of [Santa Ana River Basin](#).

COOPERATION.—Discharge measurements are provided by the San Bernardino Valley Water Conservation District during most years; no measurements were provided during water year 2003. Many observations of no flow were made during the year and provided to the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD (1939–65).—Maximum discharge, 1,500 ft<sup>3</sup>/s, Dec. 23, 1945, gage height, 6.5 ft, site and datum then in use, on basis of slope-area measurement of maximum flow; no flow for parts of each year.

EXTREMES FOR CURRENT YEAR.—Maximum discharge observed, 0.92 ft<sup>3</sup>/s, May 21; no flow observed many times during year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY INSTANTANEOUS 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	---
2	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	---	---	---	0.00	0.00
5	---	0.00	0.00	---	0.00	0.00	---	0.00	0.28	---	0.00	---
6	---	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
8	0.00	0.00	---	0.00	---	---	---	---	---	---	---	---
9	0.00	---	0.00	0.00	---	---	---	---	---	---	---	---
10	0.00	---	0.00	0.00	---	0.00	---	---	---	0.00	---	0.00
11	0.00	---	0.00	---	---	0.00	---	---	---	0.00	---	0.00
12	---	0.00	0.00	---	---	0.00	---	---	---	---	---	0.00
13	---	0.00	0.00	0.00	---	0.00	---	---	---	---	---	---
14	0.00	0.00	---	0.00	---	0.00	---	---	---	0.00	---	---
15	0.00	0.00	---	0.00	---	---	---	---	---	0.00	---	---
16	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	0.00	---	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
20	---	0.00	---	---	0.00	0.00	---	---	0.00	---	---	---
21	0.00	0.00	---	0.00	0.00	0.00	0.00	0.92	---	0.00	---	---
22	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	---	---
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	---	---	---	---	---	---
27	---	0.00	---	0.00	0.00	0.00	---	---	---	---	---	---
28	0.00	---	---	0.00	0.00	---	0.00	---	---	0.00	0.00	---
29	0.00	---	---	0.00	---	---	0.00	---	---	0.00	0.00	---
30	0.00	---	0.00	0.00	---	---	0.00	---	---	0.00	0.00	---
31	0.00	---	---	0.00	---	---	---	---	---	0.00	0.00	---

## 11055500 PLUNGE CREEK NEAR EAST HIGHLANDS, CA

LOCATION.—Lat 34° 07' 06", long 117° 08' 27", in NE 1/4 NE 1/4 sec.1, T.1 S., R.3 W., San Bernardino County, Hydrologic Unit 18070203, on left bank, at mouth of canyon, at crossing of North Fork Ditch siphon, and 1.8 mi northeast of East Highlands.

DRAINAGE AREA.—16.9 mi<sup>2</sup>.

PERIOD OF RECORD.—January 1919 to current year; combined records of creek and diversions, March 1951 to current year.

REVISED RECORDS.—WSP 1635: 1924, 1926, 1935–36(M), 1943, 1944(M), 1945, 1946(M), 1947, 1950(M). WSP 1715: 1956–58(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder and concrete control on creek. Since March 1951, water-stage recorder and weir on upper diversion, discontinued Sept. 30, 1991, reactivated July 27, 1993; water-stage recorder and concrete-lined canal on middle diversion; crest-stage gage and sharp-crested weir on lower diversion. Elevation of creek gage is 1,590 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1969, creek gage at datum 4.00 ft higher. Diversions all at different datums.

REMARKS.—Records good. No regulation upstream from station. Diversion from Alder Creek to Upper Plunge Creek area was active 1904–67. Diversions for irrigation are made at sites 0.5 mi (station 11055450), 1.0 mi (station 11055400), and 2.5 mi (station 11055350) upstream from streamflow station. Water has been diverted upstream from station for irrigation during entire period of record. For combined discharge of Plunge Creek and diversions, see station 11055501. No flow in lower diversion since May 29, 1966. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Creek only: Maximum discharge, 5,340 ft<sup>3</sup>/s, Mar. 2, 1938, on basis of slope-area measurement of peak flow; maximum recorded gage height, 7.41 ft, Nov. 29, 1970; no flow at times in some years.

Combined creek and diversions: Maximum discharge, 4,770 ft<sup>3</sup>/s, Dec. 6, 1966; no flow, Nov. 12, 1964, Sept. 29, 1965, Aug. 4, 1987, several days in November 1988, September 1991, many days in 1992, and several days in September 2003.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s, or maximum, from rating curve extended above 356 ft<sup>3</sup>/s, on basis of slope-conveyance measurement at gage height 7.41 ft:

Date	Time	Creek only Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Combined creek and diversions Discharge (ft <sup>3</sup> /s)
Nov. 9	1845	384	4.68	384
Mar. 15	1930	219	4.23	219

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.32	0.51	2.3	2.9	1.8	19	5.7	5.2	3.4	1.2	0.65	0.11
2	0.30	0.48	2.2	2.8	1.9	15	5.7	5.1	2.9	1.2	0.57	0.11
3	0.22	0.37	2.2	4.0	2.0	13	5.6	9.2	3.0	1.2	0.50	0.12
4	0.18	0.35	2.1	3.6	1.9	11	5.4	15	3.2	1.1	0.43	0.10
5	0.15	0.35	2.1	2.6	1.9	11	5.4	11	3.2	1.0	0.37	0.07
6	0.14	0.33	2.0	2.5	1.9	9.5	5.0	8.7	3.2	0.99	0.35	0.07
7	0.12	0.34	2.1	2.6	1.9	8.9	4.7	8.8	3.0	1.0	0.34	0.08
8	0.10	5.9	2.1	2.6	1.9	8.2	4.4	8.7	2.8	1.0	0.31	0.10
9	0.11	149	2.0	2.6	1.9	7.6	4.2	8.2	2.9	0.92	0.28	0.16
10	0.12	53	2.0	2.6	1.9	7.1	4.0	7.6	3.1	0.81	0.26	0.25
11	0.15	9.8	2.0	2.6	3.3	6.6	4.0	7.3	3.1	0.74	0.25	0.21
12	0.17	5.9	1.9	2.6	13	6.1	4.0	6.8	2.9	0.70	0.26	0.13
13	0.16	4.3	2.0	2.5	57	5.7	4.0	6.6	2.8	0.66	0.18	0.13
14	0.14	3.5	1.9	2.4	33	5.6	34	6.5	2.5	0.60	0.16	0.14
15	0.17	3.0	1.9	2.3	15	55	33	6.3	2.3	0.53	0.15	0.14
16	0.25	2.7	4.6	2.2	10	101	20	5.8	2.2	0.49	0.15	0.16
17	0.39	2.5	7.0	2.2	8.5	46	15	5.7	2.2	0.57	0.16	0.14
18	0.43	2.4	3.5	2.2	7.3	30	14	5.4	2.1	0.72	0.15	0.11
19	0.38	2.3	3.0	2.2	6.4	26	11	5.1	2.3	0.67	0.18	0.08
20	0.31	2.1	7.7	2.2	6.0	22	9.9	4.9	2.8	0.59	0.21	0.09
21	0.31	2.1	6.4	2.3	5.5	19	10	4.5	2.9	0.53	0.28	0.07
22	0.35	2.1	5.0	2.3	5.1	16	12	4.3	2.8	0.60	0.33	0.03
23	0.35	2.1	3.9	2.3	5.5	15	10	4.3	2.6	0.70	0.28	0.02
24	0.36	2.2	3.5	2.3	5.9	13	8.4	4.3	2.2	0.52	0.21	0.09
25	0.39	2.0	3.3	2.1	18	12	7.6	4.3	1.8	0.50	0.17	0.19
26	0.44	1.9	3.1	2.0	20	10	6.9	4.2	1.7	0.42	0.15	0.15
27	0.48	2.0	3.0	2.0	34	9.3	6.4	3.8	1.6	0.40	0.15	0.09
28	0.42	2.1	3.0	2.0	26	7.9	5.7	3.7	1.5	0.38	0.15	0.07
29	0.40	2.1	4.1	2.0	---	6.8	6.0	3.7	1.4	0.66	0.15	0.10
30	0.46	2.4	3.3	2.0	---	6.7	5.4	3.7	1.3	1.1	0.14	0.11
31	0.49	---	3.1	2.0	---	6.1	---	3.6	---	0.96	0.12	---
TOTAL	8.76	270.13	98.3	75.5	298.5	536.1	277.4	192.3	75.7	23.46	8.04	3.42
MEAN	0.28	9.00	3.17	2.44	10.7	17.3	9.25	6.20	2.52	0.76	0.26	0.11
MAX	0.49	149	7.7	4.0	57	101	34	15	3.4	1.2	0.65	0.25
MIN	0.10	0.33	1.9	2.0	1.8	5.6	4.0	3.6	1.3	0.38	0.12	0.02
AC-FT	17	536	195	150	592	1060	550	381	150	47	16	6.8

## SANTA ANA RIVER BASIN

## 11055500 PLUNGE CREEK NEAR EAST HIGHLANDS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.29	1.99	6.31	12.2	21.4	22.2	12.5	4.15	1.09	0.32	0.16	0.33
MAX	3.47	44.7	106	170	224	176	74.2	51.7	15.1	5.52	4.87	10.9
(WY)	1984	1966	1967	1993	1969	1938	1958	1998	1998	1998	1983	1978
MIN	0.000	0.000	0.000	0.003	0.000	0.029	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1920	1921	1930	1963	1961	1961	1961	1919	1919	1919	1919	1919

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1919 - 2003	
ANNUAL TOTAL	588.78		1867.61			
ANNUAL MEAN	1.61		5.12		6.88	
HIGHEST ANNUAL MEAN					42.5	
LOWEST ANNUAL MEAN					0.050	
HIGHEST DAILY MEAN	149	Nov 9	149	Nov 9	1840	Jan 25 1969
LOWEST DAILY MEAN	0.05	Jul 10	0.02	Sep 23	0.00	May 1 1919
ANNUAL SEVEN-DAY MINIMUM	0.06	Jul 8	0.07	Sep 18	0.00	May 1 1919
MAXIMUM PEAK FLOW			384		5340	
MAXIMUM PEAK STAGE			4.68		7.41	
ANNUAL RUNOFF (AC-FT)	1170		3700		4990	
10 PERCENT EXCEEDS	2.1		10		13	
50 PERCENT EXCEEDS	0.77		2.2		0.20	
90 PERCENT EXCEEDS	0.07		0.15		0.00	



## 11055501 PLUNGE CREEK NEAR EAST HIGHLANDS, CA—Continued

## PLUNGE CREEK AND DIVERSIONS NEAR EAST HIGHLANDS, CA

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.32	0.51	2.3	2.9	1.8	19	5.7	5.2	3.4	1.2	0.65	0.11
2	0.30	0.48	2.2	2.8	1.9	15	5.7	5.1	2.9	1.2	0.57	0.11
3	0.22	0.37	2.2	4.0	2.0	13	5.6	9.2	3.0	1.2	0.50	0.12
4	0.18	0.35	2.1	3.6	1.9	11	5.4	15	3.2	1.1	0.43	0.10
5	0.15	0.35	2.1	2.6	1.9	11	5.4	11	3.2	1.0	0.37	0.07
6	0.14	0.33	2.0	2.5	1.9	9.5	5.0	8.7	3.2	0.99	0.35	0.07
7	0.12	0.34	2.1	2.6	1.9	8.9	4.7	8.8	3.0	1.0	0.34	0.08
8	0.10	5.9	2.1	2.6	1.9	8.2	4.4	8.7	2.8	1.0	0.31	0.10
9	0.11	149	2.0	2.6	1.9	7.6	4.2	8.2	2.9	0.92	0.28	0.16
10	0.12	53	2.0	2.6	1.9	7.1	4.0	7.6	3.1	0.81	0.26	0.25
11	0.15	9.8	2.0	2.6	3.3	6.6	4.0	7.3	3.1	0.74	0.25	0.21
12	0.17	5.9	1.9	2.6	13	6.1	4.0	6.8	2.9	0.70	0.26	0.13
13	0.16	4.3	2.0	2.5	57	5.7	4.0	6.6	2.8	0.66	0.18	0.13
14	0.14	3.5	1.9	2.4	33	5.6	34	6.5	2.5	0.60	0.16	0.14
15	0.17	3.0	1.9	2.3	15	55	33	6.3	2.3	0.53	0.15	0.14
16	0.25	2.7	4.6	2.2	10	101	20	5.8	2.2	0.49	0.15	0.16
17	0.39	2.5	7.0	2.2	8.5	46	15	5.7	2.2	0.57	0.16	0.14
18	0.43	2.4	3.5	2.2	7.3	30	14	5.4	2.1	0.72	0.15	0.11
19	0.38	2.3	3.0	2.2	6.4	26	11	5.1	2.3	0.67	0.18	0.08
20	0.31	2.1	7.7	2.2	6.0	22	9.9	4.9	2.8	0.59	0.21	0.09
21	0.31	2.1	6.4	2.3	5.5	19	10	4.5	2.9	0.53	0.28	0.07
22	0.35	2.1	5.0	2.3	5.1	16	12	4.3	2.8	0.60	0.33	0.03
23	0.35	2.1	3.9	2.3	5.5	15	10	4.3	2.6	0.70	0.28	0.02
24	0.36	2.2	3.5	2.3	5.9	13	8.4	4.3	2.2	0.52	0.21	0.09
25	0.39	2.0	3.3	2.1	18	12	7.6	4.3	1.8	0.50	0.17	0.19
26	0.44	1.9	3.1	2.0	20	10	6.9	4.2	1.7	0.42	0.15	0.15
27	0.48	2.0	3.0	2.0	34	9.3	6.4	3.8	1.6	0.40	0.15	0.09
28	0.42	2.1	3.0	2.0	26	7.9	5.7	3.7	1.5	0.38	0.15	0.07
29	0.40	2.1	4.1	2.0	---	6.8	6.0	3.7	1.4	0.66	0.15	0.10
30	0.46	2.4	3.3	2.0	---	6.7	5.4	3.7	1.3	1.1	0.14	0.11
31	0.49	---	3.1	2.0	---	6.1	---	3.6	---	0.96	0.12	---
TOTAL	8.76	270.13	98.3	75.5	298.5	536.1	277.4	192.3	75.7	23.46	8.04	3.42
MEAN	0.28	9.00	3.17	2.44	10.7	17.3	9.25	6.20	2.52	0.76	0.26	0.11
MAX	0.49	149	7.7	4.0	57	101	34	15	3.4	1.2	0.65	0.25
MIN	0.10	0.33	1.9	2.0	1.8	5.6	4.0	3.6	1.3	0.38	0.12	0.02
AC-FT	17	536	195	150	592	1060	550	381	150	47	16	6.8

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

MEAN	1.38	3.47	7.20	16.4	22.7	23.6	13.7	7.28	3.50	1.78	1.25	1.38
MAX	7.23	45.2	106	170	224	126	79.0	52.5	17.1	7.44	7.43	14.1
(WY)	1984	1966	1967	1993	1969	1978	1958	1998	1998	1980	1983	1978
MIN	0.033	0.003	0.77	1.00	1.50	1.42	1.05	0.61	0.19	0.073	0.028	0.011
(WY)	1992	1992	1963	1963	1961	2002	2002	2002	2002	2002	1992	1992

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1951 - 2003

ANNUAL TOTAL	588.78	1867.61	
ANNUAL MEAN	1.61	5.12	8.59
HIGHEST ANNUAL MEAN			44.4
LOWEST ANNUAL MEAN			0.81
HIGHEST DAILY MEAN	149	Nov 9	1840
LOWEST DAILY MEAN	0.05	Jul 10	0.00
ANNUAL SEVEN-DAY MINIMUM	0.06	Jul 8	0.00
MAXIMUM PEAK FLOW			4770
ANNUAL RUNOFF (AC-FT)	1170	3700	6230
10 PERCENT EXCEEDS	2.1	10	15
50 PERCENT EXCEEDS	0.77	2.2	2.3
90 PERCENT EXCEEDS	0.07	0.15	0.60

## 11055800 CITY CREEK NEAR HIGHLAND, CA

LOCATION.—Lat 34° 08' 38", long 117° 11' 16", in SW 1/4 NW 1/4 sec.27, T.1 N., R.3 W., San Bernardino County, Hydrologic Unit 18070203, on right bank, 0.6 mi upstream from Highland Avenue, and 1.5 mi northeast of Highland.

DRAINAGE AREA.—19.6 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1919 to current year; combined records of creek and City Creek Water Co.'s canal, June 1924 to September 1986, October 1988 to current year.

REVISED RECORDS.—WSP 1635: 1920(M), 1923(M), 1937(M), 1939(M), 1946. WSP 1928: Drainage area.

GAGE.—Water-stage recorder on creek; water-stage recorder on canal. Elevation of creek gage is 1,580 ft above NGVD of 1929, from topographic map. Prior to Mar. 1, 1939, at site 0.2 mi downstream at different datum. Canal gage at different datum.

REMARKS.—Records fair. No regulation upstream from station. City Creek Water Co.'s canal (station 11055700) diverted from a site 0.5 mi upstream from station for irrigation throughout period of record until Sept. 30, 1986, and resumed diversion on Mar. 31, 1989. Diversion canal damaged by storms of January 1993, with no flow in canal from Jan. 14, 1993, to Apr. 5, 1995. For combined discharge of City Creek and canal see station 11055801. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Creek only: Maximum discharge, 7,000 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 9.39 ft, from rating curve extended above 580 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 8.82 ft; no flow for many days in some years.

Combined creek and canal: Maximum discharge, 7,000 ft<sup>3</sup>/s, Feb. 25, 1969; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 110 ft<sup>3</sup>/s, or maximum:

Date	Time	Creek only		Combined creek and canal
		Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
Nov. 9	1915	242	5.17	242
Feb. 13	1500	113	4.57	113
Mar. 16	0600	272	5.27	272
Apr. 14	2045	139	4.72	139

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.21	0.35	2.1	4.0	2.2	19	6.6	6.0	3.4	0.98	0.38	0.08
2	0.19	0.34	1.9	3.7	2.1	16	6.2	5.7	3.3	0.92	0.35	0.08
3	0.18	0.31	1.9	3.6	2.1	13	6.3	14	3.4	0.86	0.30	0.08
4	0.16	0.31	1.8	3.5	2.1	12	5.9	26	3.4	0.81	0.28	0.08
5	0.14	0.31	1.8	3.3	2.1	10	6.0	16	3.4	0.76	0.26	0.07
6	0.13	0.31	1.8	3.0	2.1	9.5	5.4	12	3.4	0.72	0.22	0.08
7	0.12	0.33	1.8	3.1	2.1	8.7	4.9	12	3.1	0.69	0.19	0.10
8	0.12	3.9	1.8	3.2	2.1	7.8	4.5	12	2.8	0.64	0.19	0.11
9	0.14	86	1.8	3.2	2.1	7.2	4.3	11	2.9	0.62	0.14	0.13
10	0.15	47	1.8	3.1	2.1	6.7	4.0	9.7	3.2	0.58	0.12	0.14
11	0.18	11	1.8	3.1	4.9	6.3	4.0	8.7	3.1	0.61	0.10	0.15
12	0.19	5.9	1.8	3.0	15	5.9	4.1	8.2	2.9	0.58	0.06	0.14
13	0.17	3.9	1.8	2.9	60	5.5	4.9	7.8	2.6	0.57	0.05	0.15
14	0.17	3.0	1.8	2.8	36	5.3	46	7.7	2.4	0.55	0.07	0.15
15	0.21	2.4	1.8	2.7	18	31	54	7.6	2.1	0.52	0.07	0.17
16	0.24	2.1	5.4	2.6	13	141	34	6.8	1.9	0.50	0.07	0.19
17	0.25	2.0	9.3	2.6	10	67	25	6.5	1.8	0.48	0.07	0.19
18	0.26	1.8	5.4	2.6	8.3	44	23	6.3	1.7	0.46	0.07	0.20
19	0.26	1.8	3.9	2.5	7.1	34	18	6.0	1.8	0.46	0.08	0.20
20	0.25	1.7	11	2.5	6.6	27	14	5.4	2.4	0.45	0.09	0.22
21	0.27	1.7	9.4	2.5	5.8	22	12	4.9	2.5	0.42	0.11	0.21
22	0.28	1.7	7.6	2.5	5.3	18	12	4.6	2.5	0.41	0.12	0.20
23	0.28	1.8	6.1	2.4	5.0	16	11	4.5	2.4	0.43	0.12	0.20
24	0.30	1.8	5.0	2.4	4.7	15	9.7	4.7	2.2	0.42	0.11	0.25
25	0.30	1.7	4.5	2.3	23	13	8.9	4.8	1.7	0.40	0.10	0.28
26	0.33	1.6	4.1	2.3	22	12	8.3	4.7	1.4	0.38	0.09	0.27
27	0.33	1.7	3.9	2.3	32	11	7.6	4.2	1.2	0.36	0.09	0.26
28	0.32	1.7	3.7	2.3	26	9.6	7.1	3.8	1.2	0.31	0.08	0.26
29	0.33	1.8	6.6	2.3	---	8.6	6.7	3.6	1.1	0.36	0.08	0.29
30	0.33	2.6	4.8	2.2	---	7.7	6.4	3.6	1.1	0.51	0.08	0.30
31	0.34	---	4.3	2.2	---	7.1	---	3.6	---	0.42	0.08	---
TOTAL	7.13	192.86	122.5	86.7	323.8	616.9	370.8	242.4	72.3	17.18	4.22	5.23
MEAN	0.23	6.43	3.95	2.80	11.6	19.9	12.4	7.82	2.41	0.55	0.14	0.17
MAX	0.34	86	11	4.0	60	141	54	26	3.4	0.98	0.38	0.30
MIN	0.12	0.31	1.8	2.2	2.1	5.3	4.0	3.6	1.1	0.31	0.05	0.07
AC-FT	14	383	243	172	642	1220	735	481	143	34	8.4	10

## 11055800 CITY CREEK NEAR HIGHLAND, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.07	3.37	8.37	16.3	30.1	28.7	17.6	7.44	2.84	1.08	0.59	0.62
MAX	8.48	43.4	89.5	199	451	219	148	52.3	26.1	11.7	9.56	5.70
(WY)	1984	1966	1967	1993	1969	1938	1926	1998	1998	1980	1983	1976
MIN	0.000	0.000	0.000	0.13	0.35	0.18	0.033	0.000	0.000	0.000	0.000	0.000
(WY)	1927	1922	1930	1936	1924	1926	1934	1934	1924	1924	1920	1920

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1920 - 2003	
ANNUAL TOTAL	611.66		2062.02			
ANNUAL MEAN	1.68		5.65		9.73	
HIGHEST ANNUAL MEAN					75.3 1969	
LOWEST ANNUAL MEAN					0.46 1961	
HIGHEST DAILY MEAN	86	Nov 9	141	Mar 16	3360	Feb 25 1969
LOWEST DAILY MEAN	0.04	Aug 12	0.05	Aug 13	0.00	Jul 18 1920
ANNUAL SEVEN-DAY MINIMUM	0.05	Aug 8	0.07	Aug 12	0.00	Jul 18 1920
MAXIMUM PEAK FLOW			272	Mar 16	7000	Feb 25 1969
MAXIMUM PEAK STAGE			5.27	Mar 16	9.39	Feb 25 1969
ANNUAL RUNOFF (AC-FT)	1210		4090		7050	
10 PERCENT EXCEEDS	2.3		12		19	
50 PERCENT EXCEEDS	1.5		2.2		1.4	
90 PERCENT EXCEEDS	0.08		0.14		0.00	

## 11055801 CITY CREEK NEAR HIGHLAND, CA—Continued

## CITY CREEK AND CITY CREEK WATER CO.'S CANAL NEAR HIGHLAND, CA

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.21	0.35	2.1	4.0	2.2	19	6.6	6.0	3.4	0.98	0.38	0.08
2	0.19	0.34	1.9	3.7	2.1	16	6.2	5.7	3.3	0.92	0.35	0.08
3	0.18	0.31	1.9	3.6	2.1	13	6.3	14	3.4	0.86	0.30	0.08
4	0.16	0.31	1.8	3.5	2.1	12	5.9	26	3.4	0.81	0.28	0.08
5	0.14	0.31	1.8	3.3	2.1	10	6.0	16	3.4	0.76	0.26	0.07
6	0.13	0.31	1.8	3.0	2.1	9.5	5.4	12	3.4	0.72	0.22	0.08
7	0.12	0.33	1.8	3.1	2.1	8.7	4.9	12	3.1	0.69	0.19	0.10
8	0.12	3.9	1.8	3.2	2.1	7.8	4.5	12	2.8	0.64	0.19	0.11
9	0.14	86	1.8	3.2	2.1	7.2	4.3	11	2.9	0.62	0.14	0.13
10	0.15	47	1.8	3.1	2.1	6.7	4.0	9.7	3.2	0.58	0.12	0.14
11	0.18	11	1.8	3.1	4.9	6.3	4.0	8.7	3.1	0.61	0.10	0.15
12	0.19	5.9	1.8	3.0	15	5.9	4.1	8.2	2.9	0.58	0.06	0.14
13	0.17	3.9	1.8	2.9	60	5.5	4.9	7.8	2.6	0.57	0.05	0.15
14	0.17	3.0	1.8	2.8	36	5.3	4.6	7.7	2.4	0.55	0.07	0.15
15	0.21	2.4	1.8	2.7	18	31	5.4	7.6	2.1	0.52	0.07	0.17
16	0.24	2.1	5.4	2.6	13	141	34	6.8	1.9	0.50	0.07	0.19
17	0.25	2.0	9.3	2.6	10	67	25	6.5	1.8	0.48	0.07	0.19
18	0.26	1.8	5.4	2.6	8.3	44	23	6.3	1.7	0.46	0.07	0.20
19	0.26	1.8	3.9	2.5	7.1	34	18	6.0	1.8	0.46	0.08	0.20
20	0.25	1.7	11	2.5	6.6	27	14	5.4	2.4	0.45	0.09	0.22
21	0.27	1.7	9.4	2.5	5.8	22	12	4.9	2.5	0.42	0.11	0.21
22	0.28	1.7	7.6	2.5	5.3	18	12	4.6	2.5	0.41	0.12	0.20
23	0.28	1.8	6.1	2.4	5.0	16	11	4.5	2.4	0.43	0.12	0.20
24	0.30	1.8	5.0	2.4	4.7	15	9.7	4.7	2.2	0.42	0.11	0.25
25	0.30	1.7	4.5	2.3	23	13	8.9	4.8	1.7	0.40	0.10	0.28
26	0.33	1.6	4.1	2.3	22	12	8.3	4.7	1.4	0.38	0.09	0.27
27	0.33	1.7	3.9	2.3	32	11	7.6	4.2	1.2	0.36	0.09	0.26
28	0.32	1.7	3.7	2.3	26	9.6	7.1	3.8	1.2	0.31	0.08	0.26
29	0.33	1.8	6.6	2.3	---	8.6	6.7	3.6	1.1	0.36	0.08	0.29
30	0.33	2.6	4.8	2.2	---	7.7	6.4	3.6	1.1	0.51	0.08	0.30
31	0.34	---	4.3	2.2	---	7.1	---	3.6	---	0.42	0.08	---
TOTAL	7.13	192.86	122.5	86.7	323.8	616.9	370.8	242.4	72.3	17.18	4.22	5.23
MEAN	0.23	6.43	3.95	2.80	11.6	19.9	12.4	7.82	2.41	0.55	0.14	0.17
MAX	0.34	86	11	4.0	60	141	54	26	3.4	0.98	0.38	0.30
MIN	0.12	0.31	1.8	2.2	2.1	5.3	4.0	3.6	1.1	0.31	0.05	0.07
AC-FT	14	383	243	172	642	1220	735	481	143	34	8.4	10

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2003, BY WATER YEAR (WY)

MEAN	2.14	4.63	8.77	17.1	31.1	29.9	19.1	9.94	5.31	2.55	1.59	1.53
MAX	10.2	44.1	89.9	199	451	221	148	54.2	26.9	13.3	11.0	7.05
(WY)	1984	1966	1967	1993	1969	1938	1926	1998	1998	1998	1983	1983
MIN	0.13	0.36	0.69	1.96	1.76	2.07	2.05	0.72	0.23	0.092	0.051	0.066
(WY)	1991	1991	1991	2002	2002	2002	2002	1934	2002	2002	1989	1990

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1924 - 2003

ANNUAL TOTAL	611.66	2062.02		
ANNUAL MEAN	1.68	5.65	11.0	
HIGHEST ANNUAL MEAN			77.8	1969
LOWEST ANNUAL MEAN			1.04	2002
HIGHEST DAILY MEAN	86	Nov 9	141	Mar 16
LOWEST DAILY MEAN	0.04	Aug 12	0.05	Aug 13
ANNUAL SEVEN-DAY MINIMUM	0.05	Aug 8	0.07	Aug 12
MAXIMUM PEAK FLOW			272	Mar 16
ANNUAL RUNOFF (AC-FT)	1210	4090	7990	
10 PERCENT EXCEEDS	2.3	12	19	
50 PERCENT EXCEEDS	1.5	2.2	3.6	
90 PERCENT EXCEEDS	0.08	0.14	0.39	

## 11057500 SAN TIMOTEO CREEK NEAR LOMA LINDA, CA

LOCATION.—Lat 34° 03' 41", long 117° 16' 00", in NW 1/4 NE 1/4 sec.26, T.1 S., R.4 W., [San Bernardino County](#), Hydrologic Unit 18070203, on left bank, 1,500 ft upstream from Redlands Boulevard Bridge, and 0.6 mi northwest of Loma Linda.

DRAINAGE AREA.—125 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1954 to September 1965, February 1968 to September 1975, April 1979 to current year. Discharge measurements only, October 1997 to September 1998.

WATER TEMPERATURE: April 1979 to December 1981.

SEDIMENT DATA: April 1979 to December 1981, December 1991 to March 1994.

GAGE.—Water-stage recorder and concrete-lined flood-control channel. Elevation of gage is 1,040 ft above NGVD of 1929, from topographic map. Prior to April 1979, water-stage recorder at site 0.45 mi downstream at different datum. Prior to Dec. 7, 1997, at site 0.25 mi downstream at different datum.

REMARKS.—Records poor. Since Dec. 7, 1997, channel is a trapezoidal concrete floodway. No regulation upstream from station. Natural flow affected by pumping and return flow from irrigated areas. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,000 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 8.2 ft, from floodmark, from rating curve extended above 2,100 ft<sup>3</sup>/s, on basis of slope-conveyance study of peak flow, at site and datum then in use; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 150 ft<sup>3</sup>/s, or maximum, from rating curve extended above 79 ft<sup>3</sup>/s, on basis of step-backwater analysis:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 9	2145	549	2.30	Feb. 25	unknown	unknown	unknown
Dec. 16	2200	381	2.04	Mar. 15	unknown	unknown	unknown
Dec. 20	1130	238	1.77	Apr. 14	2015	717	2.52
Feb. 13	1700	578	2.34				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.06	0.00	0.73	0.55	0.16	e8.4	1.6	0.01	0.00	0.13	0.12	0.06
2	0.06	0.00	0.26	0.72	0.05	e4.3	0.01	0.00	0.01	0.00	0.10	0.06
3	0.06	0.00	0.26	0.66	0.04	e5.0	0.01	3.6	0.01	0.09	0.10	0.09
4	0.06	0.00	0.26	0.75	0.01	e0.72	0.01	0.00	0.03	0.07	0.53	0.22
5	0.06	0.00	0.26	0.57	0.01	e0.18	0.04	0.00	0.14	0.02	0.29	0.24
6	0.06	0.00	0.23	0.63	0.02	1.1	0.00	0.00	0.21	0.06	0.06	0.25
7	0.06	0.00	0.26	0.39	0.02	1.5	0.00	0.00	0.09	0.06	0.07	0.23
8	0.06	12	0.26	0.31	0.01	0.94	0.00	0.00	0.10	0.07	0.01	0.19
9	0.06	63	0.23	0.19	0.02	0.18	0.00	0.00	0.08	0.00	0.02	0.05
10	0.06	18	0.26	0.07	0.02	0.52	0.00	0.02	0.06	0.00	0.04	0.02
11	0.06	0.17	0.27	0.11	22	1.5	0.00	0.06	0.02	0.06	0.09	0.00
12	0.06	0.20	0.27	0.09	92	1.4	0.00	0.01	0.07	0.05	0.22	0.01
13	0.06	0.31	0.20	0.31	149	1.4	0.01	0.08	0.08	0.01	0.23	0.03
14	0.06	0.31	0.18	0.30	53	1.9	177	0.01	0.03	0.02	0.09	0.00
15	0.06	0.30	0.15	0.28	8.9	e300	e68	0.00	0.00	0.07	0.08	0.03
16	0.06	0.30	56	0.26	2.0	e150	e5.7	0.00	0.00	0.08	1.1	0.11
17	0.06	0.31	37	0.05	e2.5	e20	1.1	0.00	0.00	0.04	1.7	0.03
18	0.06	0.34	8.2	0.06	e1.9	e2.0	0.04	0.00	0.00	0.17	1.1	0.01
19	0.06	0.39	1.4	0.06	e1.6	0.58	0.00	0.00	0.00	0.05	0.58	0.00
20	0.06	0.41	56	0.06	e1.1	1.9	0.00	0.00	0.07	0.02	0.09	0.06
21	0.03	0.29	4.1	0.06	e0.70	1.7	0.01	0.00	0.04	0.18	0.10	0.12
22	0.02	0.26	2.2	0.11	e0.69	0.94	0.00	0.00	0.07	0.18	0.25	0.00
23	0.02	0.27	2.5	0.13	e0.60	0.44	0.00	0.00	0.07	0.11	0.23	0.00
24	0.02	0.27	1.9	0.24	e0.60	0.87	0.00	0.00	0.00	e0.01	0.04	0.04
25	0.05	0.27	e1.6	0.57	e100	1.1	0.00	0.00	0.00	0.00	0.09	0.06
26	0.10	0.34	e1.2	0.29	e25	0.63	0.00	0.00	0.00	0.00	0.25	0.07
27	0.06	0.78	e1.0	0.26	e28	1.1	0.00	0.00	0.00	0.00	0.23	0.06
28	0.00	0.84	0.88	0.11	e10	1.6	0.00	0.00	0.00	0.64	0.15	0.00
29	0.01	0.89	0.71	0.11	---	1.1	0.22	0.00	0.00	2.2	0.27	0.00
30	0.01	4.5	0.41	0.11	---	1.4	0.00	0.01	0.11	0.22	0.18	0.00
31	0.01	---	0.53	0.08	---	1.8	---	0.00	---	0.07	0.04	---
TOTAL	1.53	104.75	179.71	8.49	499.95	516.20	253.75	3.80	1.29	4.68	8.45	2.04
MEAN	0.049	3.49	5.80	0.27	17.9	16.7	8.46	0.12	0.043	0.15	0.27	0.068
MAX	0.10	63	56	0.75	149	300	177	3.6	0.21	2.2	1.7	0.25
MIN	0.00	0.00	0.15	0.05	0.01	0.18	0.00	0.00	0.00	0.00	0.01	0.00
AC-FT	3.0	208	356	17	992	1020	503	7.5	2.6	9.3	17	4.0

e Estimated.

## SANTA ANA RIVER BASIN

## 11057500 SAN TIMOTEO CREEK NEAR LOMA LINDA, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.83	1.52	2.04	8.84	11.7	6.92	1.71	0.81	0.73	0.62	0.58	0.71
MAX	2.27	11.6	11.6	113	186	53.7	16.8	3.65	2.20	3.65	1.76	3.03
(WY)	1988	1983	1985	1993	1969	1991	1958	1969	1989	1968	1965	1965
MIN	0.000	0.000	0.16	0.079	0.17	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1996	1996	1996	1972	1968	1997	1979	1996	1996	1995	1995	1995

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1955 - 2003	
ANNUAL TOTAL	369.69		1584.64			
ANNUAL MEAN	1.01		4.34		3.07	
HIGHEST ANNUAL MEAN					21.7 1969	
LOWEST ANNUAL MEAN					0.45 2002	
HIGHEST DAILY MEAN	63	Nov 9	300	Mar 15	3500	Feb 25 1969
LOWEST DAILY MEAN	0.00	May 8	0.00	Oct 28	0.00	Feb 4 1968
ANNUAL SEVEN-DAY MINIMUM	0.00	Nov 1	0.00	Nov 1	0.00	Apr 15 1969
MAXIMUM PEAK FLOW			a Mar 15		15000	Feb 25 1969
MAXIMUM PEAK STAGE			a Mar 15		8.20	Feb 25 1969
ANNUAL RUNOFF (AC-FT)	733		3140		2220	
10 PERCENT EXCEEDS	0.89		1.9		1.9	
50 PERCENT EXCEEDS	0.11		0.08		0.54	
90 PERCENT EXCEEDS	0.01		0.00		0.00	

a Instantaneous peak discharge and stage for water year 2003 are unknown, but probably occurred on Mar. 15.



## 11058500 EAST TWIN CREEK NEAR ARROWHEAD SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.48	2.49	4.75	7.73	12.2	13.3	8.05	4.89	2.88	1.66	1.26	1.15
MAX	11.4	20.3	43.6	95.7	102	101	38.3	30.6	15.9	9.40	11.9	4.94
(WY)	1984	1966	1967	1993	1993	1991	1978	1998	1998	1983	1983	1983
MIN	0.20	0.47	0.51	0.91	1.14	1.16	0.56	0.65	0.56	0.18	0.20	0.20
(WY)	1965	1965	1990	1963	1964	2002	1977	2002	2002	1964	1964	1964

## SUMMARY STATISTICS

WATER YEARS 1921 - 2003

ANNUAL MEAN	5.12
HIGHEST ANNUAL MEAN	23.1 1993
LOWEST ANNUAL MEAN	0.85 1961
HIGHEST DAILY MEAN	795 Feb 25 1969
LOWEST DAILY MEAN	0.10 Aug 23 1929
ANNUAL SEVEN-DAY MINIMUM	0.11 Jul 11 1964
MAXIMUM PEAK FLOW	3710 Jan 29 1980
MAXIMUM PEAK STAGE	8.35 Jan 29 1980
ANNUAL RUNOFF (AC-FT)	3710
10 PERCENT EXCEEDS	9.2
50 PERCENT EXCEEDS	1.9
90 PERCENT EXCEEDS	0.51

## DISCHARGE MEASUREMENTS, NOVEMBER 2002 TO SEPTEMBER 2003

Date	Time	Discharge (ft <sup>3</sup> /s)
Nov. 9 .....	1250	33.5
Nov. 14 .....	1002	1.9
Nov. 26 .....	1131	1.0
Dec. 4 .....	1427	.93
Dec. 12 .....	1230	1.1
Dec. 17 .....	0845	4.2
Dec. 20 .....	1445	8.6
Dec. 27 .....	0930	3.3
Jan. 3 .....	0900	2.2
Jan. 10 .....	1033	1.3
Jan. 17 .....	1105	1.4
Feb. 5 .....	1502	1.2
Feb. 12 .....	1132	5.4
Feb. 13 .....	1137	254
Feb. 19 .....	1022	3.9
Feb. 25 .....	1152	34.2
Feb. 27 .....	1133	27.6
Mar. 5 .....	0959	5.0
Mar. 18 .....	1400	13.1
Apr. 2 .....	1230	3.3
Apr. 15 .....	1345	15.6
May 6 .....	1105	8.6
May 13 .....	1215	3.9
June 4 .....	1156	2.4
July 2 .....	1237	.92
Aug. 7 .....	1415	.59
Sept. 5 .....	1025	.57



## 11059300 SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO, CA

LOCATION.—Lat 34° 03' 54", long 117° 17' 58", in San Bernardino Grant, [San Bernardino County](#), Hydrologic Unit 18070203, on left bank, 0.4 mi downstream from E Street Bridge, 0.4 mi upstream from Warm Creek, 1.2 mi downstream from San Timoteo Creek, 26 mi downstream from Big Bear Lake, and 2.8 mi south of San Bernardino.

DRAINAGE AREA.—541 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—March 1939 to September 1954, October 1966 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 940 ft above NGVD of 1929, from topographic map. Prior to Nov. 10, 1950, water-stage recorder on right bank 0.4 mi upstream at datum 24.50 ft higher. Nov. 11, 1950, to September 1954, water-stage recorder on both banks 0.4 mi upstream at datum 24.50 ft higher. October 1966 to September 1976, water-stage recorder on right bank 0.4 mi upstream at datum 14.50 ft higher. October 1976 to September 1977, gage was removed for channel construction. October 1977 to Jan. 28, 1981, water-stage recorder on right bank, 0.5 mi upstream at elevation 10 ft higher, from topographic map.

REMARKS.—Records poor. Flow partly regulated by Big Bear Lake (station 11049000) and, since November 1999, by Seven Oaks Flood-Control Reservoir, capacity, 145,600 acre-ft. Natural flow of stream affected by ground-water withdrawals and diversion for domestic use and irrigation upstream from station. Effluent from sewage reclamation plant 1.0 mi upstream caused sustained flow past gage from 1967 to Mar. 21, 1996. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 28,000 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 11.9 ft, site and datum then in use; no flow for many days many years prior to 1967 and since Mar. 21, 1996.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,000 ft<sup>3</sup>/s, from rating curve extended above 5,930 ft<sup>3</sup>/s, on basis of critical-depth computations, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 9	1930	2,210	5.07	Feb. 25	0915	3,570	5.44
Dec. 16	1830	4,240	5.58	Mar. 15	1815	3,400	5.40
Dec. 20	0830	1,870	4.95	Apr. 14	2045	3,940	5.52
Feb. 12	1945	3,570	5.44	May 3	1345	1,510	4.80

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.22	0.00	0.00	17	0.00	1.8	e0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	3.6	0.00	1.1	e0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	40	0.00	68	e0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	11	0.00	e4.0	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	3.7	1.6	e1.1	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.08	0.00	e0.30	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.15	0.00	0.00	0.00	0.00
8	0.00	188	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
9	0.00	653	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
10	0.00	332	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
11	0.00	0.78	0.00	0.00	248	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	579	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
13	0.00	15	0.00	0.00	1000	0.21	0.47	e0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	275	0.12	985	e0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	86	770	373	e0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	536	0.00	e51	732	49	e0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	e133	0.00	e68	155	26	e0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	e2.7	0.00	e30	46	72	e0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	e0.00	0.00	e0.00	52	22	e0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	e285	0.00	e30	88	0.00	e0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	e2.6	0.00	e31	18	1.0	e0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	e0.00	0.00	e29	8.8	0.81	e0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	e0.00	0.00	e43	4.3	0.00	e0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	e48	2.1	0.00	e0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	788	2.3	0.00	e0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	168	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	162	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	46	0.00	0.00	e0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.56	e0.00	0.00	1.1	0.00	0.00
30	0.00	1.2	0.00	0.00	---	0.00	2.1	e0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	e0.00	---	0.00	0.00	---
TOTAL	0.00	1189.98	959.52	0.00	3682.00	1954.21	1533.54	76.45	0.00	1.10	0.00	0.00
MEAN	0.000	39.7	31.0	0.000	132	63.0	51.1	2.47	0.000	0.035	0.000	0.000
MAX	0.00	653	536	0.00	1000	770	985	68	0.00	1.1	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	2360	1900	0.00	7300	3880	3040	152	0.00	2.2	0.00	0.00

e Estimated.

## 11059300 SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1954, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.88	3.47	20.9	23.7	20.6	37.4	27.2	11.3	2.39	.93	.87	.63
MAX	3.35	21.3	117	109	72.2	183	237	145	31.2	9.87	8.37	6.32
(WY)	1942	1945	1946	1943	1945	1943	1941	1941	1941	1940	1940	1939
MIN	.000	.007	.000	1.90	2.41	1.70	1.14	.14	.000	.000	.000	.000
(WY)	1951	1952	1951	1948	1942	1951	1951	1942	1950	1950	1942	1948

## SUMMARY STATISTICS

## WATER YEARS 1939 - 1954

ANNUAL MEAN	12.7
HIGHEST ANNUAL MEAN	56.6 1941
LOWEST ANNUAL MEAN	.78 1951
HIGHEST DAILY MEAN	2350 Jan 23 1943
LOWEST DAILY MEAN	.00 Jun 19 1940
ANNUAL SEVEN-DAY MINIMUM	.00 Sep 10 1940
ANNUAL RUNOFF (AC-FT)	9190
10 PERCENT EXCEEDS	16
50 PERCENT EXCEEDS	1.0
90 PERCENT EXCEEDS	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1995, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	33.9	43.3	77.4	158	232	253	132	103	63.9	40.8	36.8	34.6
MAX	117	191	469	1327	2096	1279	742	707	339	162	160	75.0
(WY)	1984	1984	1967	1993	1980	1980	1980	1983	1983	1969	1983	1983
MIN	12.4	13.2	14.8	13.2	11.6	10.6	12.5	9.35	13.0	9.08	9.97	9.93
(WY)	1968	1972	1970	1972	1968	1972	1972	1967	1971	1967	1967	1967

## SUMMARY STATISTICS

## WATER YEARS 1967 - 1995

ANNUAL MEAN	100
HIGHEST ANNUAL MEAN	441 1980
LOWEST ANNUAL MEAN	17.2 1968
HIGHEST DAILY MEAN	14800 Feb 25 1969
LOWEST DAILY MEAN	6.4 Jul 13 1967
ANNUAL SEVEN-DAY MINIMUM	8.1 Sep 16 1967
MAXIMUM PEAK FLOW	28000 Feb 25 1969
MAXIMUM PEAK STAGE	11.90 Feb 25 1969
ANNUAL RUNOFF (AC-FT)	72490
10 PERCENT EXCEEDS	165
50 PERCENT EXCEEDS	35
90 PERCENT EXCEEDS	14

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.98	23.0	21.1	56.4	161	41.0	38.4	55.6	15.8	4.72	9.37	11.4
MAX	38.1	56.2	42.6	230	729	114	190	430	116	20.9	66.1	75.8
(WY)	1996	1997	1998	1997	1998	1998	1998	1998	1998	1999	1998	1998
MIN	0.000	0.67	1.16	0.000	0.82	0.10	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	2003	2001	2001	2003	2002	1997	1997	1996	1996	1996	1996	1996

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1996 - 2003

ANNUAL TOTAL	2369.81	9396.80	
ANNUAL MEAN	6.49	25.7	36.6
HIGHEST ANNUAL MEAN			152 1998
LOWEST ANNUAL MEAN			1.70 2002
HIGHEST DAILY MEAN	653 Nov 9	1000 Feb 13	5050 Feb 24 1998
LOWEST DAILY MEAN	0.00 Jan 10	0.00 Oct 1	0.00 Mar 22 1996
ANNUAL SEVEN-DAY MINIMUM	0.00 Feb 6	0.00 Oct 1	0.00 Mar 22 1996
MAXIMUM PEAK FLOW		4240 Dec 16	21100 Feb 23 1998
MAXIMUM PEAK STAGE		5.58 Dec 16	7.70 Feb 23 1998
ANNUAL RUNOFF (AC-FT)	4700	18640	26480
10 PERCENT EXCEEDS	1.6	24	50
50 PERCENT EXCEEDS	0.00	0.00	0.65
90 PERCENT EXCEEDS	0.00	0.00	0.00

11059300 SANTA ANA RIVER AT E STREET, NEAR SAN BERNARDINO, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1983–86, 1988 to current year.

WATER TEMPERATURE: November 1982 to September 1983.

SEDIMENT DATA: Water years 1983–86, 1988 to current year.

PERIOD OF DAILY RECORD.—October 1982 to September 1983.

WATER TEMPERATURE: November 1982 to September 1983.

SUSPENDED-SEDIMENT DISCHARGE: October 1982 to September 1983.

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sediment, falldia dst wat percent <.002mm (70337)	Suspnd. sediment, falldia dst wat percent <.004mm (70338)	Suspnd. sediment, falldia dst wat percent <.008mm (70339)	Suspnd. sediment, falldia dst wat percent <.016mm (70340)	Suspnd. sediment, falldia dst wat percent <.031mm (70341)
NOV								
09...	1255	135	17.0	36	51	66	84	96
DEC								
17...	1045	55	12.0	42	61	77	87	90
20...	1200	481	8.5	34	46	52	72	84
FEB								
11...	1525	179	18.0	--	--	--	--	--
25...	1355	403	8.0	28	31	35	51	67
27...	1345	160	9.5	21	21	27	36	45
MAR								
18...	1345	47	21.0	--	--	--	--	--
APR								
15...	0915	308	10.5	21	25	28	40	54
MAY								
05...	1315	1.1	25.0	--	--	--	--	--

Date	Suspnd. sediment, sieve diametr percent <.063mm (70331)	Suspnd. sediment, sieve diametr percent <.125mm (70332)	Suspnd. sediment, sieve diametr percent <.25mm (70333)	Suspnd. sediment, sieve diametr percent <.5 mm (70334)	Suspnd. sediment, sieve diametr percent <1 mm (70335)	Suspnd. sediment, sieve diametr percent <2 mm (70336)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
NOV								
09...	98	99	100	--	--	--	6150	2240
DEC								
17...	91	92	92	94	96	100	1550	230
20...	88	92	96	98	100	--	6820	8860
FEB								
11...	76	89	95	98	99	100	786	380
25...	83	90	98	100	--	--	26100	28400
27...	55	70	94	100	--	--	4450	1920
MAR								
18...	75	89	98	100	--	--	349	44
APR								
15...	70	84	97	100	--	--	5750	4780
MAY								
05...	97	99	100	--	--	--	366	1.1

## 11060400 WARM CREEK NEAR SAN BERNARDINO, CA

LOCATION.—Lat 34° 04' 42", long 117° 17' 58", in San Bernardino Grant, [San Bernardino County](#), Hydrologic Unit 18070203, on left bank, 0.2 mi downstream from Interstate Highway 215 Bridge, and 2.0 mi southwest of San Bernardino.

DRAINAGE AREA.—11.0 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—February 1964 to September 1972, October 1974 to current year.

REVISED RECORDS.—WDR CA-83-1: Drainage area. WDR CA-92-1: 1978(M), 1980–81(M), 1983–86(M).

GAGE.—Water-stage recorder. Elevation of gage is 960 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1974, at site 0.1 mi upstream at different datum.

REMARKS.—Records fair. Natural channel prior to October 1972; concrete-lined channel since October 1974. Possible diversion during high flows into Warm Creek from Lytle Creek flood detention basin 3.4 mi upstream. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,500 ft<sup>3</sup>/s, Mar. 4, 1978, gage height, 4.88 ft, from rating curve extended above 420 ft<sup>3</sup>/s, on basis of step-backwater analysis; maximum gage height, 6.33 ft, Nov. 22, 1965, site and datum then in use; no flow at times in some years.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.46	1.3	1.2	0.02	0.06	1.7	6.3	0.10	0.34	1.4	1.3	0.65
2	0.63	0.99	1.0	0.10	0.08	1.4	5.3	0.10	0.41	1.2	0.94	0.64
3	0.74	0.97	0.98	0.06	0.08	3.2	7.8	26	0.50	1.2	0.93	0.63
4	0.68	1.0	1.0	0.04	0.09	3.3	8.3	6.1	0.52	1.1	0.96	0.65
5	0.67	1.0	1.0	0.04	0.06	1.3	8.3	3.5	0.68	1.2	1.2	0.63
6	0.67	1.0	1.00	0.04	0.19	2.0	8.0	2.3	0.67	1.3	1.3	0.59
7	0.67	1.0	0.96	0.06	0.04	4.8	8.1	1.9	0.59	1.2	1.2	0.61
8	0.63	98	0.92	0.08	0.05	4.8	9.7	1.6	0.58	1.3	1.5	0.53
9	0.72	73	0.77	0.07	0.05	4.8	10	1.2	0.90	1.3	1.1	0.55
10	0.59	2.2	1.4	0.08	0.05	3.4	9.5	0.52	0.86	1.4	1.0	0.52
11	0.71	0.16	1.8	0.07	57	0.83	8.5	0.29	0.84	1.1	1.1	0.48
12	0.81	0.47	1.3	0.08	76	0.81	8.9	0.87	0.80	0.97	1.5	0.68
13	0.80	0.88	0.98	0.08	146	1.8	11	1.1	0.93	0.88	1.2	0.65
14	0.79	1.2	0.82	0.08	2.0	4.8	125	1.1	0.64	0.93	2.0	0.65
15	0.72	1.2	0.80	0.07	0.09	228	39	0.98	0.69	1.1	1.7	0.56
16	0.73	0.98	111	0.06	0.03	101	11	0.40	0.93	1.0	1.1	0.58
17	0.68	1.1	4.5	0.05	0.22	40	3.0	0.42	0.75	1.0	0.96	0.58
18	0.70	1.1	0.22	0.07	0.24	6.5	7.5	0.33	0.80	0.95	0.92	0.60
19	0.63	0.97	0.06	0.07	0.03	6.1	1.9	0.61	1.0	0.86	1.9	0.60
20	0.59	0.88	86	0.07	0.52	2.6	0.53	0.45	1.1	0.78	1.9	0.56
21	0.62	0.98	5.5	0.09	0.02	2.0	2.4	0.54	0.96	0.87	0.88	0.57
22	0.73	1.0	0.74	0.06	0.04	2.6	4.1	0.51	0.98	0.95	0.93	0.56
23	0.68	0.89	0.84	0.07	0.05	1.2	4.1	0.69	1.1	1.6	0.92	0.60
24	0.70	0.94	0.58	0.04	0.07	4.6	1.6	0.89	1.0	1.5	0.88	0.59
25	0.68	0.90	0.15	0.07	158	12	0.09	0.89	0.74	0.99	0.82	0.58
26	0.74	1.1	0.26	0.08	42	12	0.04	0.84	0.98	0.66	0.96	0.58
27	0.92	1.1	0.29	0.08	53	12	0.29	0.61	1.3	0.67	1.0	0.65
28	0.77	1.1	0.06	0.07	6.6	10	0.05	0.57	1.2	1.1	1.0	0.56
29	0.92	1.1	9.5	0.07	---	11	0.39	0.57	1.2	2.1	0.70	0.57
30	1.1	7.0	0.35	0.06	---	10	0.15	0.55	1.4	1.2	0.63	0.61
31	1.1	---	0.02	0.06	---	9.8	---	0.36	---	1.5	0.60	---
TOTAL	22.58	205.51	236.00	2.04	542.66	510.34	310.84	56.89	25.39	35.31	35.03	17.81
MEAN	0.73	6.85	7.61	0.066	19.4	16.5	10.4	1.84	0.85	1.14	1.13	0.59
MAX	1.1	98	111	0.10	158	228	125	26	1.4	2.1	2.0	0.68
MIN	0.46	0.16	0.02	0.02	0.02	0.81	0.04	0.10	0.34	0.66	0.60	0.48
AC-FT	45	408	468	4.0	1080	1010	617	113	50	70	69	35



## 11060400 WARM CREEK NEAR SAN BERNARDINO, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1999 to current year.

CHEMICAL DATA: Water years 1999 to current year.

SPECIFIC CONDUCTANCE: Water years 1999–2001.

WATER TEMPERATURE: Water years 1999–2001.

SEDIMENT DATA: Water years 1999 to current year.

REMARKS.—Water-quality data collected for the National Water-Quality Assessment (NAWQA) Program.

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

Date	Time	Instan- taneous dis- charge, cfs (00061)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)
OCT									
16...	1100	.77	735	12.0	136	9.1	481	15.5	19.5
DEC									
12...	0900	2.1	740	11.4	112	8.8	509	12.0	13.0
JAN									
16...	0900	.08	740	14.1	118	9.0	539	11.5	6.5
FEB									
14...	0800	1.3	734	10.0	99	8.1	203	12.5	13.0
MAR									
13...	0900	1.0	736	13.4	147	9.2	511	17.0	18.0
APR									
17...	1000	1.3	735	10.6	118	8.7	429	14.0	18.5
JUN									
12...	0900	1.0	735	10.0	117	9.1	538	19.5	21.0
AUG									
14...	0900	1.0	735	10.5	135	9.8	405	30.5	26.0

Date	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Carbon- ate, wat flt incrm. titr., field, mg/L (00452)	Chlor- ide, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
OCT									
16...	110	116	9	61.1	33.1	.42	<.04	.48	.018
DEC									
12...	110	123	5	62.1	31.0	.21	<.04	.50	.010
JAN									
16...	226	246	14	14.2	52.5	.45	<.04	.47	.032
FEB									
14...	61	75	--	6.44	17.4	.83	.26	2.34	.062
MAR									
13...	113	e115	e11	61.8	30.3	.33	<.04	.07	e.005
APR									
17...	105	120	4	39.3	35.0	.69	<.04	1.07	.026
JUN									
12...	114	108	15	65.9	34.5	1.1	<.04	.49	.017
AUG									
14...	95	e86	e14	32.7	44.5	.87	<.04	.07	.008

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

e Estimated.

## 11060400 WARM CREEK NEAR SAN BERNARDINO, CA—Continued

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

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd (00665)	2,6-Diethyl-aniline water, fltrd 0.7u GF (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 (82686)
OCT 16...	e.01	.051	<.006	<.006	<.006	<.004	<.005	<.007	<.050
DEC 12...	.02	.029	<.006	<.006	<.006	<.004	<.005	<.007	<.050
JAN 16...	<.02	.040	<.006	e.011	<.006	<.004	<.005	e.007	<.050
FEB 14...	e.07	.25	<.006	<.006	<.006	<.004	<.005	<.010	--
MAR 13...	e.01	.037	<.006	<.006	<.020	<.004	<.005	<.007	<.050
APR 17...	.06	.23	<.006	<.006	<.006	<.004	<.005	<.007	<.050
JUN 12...	<.02	.029	<.006	<.006	<.006	<.004	<.005	<.007	<.050
AUG 14...	<.02	.064	<.006	<.006	<.006	<.004	<.005	<.007	<.050

Date	Ben-flur-alin, water, fltrd 0.7u GF (82673)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF (82680)	Carbo-furan, water, fltrd 0.7u GF (82674)	Chlor-pyrifos, water, fltrd, ug/L (38933)	cis-Per-methrin, water, fltrd 0.7u GF (82687)	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water, fltrd, ug/L (82682)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)
OCT 16...	<.010	<.002	<.041	<.020	<.005	<.006	<.018	.004	<.004
DEC 12...	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	<.004
JAN 16...	<.010	<.002	<.041	<.020	<.005	<.006	<.018	e.003	<.004
FEB 14...	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	<.004
MAR 13...	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	<.004
APR 17...	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	<.004
JUN 12...	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003	<.004
AUG 14...	<.010	<.002	<.041	<.020	<.005	<.006	<.018	e.003	<.004

Date	Diazinon, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	Disulfoton, 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 sulfide, water, fltrd, ug/L (62169)	Fipro-nil sulfide, water, fltrd, ug/L (62167)	Fipro-nil sulfone, water, fltrd, ug/L (62168)
OCT 16...	e.004	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
DEC 12...	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
JAN 16...	.012	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
FEB 14...	--	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
MAR 13...	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
APR 17...	.007	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
JUN 12...	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005
AUG 14...	<.005	<.005	<.02	<.002	<.009	<.005	<.009	<.005	<.005

e Estimated.

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

## 11060400 WARM CREEK NEAR SAN BERNARDINO, CA—Continued

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

Date	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)	Moli- nate, water, fltrd 0.7u GF ug/L (82671)
OCT									
16...	<.007	<.003	<.004	<.035	<.027	<.006	<.013	<.006	<.002
DEC									
12...	<.007	<.003	<.004	<.035	<.027	<.006	<.013	<.006	<.002
JAN									
16...	<.007	<.003	<.004	<.035	<.027	<.006	<.013	<.006	<.002
FEB									
14...	<.007	<.003	<.004	<.035	<.027	<.006	<.013	<.006	<.002
MAR									
13...	<.007	<.003	<.004	<.035	<.027	<.006	<.013	<.006	<.002
APR									
17...	<.007	<.003	<.004	<.035	<.027	<.006	<.013	<.006	<.002
JUN									
12...	<.007	<.003	<.004	<.035	<.027	<.006	<.013	<.006	<.002
AUG									
14...	<.007	<.003	<.004	<.035	<.027	<.006	<.013	<.006	<.002

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)	Pron- amide, water, fltrd 0.7u GF ug/L (82676)	Propa- chlor, water, fltrd, ug/L (04024)
OCT									
16...	<.007	<.003	<.010	<.004	<.022	<.011	e.01	<.008	<.010
DEC									
12...	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.010
JAN									
16...	<.007	<.003	<.010	<.004	<.022	<.011	.02	<.004	<.010
FEB									
14...	<.007	<.003	<.010	<.004	<.022	<.011	.03	--	<.010
MAR									
13...	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.010
APR									
17...	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.010
JUN									
12...	<.007	<.003	<.010	<.004	<.022	<.011	<.01	<.004	<.010
AUG									
14...	<.007	<.003	<.010	<.004	<.022	<.011	e.01	<.004	<.010

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									
16...	<.011	<.02	e.004	<.02	<.034	<.02	<.005	<.002	<.009
DEC									
12...	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009
JAN									
16...	<.011	<.02	.022	<.02	<.034	<.02	<.005	<.002	<.009
FEB									
14...	<.011	--	.252	<.02	<.034	--	<.005	<.002	<.009
MAR									
13...	<.011	<.02	<.010	<.02	<.034	<.02	<.005	<.002	<.009
APR									
17...	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009
JUN									
12...	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009
AUG									
14...	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009

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

e Estimated.



## 11060400 WARM CREEK NEAR SAN BERNARDINO, CA—Continued

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sediment, sieve diameter percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
OCT						
16...SS	1100	.77	19.5	67	2	<.01
DEC						
12...SS	0900	2.1	13.0	84	4	.02
JAN						
16...SS	0900	.08	6.5	21	13	<.01
FEB						
14...SS	0800	1.3	13.0	98	38	.13
MAR						
13...SS	0900	1.0	18.0	51	5	.01
APR						
17...SS	1000	1.3	18.5	94	87	.31
JUN						
12...SS	0900	1.0	21.0	56	4	.01
AUG						
14...SS	0900	1.0	26.0	80	4	.01

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

Date	Time	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Location in X-sect. looking downstrm ft from l bank (00009)
AUG								
14...*	0941	735	10.4	136	9.7	450	27.0	1.00
14...*	0942	735	10.5	137	9.8	411	27.0	2.00
14...*	0943	735	10.6	138	9.8	353	27.0	3.00
14...*	0944	735	10.7	140	9.9	300	27.0	4.00
14...*	0945	735	10.6	138	9.9	275	27.0	5.00

SS Suspended-sediment data determined from a sample collected and processed according to National Water-Quality Assessment (NAWQA) Program protocols.

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

\* Instantaneous discharge at the time of cross-sectional measurements: Aug. 14, 1.0 ft<sup>3</sup>/s.

## 11062000 LYTLE CREEK NEAR FONTANA, CA

LOCATION.—Lat 34° 12'44", long 117° 27'26", in NW 1/4 SE 1/4 sec.36, T.2 N., R.6 W., San Bernardino County, Hydrologic Unit 18070203, on right bank, 25 ft upstream from highway culvert crossing, 0.7 mi upstream from right tributary, 2.3 mi downstream from Lytle Creek Conduit, and 8 mi north of Fontana.

DRAINAGE AREA.—46.6 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1918 to current year. Combined records of Lytle Creek and diversions, October 1898 to December 1899, October 1904 to current year (published as "at mouth of canyon near Rialto" 1898–99, as "near San Bernardino" 1904–18, and as "Lytle Creek and Fontana pipeline near Fontana" 1919–31). Monthly discharge only for some periods published in WSP 1315-B.

REVISED RECORDS.—WSP 1011: 1943. WDR CA-83-1: Drainage area. WDR CA-98-1: 1969(M).

GAGE.—Water-stage recorder and crest-stage gage on creek. Elevation of gage is 2,380 ft above NGVD of 1929, from topographic map. October 1918 to Mar. 21, 1938, at site 1 mi downstream at different datum. Mar. 22, 1938, to Nov. 20, 1963, at site 75 ft downstream at datum 4.58 ft lower. Water-stage recorder and sharp-crested weir on conduit since June 3, 1949. Water-stage recorder and sharp-crested weir on infiltration line from Oct. 1, 1971, to Sept. 30, 1992; nonrecording flow meter on diversion pipe since Oct. 1, 1992.

REMARKS.—Records fair except for estimated daily discharges, which are poor. No regulation upstream from station. Southern California Edison Co.'s Lytle Creek Conduit (station 11060900) diverts 2.3 mi upstream for power development and Fontana Water Co. collects water from an infiltration line (station 11061000) upstream for irrigation and domestic use. Abrupt changes in the combined discharge of Lytle Creek and diversions occurs at times, due to changes in diversion, the distances between diversion and gage locations, time of travel, and changes in surface and subsurface storage. Spill can occur from Southern California Edison Co.'s Lytle Creek forebay during unusually high flows. Water can be pumped from channel by two pumps at Miller Narrows at a point approximately 2 mi upstream. No water has been pumped out of channel since 1971. For records of combined discharge of Lytle Creek and diversions, see station 11062001. Records pertaining to distribution of flows diverted from Lytle Creek are available in the files of the U.S. Geological Survey. See schematic diagram of Santa Ana River Basin.

COOPERATION.—Records for Lytle Creek Conduit 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. 1932. Records for Fontana Water Co.'s infiltration line were provided by Fontana Water Co.

EXTREMES FOR PERIOD OF RECORD.—Creek only: Maximum discharge, 25,200 ft<sup>3</sup>/s, Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of peak flow, maximum gage height, 15.0 ft, Jan. 25, 1969; no flow at times most years.

Combined creek and diversions: Maximum discharge, 25,200 ft<sup>3</sup>/s, Mar. 2, 1938; minimum daily, 2.4 ft<sup>3</sup>/s, Feb. 2, 7, 2003.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s, or maximum:

Date	Time	Creek only		Combined creek and diversions
		Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
Feb. 12	1600	699	4.54	702
Mar. 16	0145	528	4.06	534

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	e1.8	e3.8	e1.0	e0.30	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	e1.7	e3.4	0.96	e0.26	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	e1.5	e3.0	74	e0.24	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	e1.3	e2.8	e40	e0.22	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.82	e5.5	e20	e0.18	0.00	0.00	0.00
6	0.00	0.00	0.00	0.02	0.00	0.74	e8.0	e16	e0.17	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	1.0	e11	e12	0.20	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	1.1	e13	e11	0.46	0.00	0.00	0.00
9	0.00	29	0.00	0.00	0.00	0.94	e14	e9.6	1.00	0.00	0.00	0.00
10	0.00	27	0.00	0.00	0.00	0.91	e9.8	e8.9	0.73	0.00	0.00	0.00
11	0.00	14	0.00	0.00	9.5	0.92	e0.95	e8.0	0.44	0.00	0.00	0.00
12	0.00	10	0.00	0.00	281	0.92	e0.43	e7.2	0.00	0.00	0.00	0.00
13	0.00	8.4	0.00	0.00	e166	0.96	e0.49	e6.6	0.00	0.00	0.00	0.00
14	0.00	8.3	0.00	0.00	e81	1.0	e47	e5.9	0.20	0.00	0.00	0.00
15	0.00	4.5	0.00	0.00	e55	97	e36	e4.7	0.16	0.00	0.00	0.00
16	0.00	0.59	25	0.00	e44	244	e15	e4.3	0.17	0.00	0.00	0.00
17	0.00	0.45	10	0.00	e32	e98	e5.3	e4.0	0.08	0.00	0.00	0.00
18	0.00	0.27	0.46	0.00	e21	e59	e2.7	e3.9	0.03	0.00	0.00	0.00
19	0.00	0.13	0.37	0.00	e17	e20	e2.5	e3.7	0.00	0.00	0.00	0.00
20	0.00	0.01	9.7	0.00	e16	e18	e2.4	e3.3	0.00	0.00	0.00	0.00
21	0.00	0.00	0.22	0.00	e7.0	e16	e2.2	e2.9	0.00	0.00	0.00	0.00
22	0.00	0.00	0.07	0.00	e1.9	e12	e2.0	e2.7	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	e1.5	e10	e1.8	e2.4	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	e1.2	e8.3	e1.7	e2.1	0.00	0.00	0.00	0.00
25	0.00	0.04	0.00	0.00	e11	e7.2	e1.6	e1.6	0.00	0.00	0.00	0.00
26	0.00	0.14	0.00	0.00	e5.0	e6.3	e1.5	e1.1	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	e2.6	e5.7	e1.4	e0.73	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	e2.0	e5.4	e1.4	e0.58	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	e5.0	e1.2	e0.49	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	e4.3	e1.1	e0.40	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	e4.1	---	e0.32	---	0.00	0.00	---
TOTAL	0.00	102.83	45.82	0.02	754.70	635.91	202.97	260.38	4.84	0.00	0.00	0.00
MEAN	0.000	3.43	1.48	0.001	27.0	20.5	6.77	8.40	0.16	0.000	0.000	0.000
MAX	0.00	29	25	0.02	281	244	47	74	1.0	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.74	0.43	0.32	0.00	0.00	0.00	0.00
AC-FT	0.00	204	91	0.04	1500	1260	403	516	9.6	0.00	0.00	0.00

e Estimated.

## 11062000 LYTLE CREEK NEAR FONTANA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.08	7.52	9.75	25.4	41.5	51.2	28.7	19.7	14.5	10.8	7.32	5.70
MAX	48.2	275	151	552	633	752	254	189	157	131	80.5	65.7
(WY)	1984	1966	1967	1969	1980	1938	1978	1993	1983	1983	1969	1983
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1919	1919	1919	1919	1919	1919	1919	1919	1919	1919	1919	1919

## SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1919 - 2003

ANNUAL TOTAL	224.07		2007.47		18.9		1969	
ANNUAL MEAN	0.61		5.50		177		1919	
HIGHEST ANNUAL MEAN					0.000		1919	
LOWEST ANNUAL MEAN					8950		Mar 2 1938	
HIGHEST DAILY MEAN	59	Jan 28	281	Feb 12	0.00		Oct 1 1918	
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00		Oct 1 1918	
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00		Oct 1 1918	
MAXIMUM PEAK FLOW			699		25200		Mar 2 1938	
MAXIMUM PEAK STAGE			4.54		15.00		Jan 25 1969	
ANNUAL RUNOFF (AC-FT)	444		3980		13710			
10 PERCENT EXCEEDS	0.00		10		44			
50 PERCENT EXCEEDS	0.00		0.00		0.00			
90 PERCENT EXCEEDS	0.00		0.00		0.00			

## 11062001 LYTLE CREEK NEAR FONTANA, CA—Continued

LYTLE CREEK, SOUTHERN CALIFORNIA EDISON CO.'S LYTLE CREEK CONDUIT, AND  
FONTANA WATER CO.'S INFILTRATION LINE DIVERSION

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	7.3	10	11	2.6	e24	e24	e21	e16	12	9.4	8.0
2	6.3	7.3	9.9	11	2.4	e23	e23	21	e16	12	9.3	8.3
3	6.3	7.0	9.9	11	2.6	e22	e23	91	e16	12	9.3	8.1
4	6.2	7.1	9.4	11	2.6	e22	e21	e46	e16	12	9.2	8.2
5	6.2	7.0	9.4	11	2.5	21	e18	e32	e16	11	9.3	8.0
6	5.9	6.9	9.6	9.9	2.5	20	e19	e41	e16	11	9.3	8.0
7	5.8	6.8	9.2	11	2.4	20	e18	e37	16	11	9.0	8.2
8	5.7	8.9	9.5	11	2.5	19	e20	e36	16	11	9.0	8.3
9	5.9	33	9.5	11	2.5	19	e21	e36	17	10	8.9	8.4
10	6.2	31	9.5	10	4.9	19	e19	e34	17	10	8.8	8.6
11	6.3	17	9.2	10	18	19	e22	e32	16	10	8.9	8.1
12	6.4	14	9.0	10	284	19	e21	e31	16	10	8.6	8.0
13	6.3	13	9.0	10	e169	18	e21	e31	16	9.9	8.7	8.0
14	6.0	12	9.0	10	e85	18	e62	e28	15	10	8.5	8.0
15	6.3	11	8.9	10	e60	111	e42	e27	14	10	8.9	8.1
16	6.4	10	34	10	e49	250	e31	e26	14	10	8.6	8.0
17	6.8	10	16	9.9	e38	e108	e30	e25	14	10	8.4	8.1
18	6.7	10	10	9.6	e26	e70	e27	e25	14	10	8.2	7.9
19	6.7	10	9.7	9.7	e22	e37	e28	e24	14	10	8.2	8.1
20	6.6	10	17	9.8	e24	e41	e25	e23	14	10	8.4	7.8
21	6.8	10	12	9.8	e22	e38	e25	e23	15	9.6	8.7	7.8
22	6.3	10	12	9.8	e19	e32	e26	e22	14	9.6	8.6	7.8
23	6.6	10	12	9.6	e20	e30	e25	e22	14	9.5	8.5	7.6
24	6.8	10	12	9.7	e17	e29	e25	e20	14	9.5	8.3	8.0
25	6.8	9.7	12	9.6	e31	e29	e25	e20	13	9.4	8.2	8.1
26	7.1	9.3	12	9.3	e24	e28	e24	e20	13	9.1	7.9	8.1
27	7.3	9.6	12	4.7	e25	e27	e22	e18	13	9.3	8.3	7.8
28	7.1	9.8	12	2.6	e24	e24	e22	e19	13	9.4	8.3	7.8
29	7.1	9.7	12	2.5	---	e24	e22	e18	12	9.5	8.6	8.0
30	7.1	10	12	2.6	---	e24	e22	e18	13	9.8	8.4	7.8
31	7.1	---	12	2.7	---	e22	---	e17	---	9.6	8.1	---
TOTAL	201.4	337.4	359.7	279.8	984.5	1207	753	884	443	316.2	268.8	241.0
MEAN	6.50	11.2	11.6	9.03	35.2	38.9	25.1	28.5	14.8	10.2	8.67	8.03
MAX	7.3	33	34	11	284	250	62	91	17	12	9.4	8.6
MIN	5.7	6.8	8.9	2.5	2.4	18	18	17	12	9.1	7.9	7.6
AC-FT	399	669	713	555	1950	2390	1490	1750	879	627	533	478

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1899 - 2003, BY WATER YEAR (WY)

MEAN	26.1	28.1	30.5	54.9	67.2	77.2	55.6	46.3	38.5	32.6	29.5	27.1
MAX	71.9	285	168	650	653	785	264	225	164	131	107	81.5
(WY)	1984	1966	1967	1916	1980	1938	1978	1978	1978	1969	1969	1978
MIN	6.50	8.05	7.65	9.03	11.7	12.1	10.8	10.9	8.63	6.99	6.32	5.79
(WY)	2003	1991	1951	2003	1899	1965	1899	1961	2002	2002	2002	2002

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1899 - 2003

ANNUAL TOTAL	3969.3	6275.8	
ANNUAL MEAN	10.9	17.2	42.9
HIGHEST ANNUAL MEAN			194
LOWEST ANNUAL MEAN			10.7
HIGHEST DAILY MEAN	78	Jan 28	284
LOWEST DAILY MEAN	5.4	Sep 25	2.4
ANNUAL SEVEN-DAY MINIMUM	5.5	Sep 20	2.5
MAXIMUM PEAK FLOW			702
ANNUAL RUNOFF (AC-FT)	7870	12450	31110
10 PERCENT EXCEEDS	17	28	77
50 PERCENT EXCEEDS	9.9	10	26
90 PERCENT EXCEEDS	6.1	6.8	12

e Estimated.

## 11063500 LONE PINE CREEK NEAR KEENBROOK, CA

LOCATION.—Lat 34° 15' 59", long 117° 27' 47", in SE 1/4 SW 1/4 sec.12, T.2 N., R.6 W., San Bernardino County, Hydrologic Unit 18070203, on right bank, 50 ft upstream from the Burlington Northern & Santa Fe Railway Co. bridge, 150 ft upstream from confluence with Cajon Creek, and 1.1 mi north of Keenbrook.

DRAINAGE AREA.—15.1 mi<sup>2</sup>.

PERIOD OF RECORD.—December 1919 to September 1938, June 1949 to current year.

REVISED RECORDS.—WSP 1635: 1920–22(M), 1924–25(M), 1926–27, 1928(M), 1930, 1931(M), 1932–33, 1934–36(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 2,605.92 ft above NGVD of 1929. Prior to Mar. 2, 1938, water-stage recorder (destroyed by flood), and Mar. 2 to Sept. 30, 1938, nonrecording gage at same site at datum 0.98 ft higher.

REMARKS.—Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,180 ft<sup>3</sup>/s, Mar. 2, 1938, gage height unknown, on basis of slope-area measurement of peak flow; maximum recorded gage height, 10.70 ft, Jan. 25, 1969; no flow Aug. 6–8, Sept. 29, 30, 1965.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 80 ft<sup>3</sup>/s, or maximum, from rating curve extended above 322 ft<sup>3</sup>/s, on basis of slope-conveyance measurement at gage height 9.07 ft:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	1700	194	3.52	Mar. 16	0130	332	4.39
Feb. 12	1245	608	5.64	May 3	1045	239	3.83
Feb. 25	0515	85	2.61				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.11	0.20	0.20	0.47	0.14	0.72	0.38	0.26	e0.31	0.38	0.20	0.14
2	0.13	0.17	0.20	0.36	0.14	0.58	0.38	0.21	e0.30	0.38	0.21	0.13
3	0.12	0.14	0.20	0.26	0.14	0.47	0.36	13	e0.30	0.34	0.25	0.12
4	0.10	0.14	0.20	0.20	0.14	0.39	0.28	3.7	e0.31	0.38	0.27	0.11
5	0.10	0.14	0.15	0.20	0.14	0.38	0.28	e1.7	e0.29	0.31	0.21	0.10
6	0.10	0.14	0.14	0.14	0.14	0.38	0.28	e1.1	e0.28	0.30	0.21	0.10
7	0.10	0.17	0.14	0.14	0.14	0.33	0.28	e0.80	e0.30	0.38	0.23	0.10
8	0.10	0.42	0.14	0.10	0.14	0.28	0.24	e0.76	e0.30	0.38	0.20	0.10
9	0.11	0.24	0.14	0.10	0.14	0.28	0.20	e0.73	e0.30	0.38	0.20	0.10
10	0.14	0.20	0.14	0.12	0.14	0.28	0.20	e0.65	e0.29	0.38	0.20	0.10
11	0.14	0.20	0.14	0.14	3.2	0.28	0.20	e0.59	e0.29	0.29	0.20	0.10
12	0.14	0.20	0.14	0.14	e95	0.28	0.20	e0.56	e0.30	0.25	0.19	0.10
13	0.12	0.19	0.14	0.14	e1.0	0.28	0.20	e0.52	e0.30	0.35	0.17	0.10
14	0.11	0.14	0.14	0.14	e0.31	0.28	2.3	e0.47	e0.29	0.29	0.16	0.10
15	0.13	0.14	0.14	0.14	0.16	34	1.7	e0.46	e0.28	e0.30	0.20	0.13
16	0.14	0.14	17	0.14	0.20	37	1.3	e0.45	e0.28	e0.29	0.25	0.14
17	0.18	0.14	2.8	0.14	0.20	6.1	0.97	e0.43	e0.28	e0.27	0.23	0.14
18	0.20	0.15	1.9	0.14	0.20	3.1	0.75	e0.40	e0.29	e0.27	0.20	0.14
19	0.20	0.14	1.7	0.14	0.20	2.2	0.63	e0.39	e0.29	e0.26	0.20	0.14
20	0.18	0.14	5.2	0.14	0.20	2.0	0.48	e0.38	e0.30	e0.25	0.21	0.14
21	0.20	0.19	2.3	0.14	0.20	1.7	0.41	e0.38	e0.29	e0.25	0.22	0.14
22	0.20	0.19	1.9	0.14	0.20	1.6	0.37	e0.37	0.28	e0.24	e0.22	0.14
23	0.20	0.20	1.6	0.14	0.20	1.4	0.28	e0.36	0.28	e0.25	e0.20	0.14
24	0.20	0.17	1.4	0.14	0.20	1.3	0.28	e0.36	0.28	e0.25	e0.20	0.20
25	0.20	0.14	1.1	0.14	22	0.99	0.28	e0.36	0.28	e0.23	e0.19	0.20
26	0.20	0.14	0.92	0.14	4.6	0.80	0.28	e0.34	0.28	e0.23	e0.17	0.18
27	0.20	0.14	0.84	0.14	1.6	0.73	0.28	e0.33	0.28	e0.22	e0.16	0.14
28	0.20	0.14	0.74	0.14	1.1	0.68	0.28	e0.33	0.29	e0.22	e0.16	0.14
29	0.20	0.14	0.68	0.14	---	0.68	0.28	e0.32	0.38	0.22	e0.15	0.13
30	0.20	0.20	0.59	0.14	---	0.58	0.28	e0.31	0.38	0.20	e0.14	0.10
31	0.20	---	0.56	0.14	---	0.53	---	e0.31	---	0.20	0.13	---
TOTAL	4.85	5.19	43.58	5.03	132.17	100.60	14.63	31.33	8.90	8.94	6.13	3.84
MEAN	0.16	0.17	1.41	0.16	4.72	3.25	0.49	1.01	0.30	0.29	0.20	0.13
MAX	0.20	0.42	17	0.47	95	37	2.3	13	0.38	0.38	0.27	0.20
MIN	0.10	0.14	0.14	0.10	0.14	0.28	0.20	0.21	0.28	0.20	0.13	0.10
AC-FT	9.6	10	86	10	262	200	29	62	18	18	12	7.6

e Estimated.

## SANTA ANA RIVER BASIN

## 11063500 LONE PINE CREEK NEAR KEENBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.96	1.16	1.83	2.25	4.06	4.39	1.99	1.61	1.30	1.09	1.04	1.00
MAX	5.35	6.51	15.0	24.1	40.6	98.1	11.0	8.91	7.41	5.95	6.61	6.09
(WY)	1984	1966	1923	1969	1969	1938	1980	1980	1980	1993	1993	1993
MIN	0.079	0.091	0.095	0.094	0.10	0.10	0.10	0.10	0.10	0.10	0.090	0.093
(WY)	1991	1991	1991	1991	1964	1964	1961	1928	1928	1928	1965	1965

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1920 - 2003	
ANNUAL TOTAL	119.15		365.19			
ANNUAL MEAN	0.33		1.00		1.89	
HIGHEST ANNUAL MEAN					11.4 1938	
LOWEST ANNUAL MEAN					0.11 1964	
HIGHEST DAILY MEAN	17	Dec 16	95	Feb 12	1480	Mar 2 1938
LOWEST DAILY MEAN	0.07	Aug 9	0.10	Oct 4	0.00	Aug 6 1965
ANNUAL SEVEN-DAY MINIMUM	0.09	Aug 5	0.10	Sep 5	0.06	Aug 2 1965
MAXIMUM PEAK FLOW			608	Feb 12	6180	Mar 2 1938
MAXIMUM PEAK STAGE			5.64	Feb 12	10.70	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	236		724		1370	
10 PERCENT EXCEEDS	0.38		0.94		4.0	
50 PERCENT EXCEEDS	0.23		0.21		0.60	
90 PERCENT EXCEEDS	0.13		0.14		0.10	

## 11063510 CAJON CREEK BELOW LONE PINE CREEK, NEAR KEENBROOK, CA

LOCATION.—Lat 34° 15'48", long 117° 27'58", in NW 1/4 NW 1/4 sec.13, T.2 N., R.6 W., San Bernardino County, Hydrologic Unit 18070203, on left bank, 0.25 mi downstream from Lone Pine Creek, and 0.95 mi north of Keenbrook.

DRAINAGE AREA.—56.5 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1971 to September 1977, October 1983 to current year.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 2,600 ft above NGVD of 1929, from topographic map. Oct. 1, 1971, to Sept. 30, 1977, at site 0.25 mi upstream at abandoned diversion dam at different datum.

REMARKS.—Records good through January and poor thereafter. Concrete control installed Oct. 1, 1987. No regulation or diversion upstream from station. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,700 ft<sup>3</sup>/s, Feb. 8, 1993, gage height, 8.48 ft, from rating curve extended above 180 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 8.48 ft; minimum daily, 1.7 ft<sup>3</sup>/s, Sept. 5, 6, 1989.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 250 ft<sup>3</sup>/s, or maximum, from rating curve extended above 373 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 8.48 ft:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	1300	4,570	7.93	May 3	1100	314	5.60
Mar. 16	0130	2,050	7.00				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	2.8	2.6	2.9	3.3	e13	e8.8	e7.8	e5.6	e4.1	e3.0	e2.6
2	2.4	2.7	2.6	3.0	3.3	e12	e8.7	e7.7	e5.5	e4.0	2.9	e2.5
3	2.4	2.7	2.6	3.1	3.3	e11	e8.6	e25	e5.4	e4.0	2.8	e2.5
4	2.4	2.7	2.6	3.3	3.3	e10	e8.6	e12	e5.3	e4.0	2.7	e2.5
5	2.3	2.7	2.6	3.4	3.3	e9.9	e8.5	e10	e5.2	e3.9	2.6	2.4
6	2.3	2.7	2.6	3.3	3.3	e9.6	e8.4	e9.6	e5.1	e3.9	2.7	2.5
7	2.3	2.6	2.6	3.3	3.3	e9.4	e8.2	e9.3	e5.1	e3.9	2.7	2.6
8	2.3	5.6	2.6	3.3	3.2	e9.2	e8.1	e9.1	e5.0	e3.9	e2.7	2.6
9	2.3	3.2	2.6	3.4	3.3	e9.1	e8.1	e8.7	e5.0	e3.8	e2.7	2.7
10	2.3	2.8	2.6	3.3	3.3	e9.0	e8.0	e8.4	e5.0	e3.8	e2.6	2.7
11	2.3	2.7	2.6	3.3	7.8	e8.8	e8.0	e8.2	e4.9	e3.7	e2.7	2.9
12	2.3	2.7	2.6	3.3	e497	e8.7	e7.9	e8.0	e4.9	e3.7	e2.7	2.9
13	2.3	2.7	2.6	3.1	e100	e8.6	e7.9	e7.8	e4.8	e3.6	e2.6	2.9
14	2.3	2.6	2.6	3.2	e30	e8.6	e20	e7.7	e4.8	e3.6	e2.6	2.8
15	2.3	2.6	2.6	3.3	e14	67	e11	e7.6	e4.7	e3.5	e2.7	2.8
16	2.4	2.7	15	3.3	e12	e165	e10	e7.4	e4.7	e3.5	e2.7	2.7
17	2.4	2.7	5.7	3.4	e11	e20	e10	e7.3	e4.7	e3.4	e2.6	2.7
18	2.6	2.7	4.3	3.3	e10	e15	e9.6	e7.2	e4.6	e3.4	e2.6	2.7
19	2.6	2.7	4.5	3.3	e10	e13	e9.5	e7.1	e4.5	e3.4	e2.6	2.7
20	2.5	2.7	19	3.4	e9.6	e12	e9.4	e6.9	e4.5	e3.3	e2.7	2.7
21	2.6	2.7	4.4	3.4	e9.1	e11	e9.2	e6.8	e4.4	e3.3	e2.7	2.7
22	2.7	2.7	3.4	3.3	e8.8	e10	e9.1	e6.6	e4.3	e3.3	e2.6	2.7
23	2.7	2.6	3.1	3.5	e8.6	e10	e8.9	e6.5	e4.3	e3.2	e2.6	2.7
24	2.8	2.5	3.0	3.4	e8.5	e9.5	e8.7	e6.4	e4.3	e3.1	e2.5	3.0
25	2.8	2.4	3.0	3.5	e45	e9.4	e8.6	e6.3	e4.2	e3.1	e2.5	3.1
26	2.8	2.4	3.0	3.3	e30	e9.2	e8.5	e6.2	e4.2	e3.2	e2.6	3.0
27	2.8	2.4	3.0	3.3	e15	e9.2	e8.3	e6.1	e4.2	e3.1	e2.5	3.0
28	2.8	2.4	3.0	3.3	e14	e9.1	e8.1	e6.0	e4.2	e3.2	e2.6	2.9
29	2.8	2.5	3.2	3.3	---	e9.0	e8.0	e5.9	e4.1	e3.2	e2.5	2.9
30	2.8	2.7	3.0	3.3	---	e9.0	e8.0	e5.8	e4.1	e3.2	e2.6	2.9
31	2.8	---	2.8	3.3	---	e8.9	---	e5.7	---	e3.1	e2.6	---
TOTAL	77.8	82.6	122.4	102.1	873.3	533.2	272.7	251.1	141.6	109.4	82.2	82.3
MEAN	2.51	2.75	3.95	3.29	31.2	17.2	9.09	8.10	4.72	3.53	2.65	2.74
MAX	2.8	5.6	19	3.5	497	165	20	25	5.6	4.1	3.0	3.1
MIN	2.3	2.4	2.6	2.9	3.2	8.6	7.9	5.7	4.1	3.1	2.5	2.4
AC-FT	154	164	243	203	1730	1060	541	498	281	217	163	163

e Estimated.

## 11063510 CAJON CREEK BELOW LONE PINE CREEK, NEAR KEENBROOK, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.14	5.57	8.61	17.8	24.4	16.5	10.1	7.97	5.91	4.95	4.58	5.32
MAX	14.8	13.2	26.5	134	121	51.5	27.7	18.1	15.8	16.0	15.1	24.5
(WY)	1984	1984	1972	1993	1993	1995	1993	1998	1993	1993	1993	1976
MIN	2.00	1.97	2.05	2.33	3.52	3.41	2.93	2.85	1.98	2.05	2.12	1.99
(WY)	1991	1992	1991	1991	2002	2002	1977	2002	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1972 - 2003	
ANNUAL TOTAL	1132.2		2730.7			
ANNUAL MEAN	3.10		7.48		9.66	
HIGHEST ANNUAL MEAN					35.5 1993	
LOWEST ANNUAL MEAN					3.13 2002	
HIGHEST DAILY MEAN	19	Dec 20	497	Feb 12	1100	Feb 23 1998
LOWEST DAILY MEAN	2.3	Oct 5	2.3	Oct 5	1.7	Sep 5 1989
ANNUAL SEVEN-DAY MINIMUM	2.3	Oct 5	2.3	Oct 5	1.8	Sep 2 1989
MAXIMUM PEAK FLOW			4570	Feb 12	6700	Feb 8 1993
MAXIMUM PEAK STAGE			7.93	Feb 12	8.48	Feb 8 1993
ANNUAL RUNOFF (AC-FT)	2250		5420		7000	
10 PERCENT EXCEEDS	3.5		9.6		15	
50 PERCENT EXCEEDS	3.0		3.3		5.5	
90 PERCENT EXCEEDS	2.5		2.6		2.8	



## 11063680 DEVIL CANYON CREEK NEAR SAN BERNARDINO, CA

LOCATION.—Lat 34° 12'30", long 117° 19'50", in Muscupiabe Grant, [San Bernardino County](#), Hydrologic Unit 18070203, on left bank, 0.6 mi downstream from confluence of East and West Forks, and 7.5 mi northwest of San Bernardino.

DRAINAGE AREA.—5.49 mi<sup>2</sup>.

PERIOD OF RECORD.—November 1911 to September 1912, October 1913 to September 1914, December 1919 to current year. Monthly figures only for January 1914, published in WSP 1315-B.

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 2,080 ft above NGVD of 1929, from topographic map. Prior to December 1919, nonrecording gage at site 0.5 mi downstream at different datum. December 1919 to July 1969, at site 0.4 mi downstream at different datum. July 1969 to September 1972, present gage used as supplementary gage. Oct. 1, 1973, to Feb. 25, 1974, supplementary gage at site 0.5 mi downstream at different datum.

REMARKS.—Records good above 1 ft<sup>3</sup>/s and fair below except for estimated daily discharges, which are poor. No regulation upstream from station. City of San Bernardino diverts upstream from station at times, with diverted flows routed to recharge basins downstream from station. Natural flow affected by pumping along creek. Records given below are for creek only unless otherwise indicated. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD (1913–14 and since 1919).—Maximum discharge, 3,720 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 5.40 ft, site and datum then in use, on basis of slope-area measurement of peak flow, maximum gage height, 8.40 ft, Mar. 4, 1978; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft<sup>3</sup>/s, or maximum, from rating curve extended above 158 ft<sup>3</sup>/s:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 16	0245	88	5.80	Apr. 14	1600	54	5.66

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.45	0.64	1.4	2.2	2.0	6.3	3.3	3.1	2.4	0.36	0.14	0.00
2	0.47	0.61	1.4	2.2	2.1	5.7	3.3	3.2	2.3	0.39	0.13	0.00
3	0.46	0.54	1.4	2.0	2.0	5.4	3.3	6.7	2.4	0.37	0.13	0.00
4	0.44	0.57	1.4	1.9	2.1	5.1	3.3	8.2	2.3	0.35	0.12	0.00
5	0.43	0.57	1.4	1.9	2.1	4.9	3.5	5.4	2.3	0.33	0.11	0.00
6	0.36	0.56	1.4	2.0	2.2	4.6	3.2	4.7	2.3	0.31	0.12	0.00
7	0.35	0.59	1.5	2.0	2.2	4.4	3.0	5.2	2.3	e0.32	0.11	0.00
8	0.36	3.6	1.5	2.0	2.2	4.2	2.9	5.9	2.2	e0.31	0.11	0.00
9	0.37	15	1.5	2.0	2.2	4.0	2.8	5.2	2.4	e0.32	0.11	0.00
10	0.40	6.7	1.6	2.0	2.2	3.8	2.8	4.4	2.4	e0.32	0.10	0.00
11	0.44	2.8	1.6	2.0	2.6	3.7	2.8	4.3	2.4	e0.32	0.11	0.00
12	0.44	2.3	1.7	2.0	8.3	3.7	2.8	4.0	2.4	e0.34	0.12	0.00
13	0.40	2.0	1.8	2.0	20	3.6	3.1	3.8	2.2	e0.35	0.12	0.00
14	0.42	1.6	1.8	2.0	8.6	3.6	12	3.8	2.1	e0.34	0.11	0.00
15	0.44	1.5	1.8	2.0	6.2	12	9.7	3.7	2.0	e0.35	0.11	0.00
16	0.51	1.5	3.2	2.0	5.4	31	6.4	3.5	2.0	e0.35	0.11	0.00
17	0.52	1.5	2.8	2.0	4.8	16	5.4	3.4	1.9	0.35	0.20	0.00
18	0.54	1.4	2.5	2.0	4.5	11	5.8	3.4	1.9	0.52	0.30	0.00
19	0.56	1.4	2.2	2.0	4.1	9.4	5.0	3.2	2.1	0.59	0.03	0.00
20	0.54	1.4	3.1	2.0	4.0	8.0	4.6	3.0	2.3	0.52	0.02	0.00
21	0.51	1.4	2.8	2.0	3.7	6.9	4.5	2.9	2.3	0.48	0.00	0.00
22	0.54	1.4	2.7	2.0	3.6	6.3	4.4	2.8	2.4	0.42	0.00	0.00
23	0.57	1.5	2.5	2.0	3.5	6.1	4.4	2.8	2.3	0.42	0.00	0.00
24	0.59	1.5	2.4	2.0	3.4	5.8	4.2	2.9	2.1	0.60	0.00	0.00
25	0.59	1.5	2.2	1.9	7.2	5.4	4.0	2.9	1.9	0.54	0.00	0.00
26	0.66	1.6	2.2	1.9	6.1	4.8	3.5	2.8	1.9	0.50	0.00	0.00
27	0.64	1.6	2.1	2.0	7.1	4.5	3.5	2.6	1.1	0.39	0.00	0.00
28	0.57	1.6	2.1	2.0	6.6	4.2	3.4	2.5	0.46	0.18	0.00	0.00
29	0.59	1.6	2.3	2.0	---	4.0	3.3	2.5	0.39	0.16	0.00	0.00
30	0.60	1.5	2.3	2.0	---	3.7	3.2	2.5	0.34	0.16	0.00	0.00
31	0.62	---	2.2	2.0	---	3.6	---	2.5	---	0.14	0.00	---
TOTAL	15.38	61.98	62.8	62.0	131.0	205.7	127.4	117.8	59.79	11.40	2.41	0.00
MEAN	0.50	2.07	2.03	2.00	4.68	6.64	4.25	3.80	1.99	0.37	0.078	0.000
MAX	0.66	15	3.2	2.2	20	31	12	8.2	2.4	0.60	0.30	0.00
MIN	0.35	0.54	1.4	1.9	2.0	3.6	2.8	2.5	0.34	0.14	0.00	0.00
AC-FT	31	123	125	123	260	408	253	234	119	23	4.8	0.00

e Estimated.

## 11063680 DEVIL CANYON CREEK NEAR SAN BERNARDINO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1920 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.36	0.97	1.75	3.63	6.80	7.38	4.38	2.25	1.02	0.54	0.34	0.33
MAX	3.36	12.9	14.0	44.4	108	72.9	28.3	15.2	9.49	5.09	3.83	3.33
(WY)	1984	1966	1967	1993	1980	1938	1978	1983	1998	1998	1993	1976
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1926	1926	1926	1926	1948	1951	1951	1951	1947	1926	1925	1924

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1920 - 2003	
ANNUAL TOTAL	325.78		857.66			
ANNUAL MEAN	0.89		2.35		2.44	
HIGHEST ANNUAL MEAN					16.1	1980
LOWEST ANNUAL MEAN					0.000	1951
HIGHEST DAILY MEAN	15	Nov 9	31	Mar 16	556	Jan 25 1969
LOWEST DAILY MEAN	0.00	Jul 14	0.00	Aug 21	0.00	Sep 23 1921
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 14	0.00	Aug 21	0.00	Sep 23 1921
MAXIMUM PEAK FLOW			88	Mar 16	3720	Jan 25 1969
MAXIMUM PEAK STAGE			5.80	Mar 16	8.40	Mar 4 1978
ANNUAL RUNOFF (AC-FT)	646		1700		1770	
10 PERCENT EXCEEDS	1.9		5.1		5.2	
50 PERCENT EXCEEDS	0.44		2.0		0.20	
90 PERCENT EXCEEDS	0.01		0.00		0.00	

## 11063682 EAST BRANCH CALIFORNIA AQUEDUCT AT DEVIL CANYON POWERPLANT, NEAR SAN BERNARDINO, CA

LOCATION.—Lat 34° 12'20", long 117° 20'01", in San Bernardino Corporate Grant, T.1 N., R.4 W., [San Bernardino County](#), Hydrologic Unit 18090208, in powerplant 5 mi northwest of San Bernardino.

PERIOD OF RECORD.—October 1995 to current year. Prior to October 1995, in files of California Department of Water Resources. Published as "Devil Canyon Powerplant" prior to October 1999.

GAGE.—Acoustic-velocity meters on 5 pipes. Elevation of gage is 1,939 ft above NGVD of 1929 (levels by California Department of Water Resources).

REMARKS.—This record is the total flow of the East Branch California Aqueduct, including flow through the powerplant and bypass flow, if any. See schematic diagram of the [Mojave River Basin](#).

COOPERATION.—Records were computed by the California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2426.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 1,710 ft<sup>3</sup>/s, Aug. 25, 2003; no flow at times in some years.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1430	1210	1120	766	986	1420	1420	1580	1640	1470	1500	1540
2	1360	1040	1130	772	1040	1300	1500	1700	1560	1530	1520	1640
3	1340	1070	1240	791	924	1230	1500	1560	1520	1590	1480	1570
4	1370	1150	1200	712	907	1140	1500	1560	1460	1560	1580	1540
5	1290	1240	1240	928	887	1220	1450	1300	1430	1620	1560	1580
6	1430	1390	1140	1030	951	1410	1210	1300	1530	1430	1480	1530
7	1450	1270	1210	705	880	1420	1310	1470	1560	1560	1530	1660
8	1270	1180	1150	729	902	1470	1300	1420	1530	1590	1590	1600
9	1300	971	791	630	911	1600	1410	1420	1560	1560	1560	1620
10	1320	1000	730	378	919	1350	1420	1380	1560	1580	1520	1590
11	1400	1020	756	337	748	1370	1170	1300	1550	1460	1550	1540
12	1270	1130	742	419	756	1480	1370	1500	1380	1500	1610	1560
13	1300	1180	676	377	668	1340	1250	1500	1360	1500	1620	1590
14	1380	1110	640	592	658	1480	1250	1590	1320	1540	1560	1530
15	1230	1160	720	672	683	1530	1180	1530	1220	1520	1570	1610
16	1280	1100	705	601	675	1430	1160	1580	1370	1450	1560	1490
17	1230	1220	948	776	695	1420	1060	1570	1350	1610	1570	1610
18	1220	1290	518	728	706	1430	1040	1560	1500	1570	1590	1530
19	1260	1350	633	744	783	1260	1030	1510	1550	1530	1640	1600
20	1140	1410	638	717	644	1220	965	1430	1550	1550	1590	1530
21	1150	1340	549	654	618	1350	853	1500	1500	1520	1540	1550
22	1150	1370	965	607	659	1170	756	1380	1430	1520	1600	1570
23	1180	1330	1010	588	641	1170	895	1660	1440	1570	1530	1560
24	1200	1430	1050	704	783	1060	991	1620	1340	1460	1500	1530
25	1160	1340	1060	653	703	1040	1250	1690	1270	1520	1710	1560
26	1050	1140	1090	558	890	1070	1360	1630	1400	1510	1560	1580
27	1180	1140	1040	608	1090	1190	1500	1520	1320	1510	1570	1500
28	1230	1240	1000	862	1260	1260	1410	1490	1180	1520	1560	1570
29	1120	1170	987	892	---	1520	1460	1540	1430	1570	1560	1580
30	1080	1110	870	1020	---	1530	1490	1520	1480	1540	1580	1570
31	1120	---	788	1020	---	1470	---	1690	---	1540	1610	---
TOTAL	38890	36101	28336	21570	22967	41350	37460	47000	43290	47500	48500	47030
MEAN	1255	1203	914	696	820	1334	1249	1516	1443	1532	1565	1568
MAX	1450	1430	1240	1030	1260	1600	1500	1700	1640	1620	1710	1660
MIN	1050	971	518	337	618	1040	756	1300	1180	1430	1480	1490
AC-FT	77140	71610	56200	42780	45560	82020	74300	93220	85870	94220	96200	93280

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	736	608	582	529	506	659	946	1019
MAX	1255	1337	1313	1096	1069	1334	1249	1516
(WY)	2003	2001	2001	2000	2000	2003	2003	2003
MIN	189	145	119	82.6	3.23	102	577	585
(WY)	1996	1996	1999	1997	1997	1997	1999	1999

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1996 - 2003
ANNUAL TOTAL	418109	459994	
ANNUAL MEAN	1146	1260	833
HIGHEST ANNUAL MEAN			1260
LOWEST ANNUAL MEAN			515
HIGHEST DAILY MEAN	1630	Sep 24	1710
LOWEST DAILY MEAN	518	Dec 18	337
ANNUAL SEVEN-DAY MINIMUM	673	Dec 15	482
ANNUAL RUNOFF (AC-FT)	829300	912400	603300
10 PERCENT EXCEEDS	1450	1580	1360
50 PERCENT EXCEEDS	1150	1350	927
90 PERCENT EXCEEDS	848	719	147

11065000 LYTLE CREEK AT COLTON, CA

LOCATION.—Lat 34° 04' 44", long 117° 18' 17", in San Bernardino Grant, [San Bernardino County](#), Hydrologic Unit 18070203, on right bank, 400 ft downstream from Colton Avenue, 1,930 ft upstream from outlet end of channel, and 1.3 mi northeast of Colton.

DRAINAGE AREA.—186 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1957 to September 1983, October 1984 to current year.

REVISED RECORDS.—WDR CA-83-1: Drainage area.

GAGE.—Water-stage recorder and concrete-lined flood-control channel. Datum of gage is 974.67 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.—Records fair except for discharges below 10 ft<sup>3</sup>/s and estimated daily discharges, which are poor. Flow partly regulated by Lytle Creek spreading grounds 3.2 mi upstream. Diversions upstream from station for irrigation, power development, domestic use, and ground-water replenishment. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 17,500 ft<sup>3</sup>/s, Mar. 4, 1978, gage height, 14.8 ft, from rating curve extended above 4,200 ft<sup>3</sup>/s, on basis of discharge for design flood at gage height 21.4 ft; no flow for many days most years.

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	6.3	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	e0.00	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	0.00	0.00	0.00	0.00	0.00
8	0.00	69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.36	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	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	426	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	e280	0.00	0.18	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	e1.2	0.00	84	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	e0.50	243	9.7	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	83	0.00	e0.00	361	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	3.5	0.00	e0.00	25	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	64	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	e55	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.30	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	2.0	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	128.36	150.80	0.00	780.70	629.00	93.88	6.30	0.00	0.00	0.00	0.00
MEAN	0.000	4.28	4.86	0.000	27.9	20.3	3.13	0.20	0.000	0.000	0.000	0.000
MAX	0.00	69	83	0.00	426	361	84	6.3	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	255	299	0.00	1550	1250	186	12	0.00	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2003, BY WATER YEAR (WY)

	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
MEAN	0.71	4.41	7.26	18.5	29.6	18.9	4.06	3.89	2.18	1.23	0.79	0.72											
MAX	15.8	79.1	104	318	363	326	57.3	87.6	61.3	35.4	17.1	9.58											
(WY)	1981	1966	1966	1969	1980	1978	1969	1969	1978	1978	1969	1980											
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000											
(WY)	1958	1958	1959	1963	1961	1959	1961	1959	1958	1958	1958	1958											

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1958 - 2003

ANNUAL TOTAL	312.15	1789.04	
ANNUAL MEAN	0.86	4.90	7.59
HIGHEST ANNUAL MEAN			65.4
LOWEST ANNUAL MEAN			0.008
HIGHEST DAILY MEAN	83	Dec 16	5040
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
MAXIMUM PEAK FLOW			17500
MAXIMUM PEAK STAGE			14.80
ANNUAL RUNOFF (AC-FT)	619		5500
10 PERCENT EXCEEDS	0.00		3.3
50 PERCENT EXCEEDS	0.00		0.00
90 PERCENT EXCEEDS	0.00		0.00

e Estimated.

## 11066460 SANTA ANA RIVER AT MWD CROSSING, NEAR ARLINGTON, CA

LOCATION.—Lat 33° 58'07", long 117° 26'51", in NE 1/4 SW 1/4 sec.30, T.2 S., R.5 W., Riverside County, Hydrologic Unit 18070203, on left bank, at MWD pipeline crossing, 0.8 mi downstream from Union Pacific Railroad Bridge, 1.1 mi upstream from bridge on Van Buren Boulevard, and 3.3 mi north of Arlington.

DRAINAGE AREA.—852 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—March 1970 to current year.

REVISED RECORDS.—WDR CA-83-1: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 685 ft above NGVD of 1929, from topographic map. Prior to Apr. 15, 1985, water-stage recorder at site 300 ft upstream on left bank at different datum. From Apr. 15 to Sept. 30, 1985, water-stage recorder near right bank (atop pier 9 of MWD pipeline crossing), at same site and datum. From Oct. 1, 1985, to June 16, 1993, water-stage recorder and crest-stage gage on right bank at same site and datum.

REMARKS.—Records poor. Flow partly regulated by Big Bear Lake (station 11049000) and, since November 1999, by Seven Oaks Flood-Control Reservoir, capacity, 145,600 acre-ft. Natural streamflow affected by ground-water withdrawals, diversions for irrigation, return flows from irrigated areas, and discharges of treated effluent. The records at this station are equivalent to those collected at "Santa Ana River at Riverside Narrows, near Arlington" minus the flow at "Riverside Water-Quality Control Plant at Riverside Narrows, near Arlington". See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 31,300 ft<sup>3</sup>/s, Feb. 24, 1998, gage height, 14.69 ft, on basis of area-velocity study, maximum gage height, 20.23 ft, site and datum then in use, Mar. 4, 1978; minimum daily, 15 ft<sup>3</sup>/s, Sept. 7, 8, 1980.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge since at least 1927, 100,000 ft<sup>3</sup>/s, Mar. 2, 1938, on basis of slope-area measurement, at site 1.1 mi downstream. Flood of Jan. 22, 1862, 320,000 ft<sup>3</sup>/s, on basis of slope-conveyance study, at site 8.2 mi upstream. Stage at that site was 5 ft higher than that of Mar. 2, 1938.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,500 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)
Nov. 10	0430	2,160	8.71	Feb. 25	1300	5,360	10.09
Dec. 16	2245	5,540	10.15	Mar. 16	0700	8,900	11.11
Dec. 20	1230	1,580	8.34	Apr. 14	2245	3,420	9.34
Feb. 12	2315	4,500	9.78				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	81	e82	e86	e87	149	e87	87	e79	82	86	e85
2	66	80	e83	e84	e90	e99	e87	81	e78	81	83	e87
3	67	77	e84	e88	e91	e96	e87	162	78	75	79	e85
4	66	84	e83	e86	e88	e90	e86	127	71	70	85	e83
5	65	75	e83	e81	e88	e89	e85	102	73	77	98	81
6	69	66	e82	e80	e87	e88	e88	90	72	72	84	77
7	68	e66	e80	e80	e86	e88	e86	96	76	80	87	84
8	e70	285	e80	e80	e85	e87	e86	102	e78	84	82	e82
9	e71	718	e79	e81	e85	e87	e85	102	e80	81	82	e80
10	e71	915	e79	e81	e83	e89	84	90	83	86	79	e76
11	e72	109	e78	e81	156	92	84	94	76	83	87	e78
12	e74	100	e79	e82	918	94	e83	93	83	82	100	e80
13	e75	112	e80	e82	1810	88	e83	e90	92	86	94	e81
14	e74	99	e80	e81	828	e86	916	e85	93	84	83	e82
15	e73	86	e79	e83	268	1910	586	e81	85	77	89	e83
16	e75	90	669	e82	161	2460	e83	e76	91	74	79	e83
17	71	e90	575	e82	102	538	e78	e75	98	79	77	e84
18	70	e89	164	e82	e84	232	e77	e71	99	82	78	e81
19	68	e88	108	e83	e84	149	e76	e67	93	83	76	e79
20	71	e87	682	e83	e89	224	e75	e71	96	79	86	e79
21	69	e87	192	e80	86	e114	e78	e71	97	75	73	e76
22	76	e86	120	e80	85	e102	e80	e73	97	81	e80	e76
23	78	88	99	e81	95	e96	e86	e74	89	85	76	e77
24	81	83	100	e81	92	e90	95	e74	89	79	79	78
25	81	83	e96	e80	1510	e87	94	e73	93	88	81	78
26	e85	e82	e95	e80	459	e87	81	e75	84	76	e81	73
27	e76	e82	e89	e81	474	e88	93	e76	80	80	e83	77
28	e76	e81	e91	e80	250	e88	87	e75	74	91	e83	80
29	e77	e81	e95	e82	---	e87	90	e77	81	93	e84	81
30	e78	e88	e90	e84	---	e88	90	e78	72	87	e84	84
31	79	---	e89	e87	---	e87	---	e79	---	93	e83	---
TOTAL	2261	4238	4565	2544	8421	7849	3876	2667	2530	2525	2581	2410
MEAN	72.9	141	147	82.1	301	253	129	86.0	84.3	81.5	83.3	80.3
MAX	85	915	682	88	1810	2460	916	162	99	93	100	87
MIN	65	66	78	80	83	86	75	67	71	70	73	73
AC-FT	4480	8410	9050	5050	16700	15570	7690	5290	5020	5010	5120	4780

e Estimated.

## SANTA ANA RIVER BASIN

## 11066460 SANTA ANA RIVER AT MWD CROSSING, NEAR ARLINGTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	62.3	82.4	104	223	282	306	145	117	79.7	55.8	55.2	56.4
MAX	194	259	292	1839	1411	1806	604	666	351	145	233	129
(WY)	1988	1984	1984	1993	1980	1995	1983	1983	1983	1983	1983	1976
MIN	20.5	21.2	23.3	24.7	23.1	23.7	23.1	22.3	20.2	16.8	17.9	18.0
(WY)	1974	1975	1974	1972	1972	1972	1971	1972	1981	1981	1981	1974

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL TOTAL	36292		46467			
ANNUAL MEAN	99.4		127		131	
HIGHEST ANNUAL MEAN					416	
LOWEST ANNUAL MEAN					29.0	
HIGHEST DAILY MEAN	915	Nov 10	2460	Mar 16	11500	Mar 2 1983
LOWEST DAILY MEAN	59	Aug 17	65	Oct 5	15	Sep 7 1980
ANNUAL SEVEN-DAY MINIMUM	67	Oct 1	67	Oct 1	16	Jul 1 1981
MAXIMUM PEAK FLOW			8900	Mar 16	31300	Feb 24 1998
MAXIMUM PEAK STAGE			11.11	Mar 16	20.23	Mar 4 1978
ANNUAL RUNOFF (AC-FT)	71990		92170		94900	
10 PERCENT EXCEEDS	112		102		185	
50 PERCENT EXCEEDS	86		83		70	
90 PERCENT EXCEEDS	71		74		24	

## 11066460 SANTA ANA RIVER AT MWD CROSSING, NEAR ARLINGTON, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1970 to current year.

CHEMICAL DATA: Water years 1970 to current year.

SPECIFIC CONDUCTANCE: Water years 1970–78, 1999–2000.

WATER TEMPERATURE: Water years 1999–2000.

SEDIMENT DATA: Water years 1999–2000.

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

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Residue on evap. at 180degC wat flt mg/L (70300)
OCT					
01...	1300	73	920	24.0	567
16...	1420	76	930	21.5	586
30...	1630	79	896	20.0	567
NOV					
15...	1100	97	888	24.5	556
DEC					
03...	1230	84	957	19.0	604
17...	1100	300	585	15.0	368
JAN					
07...	1400	80	934	21.0	580
16...	1145	82	940	18.0	588
FEB					
04...	1145	88	916	18.0	585
20...	1330	93	957	18.0	608
MAR					
03...	1500	98	956	17.5	602
18...	1330	225	693	18.0	429
APR					
03...	1230	88	970	20.0	614
16...	1345	81	724	20.5	431
MAY					
02...	1030	73	992	21.0	635
19...	1330	69	992	27.0	626
JUN					
03...	1115	76	983	21.0	613
16...	1320	90	934	28.0	581
JUL					
08...	1510	86	925	29.0	577
22...	1315	81	938	26.0	593
AUG					
01...	1030	81	926	24.0	582
18...	1145	83	958	26.0	609
SEP					
03...	1315	85	942	27.0	571
17...	1220	84	934	24.0	580













## 11069500 SAN JACINTO RIVER NEAR SAN JACINTO, CA

LOCATION.—Lat 33° 44' 17", long 116° 49' 59", in SE 1/4 NE 1/4 sec.13, T.5 S., R.1 E., [Riverside County](#), Hydrologic Unit 18070202, on left bank, 0.6 mi downstream from bridge on State Highway 74, 1.5 mi downstream from North Fork San Jacinto River, 7.8 mi southeast of San Jacinto, and 9.5 mi downstream from Lake Hemet.

DRAINAGE AREA.—142 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1920 to February 1927, March 1927 to September 1991, October 1996 to current year. River only records for October 1969 to September 1980 and October 1981 to September 1991 are at site upstream of Lake Hemet Municipal Water District's lower canal and are equivalent to other records if lower canal diversion is deducted from flow past station. Records of lower canal diversion are available at Lake Hemet Municipal Water District. Combined records of river and diversions are equivalent for October 1948 to September 1981. Combined records of river and diversion for October 1981 to September 1990, published in WDR CA-82-1 to WDR CA-90-1, are not equivalent due to diversion for municipal supply upstream of gages beginning in 1982. Monthly discharge only for October 1920 and July to September 1926 are published in WSP 1315-B.

REVISED RECORDS.—WSP 881: 1938. WSP 1635: 1950. WSP 1928: Drainage area. WDR CA-97-1: Date of peak discharge for Water Year 1991.

GAGE.—Water-stage recorder, concrete control, and crest-stage gage. Datum of gage is 1,910 ft above NGVD of 1929, from topographic map. From 1927 to 1991 gage operated at various locations and datums approximately 0.6 mi upstream. See WDR CA-91-1 for further description.

REMARKS.—Records fair. Flow partly regulated by Lake Hemet. Lake Hemet Municipal Water District's upper canal diverts 4.5 mi upstream from station. Several other small diversions in the basin. Diversions upstream from station began prior to 1920. See schematic of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—(River only) Maximum discharge, 45,000 ft<sup>3</sup>/s, Feb. 16, 1927, gage height unknown, on basis of slope-area measurement of peak flow; no flow for several months in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s, or maximum, from rating curve extended above 275 ft<sup>3</sup>/s, on basis of critical depth computations:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 15	2215	310	4.02

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.11	0.27	0.24	30	16	9.1	0.70	0.07	0.00	0.00
2	0.00	0.00	0.14	0.24	0.23	27	16	11	0.78	0.09	0.00	0.00
3	0.00	0.00	0.13	0.24	0.22	22	12	17	1.2	0.08	0.00	0.00
4	0.00	0.00	0.14	0.27	0.21	20	10	19	1.2	0.06	0.00	0.67
5	0.00	0.00	0.14	0.32	0.19	20	8.7	11	1.2	0.05	0.00	3.8
6	0.00	0.00	0.14	2.2	0.19	17	7.2	7.9	1.1	0.05	0.00	2.8
7	0.00	0.00	0.15	3.6	0.19	13	6.5	6.5	0.93	0.04	0.00	0.26
8	0.00	0.00	0.16	3.8	0.19	15	4.6	13	0.50	0.04	0.00	0.00
9	0.00	51	0.17	4.2	0.19	20	2.3	12	0.51	0.04	0.00	0.00
10	0.00	83	0.15	1.9	0.19	22	1.8	3.5	0.53	0.03	0.00	0.00
11	0.00	17	0.19	0.29	0.27	22	1.6	4.2	0.48	0.02	0.00	0.00
12	0.00	4.5	0.19	0.29	3.4	27	1.7	5.0	0.44	0.02	0.00	0.00
13	0.00	0.80	0.19	0.28	22	27	11	7.4	0.40	0.01	0.00	0.00
14	0.00	0.77	0.20	0.26	32	27	20	12	0.33	0.00	0.00	0.00
15	0.00	0.14	0.19	0.27	22	65	45	11	0.28	0.00	0.00	0.00
16	0.00	0.19	0.30	0.25	14	211	42	13	0.24	0.00	0.00	0.00
17	0.00	0.26	14	0.24	9.8	161	36	15	0.23	0.00	0.00	0.00
18	0.00	0.19	9.2	0.24	8.0	104	29	15	0.21	0.00	0.00	0.00
19	0.00	0.21	5.4	0.24	7.0	74	22	8.0	0.22	0.00	0.00	0.00
20	0.00	0.20	6.8	0.24	8.4	56	21	1.5	0.31	0.00	0.00	0.00
21	0.00	0.14	6.2	0.22	7.5	50	21	1.2	0.35	0.00	0.00	0.00
22	0.00	0.18	4.7	0.22	6.4	58	24	1.0	0.36	0.00	0.00	0.00
23	0.00	0.14	3.9	0.21	5.9	52	23	0.94	0.32	0.00	0.00	0.00
24	0.00	0.14	3.4	0.19	5.6	48	25	0.95	0.25	0.00	0.00	0.00
25	0.00	0.15	3.1	0.19	15	43	19	0.94	0.21	0.00	0.00	0.00
26	0.00	0.18	2.8	0.19	28	40	15	0.89	0.16	0.00	0.00	0.00
27	0.00	0.20	2.6	0.19	38	39	14	0.80	0.12	0.00	0.00	0.00
28	0.00	0.23	2.5	0.21	37	36	13	2.3	0.10	0.00	0.00	0.00
29	0.00	0.23	3.4	0.23	---	23	11	5.2	0.08	0.00	0.00	0.00
30	0.00	0.22	3.4	0.24	---	18	9.9	2.6	0.06	0.00	0.00	0.00
31	0.00	---	1.7	0.24	---	17	---	0.81	---	0.00	0.00	---
TOTAL	0.00	160.07	75.79	21.97	272.31	1404	489.3	219.73	13.80	0.60	0.00	7.53
MEAN	0.000	5.34	2.44	0.71	9.73	45.3	16.3	7.09	0.46	0.019	0.000	0.25
MAX	0.00	83	14	4.2	38	211	45	19	1.2	0.09	0.00	3.8
MIN	0.00	0.00	0.11	0.19	0.19	13	1.6	0.80	0.06	0.00	0.00	0.00
AC-FT	0.00	317	150	44	540	2780	971	436	27	1.2	0.00	15

## SANTA ANA RIVER BASIN

## 11069500 SAN JACINTO RIVER NEAR SAN JACINTO, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.68	4.03	14.6	18.7	53.5	65.2	47.2	21.9	6.18	1.22	1.07	1.15
MAX	14.2	164	283	230	1039	743	312	224	81.8	13.0	13.6	23.1
(WY)	1980	1966	1967	1969	1980	1938	1941	1983	1998	1979	1983	1983
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1923	1924	1930	1936	1951	1947	1934	1934	1931	1924	1923	1922

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1921 - 2003	
ANNUAL TOTAL	251.89		2665.10			
ANNUAL MEAN	0.69		7.30		19.2	
HIGHEST ANNUAL MEAN					156	
LOWEST ANNUAL MEAN					0.050	
HIGHEST DAILY MEAN	83	Nov 10	211	Mar 16	7590	Feb 21 1980
LOWEST DAILY MEAN	0.00	Apr 14	0.00	Oct 1	0.00	Oct 1 1920
ANNUAL SEVEN-DAY MINIMUM	0.00	May 3	0.00	Oct 1	0.00	Oct 1 1920
MAXIMUM PEAK FLOW			310	Mar 15	45000	Feb 16 1927
MAXIMUM PEAK STAGE			4.02	Mar 15	unknown	
ANNUAL RUNOFF (AC-FT)	500		5290		13910	
10 PERCENT EXCEEDS	0.23		22		36	
50 PERCENT EXCEEDS	0.00		0.23		0.10	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 11070020 BAUTISTA CREEK AT HEAD OF FLOOD CONTROL CHANNEL, NEAR HEMET, CA

LOCATION.—Lat 33° 42' 42", long 116° 52' 04", in NW 1/4 NE 1/4 sec.27, T.5 S., R.1 E., [Riverside County](#), Hydrologic Unit 18070202, on right bank, at head of concrete-lined flood channel, 3.7 mi upstream from mouth, and 3.0 mi southeast of Valle Vista.

DRAINAGE AREA.—47.6 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1987 to current year.

GAGE.—Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 2,080 ft above NGVD of 1929, from topographic map. Prior to October 1988 at datum 10.00 ft lower.

REMARKS.—No regulation upstream from station. Sand and gravel operations upstream from station may reduce runoff and cause peak attenuation. Minor diversion upstream from station for irrigation. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,310 ft<sup>3</sup>/s, Jan. 16, 1993, gage height, 3.53 ft, from rating curve developed on basis of critical-depth computations at concrete control; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.—No flow for entire water year.

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.004	0.013	0.013	2.59	2.68	2.96	0.36	0.050	0.001	0.070	0.046	0.032
MAX	0.061	0.21	0.12	31.1	22.3	26.4	3.39	0.58	0.011	1.11	0.55	0.50
(WY)	1997	1997	1988	1993	1993	1995	1998	1998	1995	1999	1994	1995
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1988	1988	1989	1989	1989	1989	1989	1988	1988	1988	1989	1988

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1988 - 2003	
ANNUAL TOTAL	0.00		0.00			
ANNUAL MEAN	0.000		0.000		0.73	
HIGHEST ANNUAL MEAN					4.35 1993	
LOWEST ANNUAL MEAN					0.000 1989	
HIGHEST DAILY MEAN	0.00 Jan 1		0.00 Oct 1		298 Jan 16 1993	
LOWEST DAILY MEAN	0.00 Jan 1		0.00 Oct 1		0.00 Oct 1 1987	
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1		0.00 Oct 1		0.00 Oct 1 1987	
MAXIMUM PEAK FLOW					1310 Jan 16 1993	
MAXIMUM PEAK STAGE					3.53 Jan 16 1993	
ANNUAL RUNOFF (AC-FT)	0.00		0.00		527	
10 PERCENT EXCEEDS	0.00		0.00		0.00	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 11070150 SAN JACINTO RIVER ABOVE STATE STREET, NEAR SAN JACINTO, CA

LOCATION.—Lat 33° 49' 17", long 116° 58' 21", in NE 1/4 SW 1/4 sec.15, T.4 S., R.1 W., [Riverside County](#), Hydrologic Unit 18070202, on left bank, 400 ft upstream from State Street Bridge, 5.5 mi downstream from confluence with Bautista Creek, and 2.5 mi northwest of San Jacinto.

DRAINAGE AREA.—252 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1996 to current year.

REVISED RECORDS.—WDR CA-00-1: 1998.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 1,500 ft above NGVD of 1929, from topographic map.

REMARKS.—Sand and gravel operations upstream from station may reduce runoff and cause peak attenuation. Flow partly regulated by Lake Hemet. Lake Hemet Municipal Water District's upper canal diverts 4.0 mi upstream from station on San Jacinto River near San Jacinto (station 11069500). See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,570 ft<sup>3</sup>/s, Feb. 23, 1998, gage height, 4.53 ft, from rating curve extended above 880 ft<sup>3</sup>/s; no flow for most of each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 200 ft<sup>3</sup>/s, or maximum, from rating curve extended above 480 ft<sup>3</sup>/s, on basis of critical-depth computations:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 13	2300	5.4	3.13	Feb. 25	1015	5.4	3.15

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	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	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	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	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	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.41	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	0.13	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.18	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	0.64	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	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	0.26	0.00	1.97	0.13	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.008	0.000	0.070	0.004	0.000	0.000	0.000	0.000	0.000	0.000
MAX	0.00	0.00	0.18	0.00	0.65	0.13	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	0.5	0.00	3.9	0.3	0.00	0.00	0.00	0.00	0.00	0.00



## 11070150 SAN JACINTO RIVER ABOVE STATE STREET, NEAR SAN JACINTO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.000	0.000	0.001	0.012	14.2	5.56	19.3	11.4	0.000	0.000	0.000	0.000
MAX	0.000	0.000	0.008	0.081	99.9	38.9	135	79.9	0.000	0.000	0.000	0.000
(WY)	1997	1997	2003	1997	1998	1998	1998	1998	1997	1997	1997	1997
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1997	1997	1997	1998	1997	1997	1997	1997	1997	1997	1997	1997

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1997 - 2003
ANNUAL TOTAL	0.26	2.36	
ANNUAL MEAN	0.001	0.006	4.12
HIGHEST ANNUAL MEAN			28.9 1998
LOWEST ANNUAL MEAN			0.000 1999
HIGHEST DAILY MEAN	0.18 Dec 17	0.65 Feb 13	600 Feb 24 1998
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1996
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1996
MAXIMUM PEAK FLOW		5.4 Feb 13	1570 Feb 23 1998
MAXIMUM PEAK STAGE		3.15 Feb 25	4.53 Feb 23 1998
ANNUAL RUNOFF (AC-FT)	0.5	4.7	2990
10 PERCENT EXCEEDS	0.00	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

## 11070210 SAN JACINTO RIVER AT RAMONA EXPRESSWAY, NEAR LAKEVIEW, CA

LOCATION.—Lat 33° 50'23", long 117° 08'06", in SW 1/4 NW 1/4 sec.7, T.4 S., R.2 W., [Riverside County](#), Hydrologic Unit 18070202, on right bank, at downstream end of Ramona Expressway Bridge, and 1.0 mi northwest of Lakeview.

DRAINAGE AREA.—365 mi<sup>2</sup>.

PERIOD OF RECORD.—October 2000 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 1,420 ft above NGVD of 1929, from topographic map.

REMARKS.—Records poor. Sand and gravel operations upstream from station may reduce runoff and cause peak attenuation. Natural storage of floodwaters in the Mystic Lake area, approximately 3 mi upstream, also reduces peak flows at times in some years. Low flows sustained, at times, by releases of reclaimed water upstream from station. Flow partly regulated by Lake Hemet. Lake Hemet Municipal Water District's upper canal diverts water at a point 4.0 mi upstream from station on San Jacinto River near San Jacinto (station 11069500). See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3.6 ft<sup>3</sup>/s, Mar. 17, 2003, gage height, 8.07 ft, from rating curve extended above 2.6 ft<sup>3</sup>/s, maximum gage height, 8.07 ft, Mar. 17, 2003; no flow for many days most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 17	0930	3.60	8.07

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.50	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.24	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.06	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	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	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	e0.00	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	1.6	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	3.4	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	e3.5	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	e3.4	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	2.5	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	2.0	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	e1.6	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	1.3	0.00	0.00	0.00	0.00	0.00	0.00
24	0.51	0.00	0.00	0.00	0.00	1.2	0.00	0.00	0.00	0.00	0.00	0.00
25	1.4	0.00	0.00	0.00	0.00	1.1	0.00	0.00	0.00	0.00	0.00	0.00
26	1.4	0.00	0.00	0.00	0.01	0.91	0.00	0.00	0.00	0.00	0.00	0.00
27	1.4	0.00	0.00	0.00	0.13	0.73	0.00	0.00	0.00	0.00	0.00	0.00
28	1.4	0.00	0.00	0.00	0.33	0.54	0.00	0.00	0.00	0.00	0.00	0.00
29	1.2	0.00	0.00	0.00	---	0.30	0.00	0.00	0.00	0.00	0.00	0.00
30	1.0	0.00	0.00	0.00	---	0.12	0.00	0.00	0.00	0.00	0.00	0.00
31	0.79	---	0.00	0.00	---	0.03	---	0.00	---	0.00	0.00	---
TOTAL	9.10	0.81	0.00	0.00	0.47	24.67	0.00	0.00	0.00	0.00	0.00	0.00
MEAN	0.29	0.027	0.000	0.000	0.017	0.80	0.000	0.000	0.000	0.000	0.000	0.000
MAX	1.4	0.50	0.00	0.00	0.33	3.5	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	18	1.6	0.00	0.00	0.9	49	0.00	0.00	0.00	0.00	0.00	0.00

e Estimated.

## 11070210 SAN JACINTO RIVER AT RAMONA EXPRESSWAY, NEAR LAKEVIEW, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.30	0.29	0.28	0.47	0.62	0.60	0.39	0.27	0.26	0.32	0.14	1.74
MAX	0.60	0.85	0.82	1.37	1.83	0.99	1.07	0.81	0.77	0.95	0.43	6.96
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2000
MIN	0.000	0.000	0.000	0.000	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	2002	2002	2003	2003	2002	2002	2003	2003	2002	2002	2002	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL TOTAL	14.12		35.05			
ANNUAL MEAN	0.039		0.096		0.33	
HIGHEST ANNUAL MEAN					0.87 2001	
LOWEST ANNUAL MEAN					0.013 2002	
HIGHEST DAILY MEAN	1.4	Oct 25	3.5	Mar 18	9.1	Aug 23 2000
LOWEST DAILY MEAN	0.00	Feb 2	0.00	Oct 1	0.00	Oct 16 2000
ANNUAL SEVEN-DAY MINIMUM	0.00	Feb 2	0.00	Oct 1	0.00	Aug 22 2001
MAXIMUM PEAK FLOW			3.6	Mar 17	3.6	Mar 17 2003
MAXIMUM PEAK STAGE			8.07	Mar 17	8.07	Mar 17 2003
ANNUAL RUNOFF (AC-FT)	28		70		236	
10 PERCENT EXCEEDS	0.06		0.00		1.0	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 11070270 PERRIS VALLEY STORM DRAIN AT NUEVO ROAD, NEAR PERRIS, CA

LOCATION.—Lat 33° 48' 04", long 117° 12' 19", in SW 1/4 SW 1/4 sec.21, T.4 S., R.3 W., [Riverside County](#), Hydrologic Unit 18070202, on right bank, 1.9 mi northeast of Perris, and 2.0 mi upstream from San Jacinto River.

DRAINAGE AREA.—93.3 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1969 to September 1975, October 1989 to September 1997, and October 1998 to current year.

PRECIPITATION DATA: Water years 1990–1997.

REVISED RECORDS.—WDR CA-92-1: 1991(M).

GAGE.—Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 1,410 ft above NGVD of 1929, from topographic map. October 1969 to September 1975, October 1989 to September 1997, and October 1998 to September 2002, at same site at different datum.

REMARKS.—Records fair except for estimated daily discharges, which are poor. New control installed October 2002. Some regulation by percolation basins upstream from station. Some pumping for irrigation upstream from station. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,400 ft<sup>3</sup>/s, Feb. 12, 1992, gage height, 7.81 ft, from rating curve extended above 2,120 ft<sup>3</sup>/s, on basis of slope area measurement of peak flow at datum then in use; maximum gage height, 15.76 ft, Mar. 15, 2003. No flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,100 ft<sup>3</sup>/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 13	1600	1,170	14.69	Mar. 15	1915	1,960	15.76
Feb. 25	1030	1,500	15.19				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.00	e0.00	0.00	0.03	0.05	0.38	0.03	0.08	0.35	0.16	0.00	0.23
2	e0.00	e0.00	0.01	0.02	0.03	0.02	0.01	0.10	0.16	0.14	0.05	0.16
3	e0.00	e0.00	0.02	0.06	0.02	0.00	0.04	4.7	0.18	0.17	0.04	0.16
4	e0.00	e0.00	0.02	0.11	0.03	2.0	0.06	3.0	0.22	0.16	0.09	0.05
5	e0.00	e0.04	0.02	0.06	0.03	1.7	0.19	0.36	0.48	0.17	0.05	0.04
6	e0.00	0.02	0.02	0.01	0.57	0.40	0.04	0.33	0.28	0.21	0.06	0.03
7	e0.00	0.08	0.02	0.12	0.04	0.62	0.06	0.42	0.24	0.25	0.06	0.03
8	e0.00	0.29	0.01	0.53	0.03	0.05	0.05	0.35	0.22	0.25	0.08	0.02
9	e0.00	16	0.03	0.03	0.01	0.00	0.04	0.35	0.19	0.26	0.13	0.01
10	e0.00	42	0.02	0.03	0.03	0.15	0.05	0.35	0.16	0.34	0.13	0.03
11	e0.00	0.34	0.01	0.02	89	0.08	0.06	0.38	0.16	0.19	0.06	0.03
12	e0.00	0.00	0.00	0.01	279	0.03	0.08	0.08	0.19	0.62	0.07	0.02
13	e0.00	0.00	0.02	0.05	405	0.02	0.02	0.27	0.20	0.19	0.09	0.03
14	e0.00	0.04	0.02	0.08	154	0.02	181	0.20	0.11	0.11	0.10	0.04
15	e0.00	0.03	0.00	0.05	1.3	437	169	0.12	0.16	0.19	0.13	0.04
16	e0.00	0.04	106	0.04	0.26	535	4.2	0.10	0.08	0.30	0.20	0.04
17	e0.00	0.03	94	0.03	0.17	74	0.01	0.16	0.19	0.22	0.17	0.04
18	e0.00	0.05	4.8	0.03	0.01	5.4	0.05	0.57	0.13	0.22	0.12	0.06
19	e0.00	0.13	0.00	0.04	0.00	1.2	0.03	0.20	0.08	0.16	0.08	0.06
20	e0.00	0.06	105	0.03	0.18	0.06	0.00	0.13	0.21	0.24	2.0	0.05
21	e0.00	0.06	5.7	0.04	0.04	0.04	0.02	0.11	0.18	0.22	0.42	0.05
22	e0.00	0.07	0.17	0.02	0.00	0.01	0.07	0.10	0.16	0.31	0.06	0.04
23	e0.00	0.14	0.00	0.01	0.03	0.02	0.13	0.21	0.13	0.35	0.11	0.06
24	e0.00	0.04	0.00	0.01	0.00	0.09	0.06	0.34	0.11	0.20	0.05	0.06
25	e0.00	0.06	0.00	0.03	519	0.13	0.12	0.27	0.09	0.20	0.11	0.07
26	e0.00	0.15	0.00	0.02	131	0.21	0.09	0.12	0.08	0.19	0.13	0.07
27	e0.00	0.07	0.00	0.10	65	0.08	0.07	0.11	0.07	0.18	0.06	0.09
28	e0.00	0.10	0.00	0.18	9.4	0.04	0.16	0.13	0.23	0.11	0.06	0.10
29	e0.00	1.9	0.52	0.06	---	0.03	0.06	0.09	0.53	0.41	0.08	0.06
30	e0.00	0.35	0.11	0.10	---	0.13	0.03	0.09	0.10	3.6	0.15	0.07
31	e0.00	---	0.02	0.07	---	0.02	---	0.11	---	0.07	0.11	---
TOTAL	0.00	62.09	316.54	2.02	1654.23	1058.93	355.83	13.93	5.67	10.39	5.05	1.84
MEAN	0.000	2.07	10.2	0.065	59.1	34.2	11.9	0.45	0.19	0.34	0.16	0.061
MAX	0.00	42	106	0.53	519	535	181	4.7	0.53	3.6	2.0	0.23
MIN	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.08	0.07	0.07	0.00	0.01
AC-FT	0.00	123	628	4.0	3280	2100	706	28	11	21	10	3.6

e Estimated.

## 11070270 PERRIS VALLEY STORM DRAIN AT NUEVO ROAD, NEAR PERRIS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.25	1.30	3.67	18.9	20.5	12.5	1.58	0.16	0.17	0.12	0.026	0.23
MAX	1.68	9.87	35.1	167	87.5	70.7	11.9	1.06	1.73	1.85	0.18	4.21
(WY)	1997	1997	1993	1993	1993	1991	2003	1990	1995	1999	2000	1997
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1970	1972	1970	1975	1971	1972	1970	1970	1970	1970	1970	1970

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL TOTAL	412.87		3486.52			
ANNUAL MEAN	1.13		9.55		4.88	
HIGHEST ANNUAL MEAN					24.4	
LOWEST ANNUAL MEAN					0.30	
HIGHEST DAILY MEAN	106	Dec 16	535	Mar 16	1270	Jan 16 1993
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1969
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1969
MAXIMUM PEAK FLOW			1960	Mar 15	4400	Feb 12 1992
MAXIMUM PEAK STAGE			15.76	Mar 15	15.76	Mar 15 2003
ANNUAL RUNOFF (AC-FT)	819		6920		3540	
10 PERCENT EXCEEDS	0.10		0.53		0.28	
50 PERCENT EXCEEDS	0.00		0.07		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 11070365 SAN JACINTO RIVER NEAR SUN CITY, CA

LOCATION.—Lat 33° 44' 46", long 117° 13' 51", in SW 1/4 SE 1/4 sec.7, T.5 S., R.3 W., Riverside County, Hydrologic Unit 18070202, on left bank, 0.6 mi downstream from Goetz Road Bridge, 6.0 mi northeast of Railroad Canyon Dam, and 3.2 mi northwest of Sun City.

DRAINAGE AREA.—560 mi<sup>2</sup>.

PERIOD OF RECORD.—October 2000 to current year.

GAGE.—Water-stage recorder, crest-stage gage, and culvert/concrete road crossing control. Elevation of gage is 1,400 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair. Sand and gravel operations upstream from station may reduce runoff and cause peak attenuation. Natural storage of floodwaters in the Mystic Lake area also reduces peak flows at times in some years. Flow partly regulated by Lake Hemet. Lake Hemet Municipal Water District's upper canal diverts at a point 4.0 mi upstream from station on San Jacinto River near San Jacinto (station 11069500). See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,960 ft<sup>3</sup>/s, Mar. 16, 2003, gage height, 12.08 ft; no flow for many days in most years.

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)
Feb. 13	2045	1,000	10.76	Mar. 16	0815	1,960	12.08
Feb. 25	1445	1,580	11.69	Apr. 15	0300	827	10.39

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	6.4	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	5.8	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	5.7	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	5.7	0.00	1.8	0.00	e0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	6.0	0.00	2.5	0.00	e0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	3.9	0.00	0.65	0.00	e0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	1.1	0.00	0.26	0.00	e0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.37	0.00	0.13	0.00	e0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.02	0.00	0.00	0.00	0.00
10	0.00	37	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	6.2	0.00	0.00	28	0.01	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.53	0.00	0.00	202	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.14	0.00	0.00	581	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	361	0.00	27	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	29	261	495	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	5.8	0.00	8.1	1290	29	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	172	0.00	7.5	147	2.2	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	39	0.00	6.7	18	0.77	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	2.2	0.00	6.0	9.8	0.34	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	75	0.00	6.2	3.3	0.24	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	47	0.00	6.2	2.0	0.14	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	4.0	0.00	5.7	1.7	0.07	e0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.85	0.00	5.7	0.90	0.01	e0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.31	0.00	5.6	0.43	0.00	e0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.14	0.00	716	0.28	0.00	e0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.02	0.00	230	0.22	0.00	e0.00	0.00	0.00	e0.00	0.00
27	0.00	0.00	0.00	0.00	89	0.15	0.00	0.00	0.00	0.00	e0.00	0.00
28	0.00	0.00	0.00	0.00	34	0.07	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.01	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	43.87	346.32	0.00	2327.70	1770.11	554.77	5.36	0.00	0.00	0.00	0.00
MEAN	0.000	1.46	11.2	0.000	83.1	57.1	18.5	0.17	0.000	0.000	0.000	0.000
MAX	0.00	37	172	0.00	716	1290	495	2.5	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	87	687	0.00	4620	3510	1100	11	0.00	0.00	0.00	0.00

e Estimated.

## 11070365 SAN JACINTO RIVER NEAR SUN CITY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.19	1.00	4.14	6.50	37.3	21.6	12.1	0.058	0.000	0.000	0.000	0.000
MAX	0.58	1.54	11.2	19.5	83.1	57.1	18.5	0.17	0.000	0.000	0.000	0.000
(WY)	2001	2002	2003	2001	2003	2003	2003	2003	2001	2001	2001	2001
MIN	0.000	0.003	0.000	0.000	0.000	2.79	3.34	0.000	0.000	0.000	0.000	0.000
(WY)	2002	2001	2001	2002	2002	2002	2001	2001	2001	2001	2001	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	908.85		5048.13			
ANNUAL MEAN	2.49		13.8		6.69	
HIGHEST ANNUAL MEAN					13.8	
LOWEST ANNUAL MEAN					1.65	
HIGHEST DAILY MEAN	172	Dec 17	1290	Mar 16	1290	Mar 16 2003
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 2000
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 2000
MAXIMUM PEAK FLOW			1960	Mar 16	1960	Mar 16 2003
MAXIMUM PEAK STAGE			12.08	Mar 16	12.08	Mar 16 2003
ANNUAL RUNOFF (AC-FT)	1800		10010		4850	
10 PERCENT EXCEEDS	0.00		5.7		0.81	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 11070465 SALT CREEK AT MURRIETA ROAD, NEAR SUN CITY, CA

LOCATION.—Lat 33° 41' 39", long 117° 12' 17", in SW 1/4 NW 1/4 sec.33, T.5 S., R.3 W., Riverside County, Hydrologic Unit 18070202, on right bank, 20 ft upstream from Murrieta Road crossing, 2.2 mi upstream from Railroad Canyon Reservoir, and 1.1 mi southwest of Sun City.

DRAINAGE AREA.—116 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1983 to September 1985, October 2000 to current year.

GAGE.—Water-stage recorder and crest-stage gage. October 1983 to September 1985, at same site at different datum. Elevation of gage is 1,405 ft above NGVD of 1929, from topographic map.

REMARKS.—Records rated fair except for estimated daily discharges, which are poor. Flow partly regulated by Paloma Valley Reservoir. Diversions for irrigation and domestic use occur at times upstream from station. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 559 ft<sup>3</sup>/s, Feb. 25, 2003, gage height, 10.63 ft; no flow for many days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 4,120 ft<sup>3</sup>/s, Mar. 2, 1983, gage height, 6.88 ft, datum then in use, provided by Riverside County Flood Control and Water Conservation District.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	2.2	0.00	0.00	0.00	e0.00	e0.00	e0.00
2	0.00	0.00	0.00	0.00	0.00	0.85	0.00	0.00	0.00	e0.00	e0.00	e0.00
3	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.23	0.00	e0.00	e0.00	e0.00
4	0.00	0.00	0.00	0.00	0.00	2.3	0.00	0.00	0.00	e0.00	e0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.59	0.00	0.00	0.00	e0.00	e0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	e0.00	0.52	0.54	0.00	e0.00	e0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	e0.00	e0.00	0.00
8	0.00	0.20	0.00	0.01	0.00	e0.00	0.00	0.00	0.00	e0.00	e0.00	0.00
9	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	0.00
10	0.00	0.10	0.00	0.00	0.00	0.00	0.30	0.00	0.00	e0.00	e0.00	0.00
11	0.00	0.00	0.00	0.00	24	0.00	0.00	0.00	0.00	e0.00	e0.00	0.00
12	0.00	0.00	0.00	0.00	74	0.00	0.00	0.00	0.00	e0.00	e0.00	0.00
13	0.00	0.00	0.00	0.00	113	0.00	0.00	0.00	0.00	e0.00	e0.15	0.00
14	0.00	0.00	0.00	0.00	43	0.00	56	0.00	0.00	e0.00	e0.00	0.00
15	0.00	0.00	0.00	0.00	4.5	79	92	0.00	0.00	e0.00	e0.00	0.00
16	0.00	0.00	17	0.00	0.53	196	11	0.00	0.00	e0.00	e0.00	0.00
17	0.00	0.00	31	0.00	0.11	51	1.9	0.00	e0.00	e0.00	e0.00	0.00
18	0.00	0.00	4.3	0.00	0.00	8.7	0.53	0.00	e0.00	e0.00	e0.00	0.00
19	0.00	0.00	0.21	0.00	0.02	1.7	0.63	0.00	e0.00	e0.00	e0.00	0.00
20	0.00	0.00	19	0.00	0.40	0.22	0.00	0.60	e0.00	e0.00	e0.00	0.00
21	0.00	0.00	4.9	0.00	0.00	0.00	0.82	0.00	e0.00	e0.00	e0.00	0.00
22	0.00	0.00	0.04	0.00	0.00	0.00	0.14	0.00	e0.00	e0.00	e0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	e0.00	e0.00	0.00
25	0.00	0.00	0.00	0.00	218	0.03	0.00	0.96	e0.00	e0.00	e0.00	0.00
26	0.00	0.00	0.00	0.00	72	1.0	0.00	1.9	e0.00	e0.00	e0.00	0.00
27	0.00	0.00	0.00	0.00	23	0.00	0.00	1.9	e0.00	e0.00	e0.00	0.00
28	0.00	0.00	0.00	0.00	8.7	0.00	0.00	1.9	e0.00	e0.00	e0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	1.7	e0.00	e0.00	e0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	e0.00	e0.30	e0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	e0.00	e0.00	---
TOTAL	0.00	0.39	76.45	0.01	581.26	343.61	163.84	9.73	0.00	0.30	0.15	0.00
MEAN	0.000	0.013	2.47	0.000	20.8	11.1	5.46	0.31	0.000	0.010	0.005	0.000
MAX	0.00	0.20	31	0.01	218	196	92	1.9	0.00	0.30	0.15	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	0.8	152	0.02	1150	682	325	19	0.00	0.6	0.3	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2003, BY WATER YEAR (WY)

	1984	1985	1985	2001	2003	2003	2003	2003	2003	1984	1985	1985
MEAN	0.42	0.22	2.79	0.91	6.50	2.54	1.21	0.083	0.000	0.052	0.25	0.023
MAX	1.98	0.61	10.0	4.19	20.8	11.1	5.46	0.31	0.000	0.25	1.26	0.11
(WY)	1984	1985	1985	2001	2003	2003	2003	2003	1984	1984	1984	1984
MIN	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1985	2003	2001	1984	1984	1984	1985	1984	1984	1985	1985	1985

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1984 - 2003
ANNUAL TOTAL	82.14	1175.74	
ANNUAL MEAN	0.23	3.22	1.22
HIGHEST ANNUAL MEAN			3.22 2003
LOWEST ANNUAL MEAN			0.069 2002
HIGHEST DAILY MEAN	31 Dec 17	218 Feb 25	218 Feb 25 2003
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Oct 3 1983
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Oct 5 1983
MAXIMUM PEAK FLOW		559 Feb 25	559 Feb 25 2003
MAXIMUM PEAK STAGE		10.63 Feb 25	10.63 Feb 25 2003
ANNUAL RUNOFF (AC-FT)	163	2330	883
10 PERCENT EXCEEDS	0.00	0.56	0.05
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated.



## 11070500 SAN JACINTO RIVER NEAR ELSINORE, CA

LOCATION.—Lat 33° 39' 51", long 117° 17' 35", in SE 1/4 NE 1/4 sec.9, T.6 S., R.4 W., [Riverside County](#), Hydrologic Unit 18070203, on right bank, 2.0 mi east of Elsinore, 2.1 mi downstream from Railroad Canyon Dam, and 36 mi downstream from Lake Hemet.

DRAINAGE AREA.—723 mi<sup>2</sup>.

PERIOD OF RECORD.—January 1916 to current year. Monthly figures 1927–50, adjusted for diversion, published in WSP 1315-B.

REVISED RECORDS.—WDR CA-72-1: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 1,270 ft above NGVD of 1929, from topographic map. Prior to Feb. 13, 1916, nonrecording gage at site 0.7 mi downstream at different datum. Feb. 13, 1916, to Oct. 27, 1921, nonrecording gage at present site, at different datum.

REMARKS.—Records fair. Flow partly regulated by Lake Hemet, capacity, 13,500 acre-ft, and since 1928 by Railroad Canyon Reservoir, capacity, 12,000 acre-ft, 2.1 mi upstream from station. Diversions for irrigation and domestic use upstream from Railroad Canyon Reservoir took place in some years prior to water year 1994. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 16,000 ft<sup>3</sup>/s, Feb. 17, 1927, gage height, 11.8 ft, from rating curve extended above 2,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; no flow for many days in most years.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	0.08	0.40	0.44	0.47	45	0.97	1.1	0.25	0.02	0.01	0.01
2	0.02	0.08	0.39	0.44	0.47	24	0.85	1.0	0.24	1.5	0.01	0.01
3	0.02	0.08	0.39	0.44	0.46	15	0.85	1.1	0.24	0.44	0.01	0.01
4	0.01	0.09	0.40	0.44	0.46	13	0.83	1.1	0.25	0.06	0.00	0.01
5	0.01	0.09	0.39	0.45	0.46	12	0.86	0.98	0.24	0.03	0.00	0.01
6	0.02	0.09	0.39	0.45	0.46	10	0.82	0.94	0.24	0.02	0.00	0.01
7	0.02	0.09	0.41	0.46	0.46	7.9	0.80	0.88	0.24	0.02	0.00	0.01
8	0.02	0.14	0.40	0.47	0.46	5.5	0.77	0.84	0.22	0.01	0.00	0.01
9	0.02	0.17	0.39	0.52	0.45	4.7	0.76	0.77	0.23	0.01	0.00	0.01
10	0.02	0.14	0.40	0.52	0.44	3.7	0.73	0.72	0.23	0.01	0.00	0.01
11	0.02	0.14	0.40	0.50	6.1	3.1	0.74	0.69	0.21	0.01	0.00	0.01
12	0.03	0.13	0.39	0.49	24	2.4	0.73	0.63	0.20	0.00	0.00	0.01
13	0.02	0.14	0.39	0.49	23	1.9	0.75	0.62	0.18	0.00	0.00	0.01
14	0.02	0.14	0.39	0.49	6.0	1.9	7.1	0.62	0.16	0.01	0.00	0.01
15	0.03	0.15	0.40	0.49	1.5	36	258	0.59	0.14	0.01	0.00	0.01
16	0.03	0.15	1.0	0.49	0.96	1390	185	0.55	0.13	0.01	0.00	0.01
17	0.03	0.16	5.0	0.49	0.80	391	48	0.52	0.12	0.01	0.00	0.01
18	0.03	0.16	0.73	0.49	0.71	104	17	0.51	0.11	0.01	0.00	0.01
19	0.03	0.17	0.51	0.48	0.71	46	8.3	0.49	0.11	0.01	0.00	0.01
20	0.04	0.17	2.2	0.48	1.1	27	5.2	0.45	0.13	0.01	0.00	0.01
21	0.04	0.18	0.79	0.49	0.70	16	3.6	0.41	0.14	0.01	0.01	0.01
22	0.04	0.19	0.57	0.49	0.64	11	2.6	0.38	0.14	0.01	0.01	0.01
23	0.04	0.21	0.50	0.49	0.63	7.7	2.2	0.39	0.12	0.01	0.01	0.01
24	0.04	0.23	0.46	0.49	0.61	5.9	1.9	0.40	0.10	0.01	0.01	0.01
25	0.05	0.23	0.44	0.49	806	4.6	1.7	0.40	0.08	0.01	0.01	0.01
26	0.05	0.24	0.44	0.49	856	3.8	1.6	0.38	0.06	0.07	0.00	0.01
27	0.05	0.26	0.44	0.48	229	3.5	1.5	0.34	0.05	0.02	0.00	0.01
28	0.05	0.29	0.44	0.48	99	4.0	1.4	0.29	0.04	0.01	0.00	0.02
29	0.05	0.36	0.44	0.47	---	2.7	1.4	0.27	0.03	0.01	0.00	0.01
30	0.05	0.53	0.44	0.47	---	1.5	1.2	0.26	0.03	0.01	0.00	0.01
31	0.06	---	0.44	0.46	---	1.2	---	0.26	---	0.01	0.01	---
TOTAL	0.98	5.28	20.77	14.82	2062.05	2206.0	558.16	18.88	4.66	2.38	0.09	0.31
MEAN	0.032	0.18	0.67	0.48	73.6	71.2	18.6	0.61	0.16	0.077	0.003	0.010
MAX	0.06	0.53	5.0	0.52	856	1390	258	1.1	0.25	1.5	0.01	0.02
MIN	0.01	0.08	0.39	0.44	0.44	1.2	0.73	0.26	0.03	0.00	0.00	0.01
AC-FT	1.9	10	41	29	4090	4380	1110	37	9.2	4.7	0.2	0.6

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2003, BY WATER YEAR (WY)

MEAN	0.57	0.75	4.85	34.1	86.2	70.1	22.6	5.34	0.76	0.57	0.38	0.48
MAX	22.0	28.1	268	1303	2116	802	333	132	13.8	19.7	14.6	15.4
(WY)	1938	1938	1922	1916	1980	1983	1941	1983	1937	1938	1937	1938
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1917	1917	1917	1921	1921	1921	1921	1921	1919	1918	1918	1917

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1916 - 2003
ANNUAL TOTAL	103.60	4894.38	
ANNUAL MEAN	0.28	13.4	16.7
HIGHEST ANNUAL MEAN			232
LOWEST ANNUAL MEAN			0.000
HIGHEST DAILY MEAN	5.0 Dec 17	1390 Mar 16	14000 Jan 28 1916
LOWEST DAILY MEAN	0.00 Jun 18	0.00 Jul 12	0.00 Jul 28 1916
ANNUAL SEVEN-DAY MINIMUM	0.00 Jul 1	0.00 Aug 4	0.00 Jul 28 1916
MAXIMUM PEAK FLOW		2110 Feb 25	16000 Feb 17 1927
MAXIMUM PEAK STAGE		10.22 Feb 25	11.80 Feb 17 1927
ANNUAL RUNOFF (AC-FT)	205	9710	12070
10 PERCENT EXCEEDS	0.70	4.2	3.3
50 PERCENT EXCEEDS	0.15	0.29	0.10
90 PERCENT EXCEEDS	0.00	0.01	0.00

## 11072100 TEMESCAL CREEK ABOVE MAIN STREET, AT CORONA, CA

LOCATION.—Lat 33° 53' 21", long 117° 33' 43", in La Sierra Grant, [Riverside County](#), Hydrologic Unit 18070203, on right bank, 500 ft upstream from Main Street Bridge in Corona, and 1.5 mi upstream from topographic boundary of Prado Flood-Control Basin.

DRAINAGE AREA.—224 mi<sup>2</sup>, excludes 768 mi<sup>2</sup> above Lake Elsinore.

PERIOD OF RECORD.—October 1980 to July 1983, February 1984 to current year. December 1967 to September 1974, water-stage recorder at site 1.2 mi downstream at different datum (published as station 11072200, "Temescal Creek at Corona").

GAGE.—Water-stage recorder and concrete-lined flood-control channel. Elevation of gage is 600 ft above NGVD of 1929, from topographic map. October 1980 to July 1983 at site 500 ft downstream at different datum.

REMARKS.—Records fair. Flow regulated by several small storage reservoirs. Many diversions upstream from station for irrigation. Water discharged to channel from Arlington Desalter at times since September 1990; records for water years 1981 to 1990 and 1991 to current year are not equivalent. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,720 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 11.67 ft, site and datum then in use, on basis of slope-conveyance study; minimum daily, 0.27 ft<sup>3</sup>/s, Sept. 25, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 8,850 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 8.17 ft, from floodmark, at old site (station 11072200) 1.2 mi downstream on basis of slope-area measurement of peak flow.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	12	15	11	11	12	24	46	3.5	2.8	8.9	13
2	13	12	15	11	11	11	29	42	3.8	3.5	13	13
3	13	10	14	11	11	10	34	63	3.6	3.2	13	13
4	13	11	13	11	11	21	33	42	4.5	3.1	14	14
5	14	12	13	11	12	12	31	41	4.1	4.5	12	15
6	15	9.2	12	11	13	11	25	36	4.5	3.1	13	15
7	14	12	13	10	15	12	15	37	5.1	3.2	12	15
8	13	68	13	12	12	12	21	35	3.6	2.9	13	15
9	13	64	13	11	12	12	18	27	3.4	4.9	12	15
10	13	9.9	14	12	12	13	18	20	2.7	3.0	11	11
11	14	14	11	14	167	13	19	19	2.6	2.9	14	14
12	13	13	5.6	13	276	13	18	18	2.2	2.2	16	14
13	6.3	13	12	12	282	13	20	17	2.0	2.9	16	15
14	5.1	13	11	13	18	12	285	16	3.2	2.9	16	14
15	13	12	11	10	5.7	456	88	14	2.8	3.0	19	14
16	13	14	230	13	3.4	626	35	14	2.9	2.8	19	13
17	12	14	35	15	8.1	109	32	15	2.8	2.7	19	11
18	12	13	11	15	13	41	30	13	2.5	4.4	21	13
19	12	13	6.2	15	13	23	40	13	3.1	5.7	21	12
20	11	15	124	17	20	19	48	13	4.6	4.5	19	12
21	12	13	12	16	13	17	48	15	4.2	9.4	13	10
22	13	15	9.6	12	13	15	50	13	3.1	9.2	15	12
23	14	14	10	10	14	14	54	7.6	3.7	7.8	16	12
24	12	13	13	4.5	14	15	61	8.1	2.4	8.2	15	13
25	13	11	12	1.8	417	17	67	5.7	2.2	9.1	14	13
26	11	10	7.6	2.0	25	16	61	5.4	2.6	14	13	14
27	10	12	11	1.9	30	16	53	5.3	2.7	14	12	14
28	9.7	13	11	4.6	12	14	53	4.3	2.9	12	12	15
29	9.5	48	13	11	---	3.2	53	3.8	3.1	18	12	11
30	11	24	9.2	10	---	5.8	49	3.7	3.1	11	12	11
31	11	---	11	11	---	15	---	4.5	---	8.8	13	---
TOTAL	371.6	527.1	711.2	332.8	1464.2	1599.0	1412	617.4	97.5	189.7	448.9	396
MEAN	12.0	17.6	22.9	10.7	52.3	51.6	47.1	19.9	3.25	6.12	14.5	13.2
MAX	15	68	230	17	417	626	285	63	5.1	18	21	15
MIN	5.1	9.2	5.6	1.8	3.4	3.2	15	3.7	2.0	2.2	8.9	10
AC-FT	737	1050	1410	660	2900	3170	2800	1220	193	376	890	785

## 11072100 TEMESCAL CREEK ABOVE MAIN STREET, AT CORONA, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1990, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.62	15.1	23.8	23.0	14.5	40.9	13.1	12.0	9.35	7.15	6.45	6.99
MAX	16.1	55.9	126	116	25.5	237	39.3	43.7	30.0	10.9	13.4	11.3
(WY)	1986	1981	1981	1981	1981	1983	1983	1983	1983	1985	1990	1985
MIN	2.36	4.67	2.53	7.01	7.42	6.26	4.02	3.77	1.12	1.20	1.79	1.09
(WY)	1985	1987	1982	1989	1982	1990	1989	1982	1982	1982	1982	1981

## SUMMARY STATISTICS

## WATER YEARS 1981 - 1990

ANNUAL MEAN	12.4
HIGHEST ANNUAL MEAN	33.7 1981
LOWEST ANNUAL MEAN	6.10 1987
HIGHEST DAILY MEAN	1720 Mar 1 1983
LOWEST DAILY MEAN	.27 Sep 25 1981
ANNUAL SEVEN-DAY MINIMUM	.56 Sep 23 1981
MAXIMUM PEAK FLOW	4720 Mar 1 1983
MAXIMUM PEAK STAGE	11.67 Mar 1 1983
ANNUAL RUNOFF (AC-FT)	8990
10 PERCENT EXCEEDS	27
50 PERCENT EXCEEDS	6.1
90 PERCENT EXCEEDS	2.7

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)

MEAN	12.2	14.7	16.9	39.7	84.0	62.2	36.8	22.3	14.5	12.9	12.4	12.7
MAX	16.3	24.3	26.4	161	351	349	190	100	34.3	24.9	20.1	15.1
(WY)	1997	1994	1993	1995	1993	1995	1995	1995	1995	1993	1993	1994
MIN	6.22	5.55	9.35	10.7	10.5	5.19	2.89	3.24	3.25	3.56	6.98	7.08
(WY)	1996	1996	1999	2003	2002	2001	1991	1992	2003	1994	1994	1995

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1991 - 2003

ANNUAL TOTAL	5150.4	8167.4	
ANNUAL MEAN	14.1	22.4	28.1
HIGHEST ANNUAL MEAN			81.8 1995
LOWEST ANNUAL MEAN			12.8 1999
HIGHEST DAILY MEAN	230 Dec 16	626 Mar 16	2090 Feb 24 1998
LOWEST DAILY MEAN	1.1 Feb 3	1.8 Jan 25	0.34 Jul 3 1992
ANNUAL SEVEN-DAY MINIMUM	1.7 Jan 31	2.6 Jun 10	0.89 Jan 13 1992
MAXIMUM PEAK FLOW		2380 Dec 16	3660 Feb 24 1998
MAXIMUM PEAK STAGE		5.82 Dec 16	6.54 Feb 24 1998
ANNUAL RUNOFF (AC-FT)	10220	16200	20380
10 PERCENT EXCEEDS	16	35	40
50 PERCENT EXCEEDS	13	13	13
90 PERCENT EXCEEDS	9.5	3.3	4.4

## 11073300 SAN ANTONIO CREEK AT RIVERSIDE DRIVE, NEAR CHINO, CA

LOCATION.—Lat 34° 01' 07", long 117° 43' 47", in Santa Ana del Chino Grant, [San Bernardino County](#), Hydrologic Unit 18070203, on right bank, at south end of Riverside Drive Bridge, 0.4 mi upstream from confluence with Chino Creek, 10.2 mi downstream from San Antonio Dam, and 2.4 mi northwest of Chino.

DRAINAGE AREA.—36.6 mi<sup>2</sup>.

PERIOD OF RECORD.—December 1998 to current year.

GAGE.—Water-stage recorder and concrete-lined flood-control channel. Elevation of gage is 735 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair above 20 ft<sup>3</sup>/s and poor below. Flow mostly regulated by San Antonio Flood-Control Reservoir, capacity, 7,700 acre-ft. Natural streamflow affected by ground-water withdrawals, diversions for power, domestic use, irrigation, and return flow from irrigated areas. Flow at gage is primarily urban runoff, except when releases are made from San Antonio Dam. Releases of imported water are made to San Antonio Creek by the California Water Project at times in some years, from Rialto Pipeline below San Antonio Dam, at a site 10 mi upstream. During the current year, the California Water Project reported releases of 1,770 acre-ft. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,750 ft<sup>3</sup>/s, Nov. 24, 2001, gage height, 4.84 ft, from rating curve extended above 576 ft<sup>3</sup>/s, on basis of step-backwater analysis; no flow at times in most years.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.48	0.33	0.79	0.05	0.55	2.0	0.80	0.23	0.57	0.71	0.66	1.00
2	0.36	0.25	2.6	0.25	0.32	1.5	0.39	4.0	0.56	0.65	0.63	0.35
3	0.37	0.34	0.06	0.31	1.1	1.8	0.38	75	0.71	0.75	0.57	0.38
4	0.34	0.78	0.01	0.19	0.52	1.3	0.44	1.2	0.70	0.56	5.0	0.39
5	0.35	0.31	0.11	0.20	0.56	0.70	0.81	0.77	0.76	0.39	17	0.41
6	0.35	0.20	0.14	0.17	0.84	0.47	0.37	0.54	0.71	0.43	20	0.38
7	0.44	0.28	0.10	0.31	0.70	0.27	0.55	0.44	0.56	0.66	19	0.41
8	0.33	93	0.11	0.44	0.54	0.16	0.55	0.53	0.84	0.78	18	5.0
9	0.35	132	0.31	1.3	0.50	0.19	0.60	0.53	0.88	0.81	22	21
10	0.39	3.3	0.23	0.69	0.65	0.29	0.56	0.39	0.83	0.86	20	20
11	0.89	1.9	0.14	0.26	66	0.27	0.54	0.40	0.77	0.82	25	25
12	1.1	1.5	0.10	0.32	159	0.22	0.54	0.42	0.95	0.64	24	24
13	1.9	1.5	0.18	0.55	113	0.30	0.44	0.45	0.86	0.72	26	24
14	0.83	0.82	0.06	1.2	1.5	0.31	112	0.51	0.71	0.79	27	23
15	0.50	0.29	0.06	1.1	0.67	346	17	0.79	0.70	0.82	25	21
16	0.40	0.21	173	0.57	1.6	141	0.59	0.64	0.64	0.82	30	20
17	0.54	0.49	20	0.45	1.2	6.6	0.81	0.53	0.57	0.92	32	21
18	0.43	0.23	0.62	0.31	0.52	0.58	0.51	0.52	0.86	0.93	30	22
19	0.43	0.34	0.74	0.38	1.7	0.46	0.38	0.66	0.66	0.82	14	22
20	1.4	0.23	84	0.71	1.6	0.45	0.25	0.64	0.77	0.81	1.7	27
21	1.4	0.24	2.0	1.3	0.47	0.38	0.42	0.73	0.98	0.89	1.0	28
22	1.0	0.29	0.52	0.71	0.39	0.22	0.33	0.60	0.77	1.1	0.81	19
23	0.82	0.20	0.23	0.58	0.26	0.36	0.32	0.57	0.79	0.95	0.70	23
24	0.46	0.31	0.62	0.41	1.00	0.38	0.44	0.62	0.74	0.81	0.52	23
25	0.97	0.24	0.54	0.27	78	0.35	0.36	0.52	0.78	0.82	0.54	24
26	1.4	0.08	0.96	0.26	43	0.32	0.31	0.55	1.00	0.83	0.58	23
27	1.1	0.15	0.33	1.2	18	0.40	0.25	0.66	0.68	0.81	0.33	20
28	0.63	0.40	1.1	0.53	0.81	0.32	0.24	0.71	0.71	0.96	0.26	23
29	0.45	9.3	5.8	0.37	---	0.24	0.22	0.71	0.61	1.1	0.34	25
30	0.47	1.0	0.32	0.48	---	0.48	0.17	0.54	0.67	0.69	0.36	26
31	0.31	---	0.19	0.45	---	0.73	---	0.50	---	0.69	0.44	---
TOTAL	21.19	250.51	295.97	16.32	495.00	509.05	141.57	95.90	22.34	24.34	363.44	512.32
MEAN	0.68	8.35	9.55	0.53	17.7	16.4	4.72	3.09	0.74	0.79	11.7	17.1
MAX	1.9	132	173	1.3	159	346	112	75	1.0	1.1	32	28
MIN	0.31	0.08	0.01	0.05	0.26	0.16	0.17	0.23	0.56	0.39	0.26	0.35
AC-FT	42	497	587	32	982	1010	281	190	44	48	721	1020

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

	1999	2000	2001	2002	2003
MEAN	34.0	19.6	14.9	14.4	19.4
MAX	98.1	63.2	46.9	53.9	55.3
(WY)	2000	2001	2000	2000	2003
MIN	0.32	0.59	0.19	0.53	1.70
(WY)	2002	2000	2001	2003	2002

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1999 - 2003	
ANNUAL TOTAL	2409.83		2747.95			
ANNUAL MEAN	6.60		7.53		11.8	
HIGHEST ANNUAL MEAN					22.6	
LOWEST ANNUAL MEAN					5.82	
HIGHEST DAILY MEAN	173	Dec 16	346	Mar 15	346	Mar 15 2003
LOWEST DAILY MEAN	0.01	Dec 4	0.01	Dec 4	0.00	Dec 21 1998
ANNUAL SEVEN-DAY MINIMUM	0.12	Dec 3	0.12	Dec 3	0.00	Dec 26 1998
MAXIMUM PEAK FLOW			2170		2750	
MAXIMUM PEAK STAGE			4.29		4.84	
ANNUAL RUNOFF (AC-FT)	4780		5450		8530	
10 PERCENT EXCEEDS	23		22		48	
50 PERCENT EXCEEDS	0.83		0.63		0.54	
90 PERCENT EXCEEDS	0.34		0.25		0.04	

## 11073360 CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO, CA

LOCATION.—Lat 34° 00' 14", long 117° 43' 34", in Santa Ana del Chino Grant, [San Bernardino County](#), Hydrologic Unit 18070203, on right bank, 300 ft downstream from old Schaefer Avenue Bridge, 0.8 mi downstream from San Antonio Creek, and 1.5 mi southwest of Chino.

DRAINAGE AREA.—48.9 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1969 to current year.

CHEMICAL DATA: Water year 1998.

SEDIMENT DATA: Water year 1998.

REVISED RECORDS.—WDR CA-84-1: 1983(M). WDR CA-95-1: 1992, 1993.

GAGE.—Water-stage recorder and concrete-lined flood-control channel. Concrete dikes formed low-water control from October 1975 to Apr. 16, 1991. Elevation of gage is 685 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair above 10 ft<sup>3</sup>/s and poor below. Since 1997, due to construction in area of gage, Schaefer Avenue no longer extends to the Chino Creek crossing. The Schaefer Avenue Bridge, however, remains. Flow mostly regulated by San Antonio Flood-Control Reservoir, capacity, 7,700 acre-ft. Natural streamflow affected by extensive ground-water withdrawals, diversions for power, domestic use, irrigation, and return flow from irrigated areas. Releases of imported water are made to the basin by the California Water Project at times in some years, via San Antonio Creek from Rialto Pipeline below San Antonio Dam, at a site approximately 11 mi upstream. During the current year, 1,770 acre-ft was released. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 12,700 ft<sup>3</sup>/s, Feb. 27, 1983, gage height, 10.32 ft, from rating curve extended above 560 ft<sup>3</sup>/s, on basis of slope-conveyance study; no flow May 21, June 30, July 1, Oct. 30, Nov. 3, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Jan. 25, 1969, reached a stage of 9.23 ft, present datum, discharge, 9,200 ft<sup>3</sup>/s, on basis of contracted-opening measurement at site 6.1 mi downstream.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	1.8	2.8	1.4	1.9	4.4	1.9	1.9	2.3	1.5	1.0	3.5
2	1.6	1.8	8.1	1.5	1.7	5.1	1.5	7.0	2.3	1.5	0.95	2.1
3	1.6	1.9	2.5	1.6	3.1	4.8	1.6	174	2.3	1.4	0.87	1.3
4	1.6	3.3	2.4	1.6	1.7	4.3	1.6	3.4	2.3	1.4	6.9	1.3
5	1.6	2.4	2.4	1.6	1.7	2.2	2.1	2.3	2.4	1.3	22	1.3
6	1.5	2.3	2.2	1.9	1.9	1.6	1.6	2.1	2.4	1.4	23	1.3
7	1.6	2.6	1.7	2.1	1.8	1.4	1.7	1.9	2.2	1.5	24	1.3
8	1.5	205	1.6	1.8	1.6	1.3	1.7	2.0	2.3	1.8	24	7.3
9	1.6	265	5.3	3.3	1.6	1.4	1.8	2.0	2.6	1.7	26	26
10	1.6	7.0	7.3	2.0	1.8	1.4	1.7	1.9	2.3	1.8	26	25
11	2.7	4.2	2.2	1.4	89	1.5	1.7	2.0	2.3	1.9	27	25
12	3.2	3.6	2.6	1.5	374	1.5	1.7	2.1	2.5	1.7	28	24
13	4.4	3.4	2.2	1.8	197	1.6	1.7	2.0	2.4	1.7	30	24
14	2.5	2.5	2.0	3.1	4.1	1.5	197	2.1	2.3	1.8	30	24
15	2.3	2.0	1.8	2.8	2.0	780	21	2.4	2.2	1.8	29	24
16	2.2	1.9	341	1.8	3.7	311	1.8	2.2	2.3	2.4	30	23
17	1.9	2.3	31	1.6	2.9	9.3	1.9	2.3	2.3	1.8	32	23
18	1.8	1.9	2.5	1.5	2.1	2.5	1.7	2.2	2.6	1.9	32	23
19	1.8	2.0	2.2	1.6	3.2	2.1	1.6	2.3	2.2	1.9	15	23
20	3.4	2.0	148	2.2	3.1	2.0	1.6	2.3	2.0	1.8	3.8	26
21	3.6	2.1	5.1	3.2	1.7	1.9	1.7	2.4	2.3	1.9	1.6	27
22	2.7	2.1	2.4	2.1	1.7	1.9	1.7	2.4	2.2	1.9	1.3	25
23	2.3	2.0	1.8	1.9	1.6	1.9	1.7	2.3	2.1	1.8	1.3	25
24	1.6	2.0	2.1	1.5	2.4	1.9	1.8	2.3	1.9	1.7	1.2	24
25	4.1	2.1	2.0	1.5	132	2.1	1.8	2.2	2.0	1.7	1.2	24
26	3.2	2.0	2.5	1.4	64	1.6	1.8	2.2	2.5	1.7	1.3	24
27	2.8	2.2	1.6	3.0	29	1.7	1.7	2.4	1.5	1.7	1.4	24
28	2.2	2.5	2.3	1.9	2.9	1.6	1.8	2.4	1.5	1.9	1.4	24
29	2.0	19	9.6	1.6	---	1.6	1.8	2.7	1.4	3.3	1.3	24
30	2.1	3.9	2.1	1.7	---	1.6	1.8	2.3	1.7	1.0	1.3	27
31	1.9	---	1.5	1.6	---	1.7	---	2.3	---	1.0	1.2	---
TOTAL	70.8	558.8	604.8	59.5	935.2	1160.4	266.5	246.3	65.6	53.6	426.02	557.4
MEAN	2.28	18.6	19.5	1.92	33.4	37.4	8.88	7.95	2.19	1.73	13.7	18.6
MAX	4.4	265	341	3.3	374	780	197	174	2.6	3.3	32	27
MIN	1.5	1.8	1.5	1.4	1.6	1.3	1.5	1.9	1.4	1.0	0.87	1.3
AC-FT	140	1110	1200	118	1850	2300	529	489	130	106	845	1110

## SANTA ANA RIVER BASIN

## 11073360 CHINO CREEK AT SCHAEFER AVENUE, NEAR CHINO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	16.0	16.9	26.2	33.0	38.0	28.7	9.93	12.9	18.3	18.9	16.8	14.0
MAX	126	113	189	186	193	257	68.6	104	184	176	191	198
(WY)	1979	1976	1976	1976	1980	1978	1974	1997	1976	1974	1974	1997
MIN	0.061	0.23	0.53	0.55	0.33	0.30	0.14	0.22	0.062	0.069	0.14	0.13
(WY)	1978	1978	1970	1972	1972	1972	1977	1973	1977	1977	1976	1977

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL TOTAL	3487.2		5004.92			
ANNUAL MEAN	9.55		13.7		20.7	
HIGHEST ANNUAL MEAN					92.4	
LOWEST ANNUAL MEAN					3.24	
HIGHEST DAILY MEAN	341	Dec 16	780	Mar 15	2060	Mar 1 1978
LOWEST DAILY MEAN	1.2	Jul 21	0.87	Aug 3	0.00	May 21 1977
ANNUAL SEVEN-DAY MINIMUM	1.4	Jul 18	1.3	Aug 22	0.02	Oct 28 1977
MAXIMUM PEAK FLOW			4310	Mar 15	12700	Feb 27 1983
MAXIMUM PEAK STAGE			7.45	Mar 15	10.32	Feb 27 1983
ANNUAL RUNOFF (AC-FT)	6920		9930		15030	
10 PERCENT EXCEEDS	30		24		75	
50 PERCENT EXCEEDS	2.1		2.1		1.3	
90 PERCENT EXCEEDS	1.6		1.5		0.36	

## 11073493 WEST BRANCH CUCAMONGA CHANNEL ABOVE ELY PERCOLATION BASINS, AT ONTARIO, CA

LOCATION.—Lat 34° 02' 15", long 117° 37' 09", in SE 1/4 SW 1/4 sec.33, T.1 S., R.7 W., San Bernardino County, Hydrologic Unit 18070203, on right bank, 700 ft upstream from northwest corner of westernmost of Ely Percolation Basins, in Ontario.

DRAINAGE AREA.—6.01 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1996 to current year.

GAGE.—Water-stage recorder and concrete-lined flood-control channel. Elevation of gage is 850 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair. No regulation or diversion upstream from station. Flow at gage is primarily urban runoff. Irrigation return flow and various industrial releases represent most of the base flow at this site. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,750 ft<sup>3</sup>/s, Mar. 15, 2003, gage height, 4.60 ft, from rating curve extended above 415 ft<sup>3</sup>/s, on basis of step-backwater computations; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 300 ft<sup>3</sup>/s, or maximum, from rating curve extended as explained above:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 9	1715	991	3.61	Mar. 15	1645	1,750	4.60
Dec. 16	1645	958	3.56	Apr. 14	1430	347	2.44
Feb. 13	1815	437	2.64	May 3	1100	681	3.11

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.2	3.8	2.2	7.1	1.8	2.8	1.9	2.6	2.0	1.7	0.14
2	1.8	2.2	2.8	2.4	8.5	1.8	2.1	1.2	2.6	3.6	0.80	0.15
3	1.5	2.3	2.7	2.3	7.7	1.6	1.6	66	3.2	3.7	0.74	0.17
4	1.4	2.5	2.1	2.4	6.0	3.6	1.4	15	1.9	3.5	0.82	0.16
5	1.7	2.3	1.8	2.3	8.9	5.2	2.1	2.7	1.7	3.7	1.0	0.18
6	1.6	2.5	2.6	0.58	6.6	1.7	2.8	2.8	1.6	4.0	0.90	0.17
7	1.7	2.7	1.9	1.7	2.3	1.9	0.85	2.5	1.7	2.8	0.90	0.25
8	1.8	93	1.6	2.5	1.9	2.1	1.4	2.6	2.0	1.2	0.58	0.25
9	1.9	175	1.5	2.6	2.0	2.2	0.99	1.9	1.9	0.89	0.63	0.24
10	1.8	2.5	0.22	2.6	2.4	2.1	1.9	2.1	1.3	0.68	0.65	0.19
11	1.8	1.9	0.65	2.4	33	2.3	2.5	2.2	1.8	0.93	0.65	0.12
12	1.7	1.6	1.9	2.5	117	2.1	2.4	1.6	1.8	1.0	0.62	0.18
13	1.5	1.6	2.8	2.5	83	2.5	3.4	0.73	1.7	0.89	0.57	0.18
14	1.4	2.9	0.62	3.2	6.5	2.3	110	1.4	1.8	1.7	0.61	0.17
15	2.2	1.6	0.13	2.6	1.7	275	23	1.6	1.9	2.4	0.59	0.26
16	2.6	2.2	111	2.5	1.3	89	3.6	0.32	2.2	1.7	0.58	0.22
17	5.1	1.7	11	5.5	1.3	8.5	5.0	0.33	2.3	0.95	0.54	0.52
18	4.5	2.2	1.7	4.5	1.6	1.1	5.1	0.27	2.5	0.89	0.48	0.17
19	3.6	2.3	1.0	3.2	1.4	2.3	1.8	4.8	2.4	0.94	0.47	0.16
20	2.7	7.9	47	3.3	1.4	2.1	2.0	0.40	2.4	0.85	0.42	0.13
21	5.9	5.9	1.0	3.8	1.4	2.4	2.4	1.8	2.0	0.92	0.37	0.35
22	4.0	7.6	0.15	3.2	1.7	2.9	2.0	5.9	2.4	1.1	0.21	0.18
23	4.4	6.1	0.78	3.3	1.9	2.4	1.9	6.3	1.9	0.92	0.16	0.18
24	4.1	5.7	1.2	3.0	2.0	1.3	1.9	5.4	2.1	1.0	0.17	0.14
25	2.7	9.1	1.8	3.0	62	2.0	2.0	7.5	2.3	0.96	0.19	0.14
26	3.2	11	2.0	3.4	25	1.3	2.1	7.9	1.9	0.96	0.22	0.13
27	2.7	13	2.2	3.4	14	1.4	2.1	8.3	1.0	0.96	0.10	0.16
28	4.6	6.7	2.4	3.3	2.7	1.1	2.1	6.4	0.67	1.8	0.09	0.15
29	6.4	9.5	4.8	1.8	---	1.4	2.5	3.1	0.37	2.8	0.20	0.13
30	5.3	5.2	2.4	2.3	---	2.4	2.2	3.0	0.39	2.5	0.12	0.17
31	3.1	---	2.5	4.7	---	2.3	---	2.7	---	0.75	0.15	---
TOTAL	90.5	392.9	220.05	88.98	412.3	432.1	197.94	170.65	56.33	52.99	16.23	5.74
MEAN	2.92	13.1	7.10	2.87	14.7	13.9	6.60	5.50	1.88	1.71	0.52	0.19
MAX	6.4	175	111	5.5	117	275	110	66	3.2	4.0	1.7	0.52
MIN	1.4	1.6	0.13	0.58	1.3	1.1	0.85	0.27	0.37	0.68	0.09	0.12
AC-FT	180	779	436	176	818	857	393	338	112	105	32	11

## 11073493 WEST BRANCH CUCAMONGA CHANNEL ABOVE ELY PERCOLATION BASINS, AT ONTARIO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.92	5.04	4.14	7.15	13.3	5.32	4.31	3.12	1.14	1.08	0.88	1.15
MAX	3.02	13.1	10.0	20.3	38.6	13.9	6.60	8.92	2.71	2.45	2.21	2.19
(WY)	1997	2003	1997	1997	1998	2003	2003	1998	1998	1998	2002	1997
MIN	1.00	0.093	0.61	1.94	1.59	1.33	1.56	0.62	0.22	0.16	0.11	0.16
(WY)	1999	2000	2000	2000	1997	1997	1997	1997	2001	1997	2000	2000

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1997 - 2003	
ANNUAL TOTAL	1244.85		2136.71			
ANNUAL MEAN	3.41		5.85		3.99	
HIGHEST ANNUAL MEAN					7.57 1998	
LOWEST ANNUAL MEAN					1.94 1999	
HIGHEST DAILY MEAN	175	Nov 9	275	Mar 15	275	Mar 15 2003
LOWEST DAILY MEAN	0.00	Jan 1	0.09	Aug 28	0.00	Jun 11 1997
ANNUAL SEVEN-DAY MINIMUM	0.18	May 30	0.14	Aug 27	0.01	Jul 15 1997
MAXIMUM PEAK FLOW			1750	Mar 15	1750	Mar 15 2003
MAXIMUM PEAK STAGE			4.60	Mar 15	4.60	Mar 15 2003
ANNUAL RUNOFF (AC-FT)	2470		4240		2890	
10 PERCENT EXCEEDS	3.7		6.3		4.1	
50 PERCENT EXCEEDS	1.8		2.0		1.7	
90 PERCENT EXCEEDS	0.27		0.22		0.10	







## 11073495 CUCAMONGA CREEK NEAR MIRA LOMA, CA

LOCATION.—Lat 33° 58' 58", long 117° 35' 55", in SW 1/4 NE 1/4 sec.22, T.2 S., R.7 W., [San Bernardino County](#), Hydrologic Unit 18070203, on right bank, 300 ft upstream from Merrill Avenue Bridge, and 4.6 mi west of Mira Loma.

DRAINAGE AREA.—75.8 mi<sup>2</sup>.

PERIOD OF RECORD.—January 1968 to July 1977, January 1979 to current year.

CHEMICAL DATA: Water years 1999–2000.

SPECIFIC CONDUCTANCE: Water years 1999–2000.

WATER TEMPERATURE: Water years 1999–2000.

SEDIMENT DATA: Water years 1999–2000.

GAGE.—Water-stage recorder, crest-stage gage, and concrete-lined flood-control channel. Elevation of gage is 660 ft above NGVD of 1929, from topographic map. Prior to July 1977 at site 100 ft downstream at different datum.

REMARKS.—Records fair above 200 ft<sup>3</sup>/s and poor below. Channel is a trapezoidal concrete floodway; records for low and medium flows prior to July 31, 1977, are not equivalent (channel concrete lined since July 31, 1977). Inland Empire Utilities Agency Tertiary Plant No. 1 began discharging effluent 3.3 mi upstream from station on May 8, 1985. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 16,100 ft<sup>3</sup>/s, Feb. 27, 1983, gage height, 7.85 ft, from floodmark, on basis of slope-conveyance study of peak flow; prior to operation of Plant No. 1, no flow for most of some years; minimum daily since 1985, 2.5 ft<sup>3</sup>/s, June 6, 1987.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	52	48	59	64	57	44	59	57	51	47	43
2	41	56	49	57	56	59	50	60	55	49	50	50
3	41	59	53	53	51	55	49	447	57	51	49	44
4	41	59	46	54	50	114	60	126	61	58	50	40
5	49	51	47	54	42	68	68	64	56	56	46	41
6	51	51	43	50	41	76	72	56	54	60	45	39
7	48	46	45	45	36	76	63	58	51	57	42	44
8	47	587	46	44	40	85	55	56	55	54	42	46
9	52	857	58	47	44	85	67	53	55	51	44	51
10	50	88	48	46	40	72	67	56	55	49	44	46
11	45	63	50	48	346	71	51	58	49	49	45	47
12	48	59	50	52	903	60	54	53	59	49	45	45
13	48	52	56	49	657	59	76	48	60	55	43	47
14	57	50	59	47	86	55	1040	47	55	44	42	47
15	58	52	61	55	60	e1690	196	48	49	44	44	52
16	52	69	749	51	51	800	57	48	47	45	42	45
17	50	65	106	48	49	153	68	52	42	44	42	46
18	48	61	59	55	49	62	59	64	45	47	45	47
19	47	51	61	59	47	56	61	56	51	50	46	47
20	52	54	369	48	41	59	57	52	41	50	41	47
21	56	70	49	49	43	62	52	51	47	54	44	49
22	58	53	49	55	47	68	57	57	49	53	42	50
23	50	49	53	50	56	72	62	58	49	54	42	49
24	49	55	57	46	73	71	72	60	46	58	44	49
25	49	52	51	47	747	69	74	54	44	56	45	47
26	56	45	53	56	219	62	69	54	42	56	43	51
27	55	52	59	54	115	59	57	51	43	55	48	47
28	55	64	62	58	64	57	48	49	45	54	46	50
29	52	59	74	54	---	57	46	51	46	55	46	51
30	52	67	54	59	---	51	51	51	47	54	47	50
31	59	---	58	53	---	44	---	54	---	50	45	---
TOTAL	1558	3048	2722	1602	4117	4484	2902	2151	1512	1612	1386	1407
MEAN	50.3	102	87.8	51.7	147	145	96.7	69.4	50.4	52.0	44.7	46.9
MAX	59	857	749	59	903	1690	1040	447	61	60	50	52
MIN	41	45	43	44	36	44	44	47	41	44	41	39
AC-FT	3090	6050	5400	3180	8170	8890	5760	4270	3000	3200	2750	2790

e Estimated.

## SANTA ANA RIVER BASIN

## 11073495 CUCAMONGA CREEK NEAR MIRA LOMA, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1977, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.021	1.15	1.55	18.2	4.65	1.91	1.35	.065	.001	.000	.000	.11
MAX	.19	6.07	7.91	149	30.7	7.94	13.1	.54	.007	.000	.000	1.03
(WY)	1972	1971	1972	1969	1969	1969	1969	1977	1969	1968	1968	1976
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1969	1969	1970	1975	1972	1972	1968	1968	1968	1968	1968	1968

## SUMMARY STATISTICS

## WATER YEARS 1968 - 1977

ANNUAL TOTAL	
ANNUAL MEAN	2.73
HIGHEST ANNUAL MEAN	16.8 1969
LOWEST ANNUAL MEAN	.16 1976
HIGHEST DAILY MEAN	2600 Jan 25 1969
LOWEST DAILY MEAN	.00 Feb 1 1968
ANNUAL SEVEN-DAY MINIMUM	.00 Feb 1 1968
MAXIMUM PEAK FLOW	9100 Jan 25 1969
MAXIMUM PEAK STAGE	7.08 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	1980
10 PERCENT EXCEEDS	.10
50 PERCENT EXCEEDS	.00
90 PERCENT EXCEEDS	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1984, BY WATER YEAR (WY)

MEAN	3.49	11.3	7.69	34.1	65.0	46.3	12.1	3.43	.48	.37	1.47	1.08
MAX	11.1	27.9	24.7	149	216	205	63.4	19.8	2.30	1.22	6.99	3.45
(WY)	1984	1983	1984	1983	1980	1983	1983	1983	1983	1983	1983	1983
MIN	.091	.002	.006	1.67	1.29	2.44	.056	.063	.008	.019	.009	.011
(WY)	1981	1980	1980	1984	1984	1984	1981	1979	1979	1981	1979	1979

## SUMMARY STATISTICS

## WATER YEARS 1979 - 1984

ANNUAL TOTAL	
ANNUAL MEAN	17.5
HIGHEST ANNUAL MEAN	53.4 1983
LOWEST ANNUAL MEAN	1.51 1981
HIGHEST DAILY MEAN	2530 Mar 1 1983
LOWEST DAILY MEAN	.00 Feb 6 1979
ANNUAL SEVEN-DAY MINIMUM	.00 Feb 6 1979
MAXIMUM PEAK FLOW	16100 Feb 27 1983
MAXIMUM PEAK STAGE	7.85 Feb 27 1983
ANNUAL RUNOFF (AC-FT)	12700
10 PERCENT EXCEEDS	10
50 PERCENT EXCEEDS	.13
90 PERCENT EXCEEDS	.01

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2003, BY WATER YEAR (WY)

MEAN	36.6	42.6	46.4	75.8	96.4	66.8	43.9	35.3	34.4	32.9	32.9	36.9
MAX	52.9	102	87.8	265	304	198	96.7	69.4	57.1	52.0	51.8	52.0
(WY)	1988	2003	2003	1993	1998	1995	2003	2003	1992	2003	1992	1986
MIN	20.4	23.4	21.0	26.1	34.9	25.3	20.5	18.5	18.1	19.3	18.5	16.4
(WY)	1987	1989	1987	1989	1989	1988	1987	1988	1988	1987	1987	1988

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1986 - 2003

ANNUAL TOTAL	20065	28501	
ANNUAL MEAN	55.0	78.1	48.1
HIGHEST ANNUAL MEAN			78.1 2003
LOWEST ANNUAL MEAN			26.6 1987
HIGHEST DAILY MEAN	857 Nov 9	1690 Mar 15	2490 Feb 20 1996
LOWEST DAILY MEAN	34 Jan 23	36 Feb 7	2.5 Jun 6 1987
ANNUAL SEVEN-DAY MINIMUM	37 Jul 17	42 Feb 4	12 Aug 25 1988
MAXIMUM PEAK FLOW		6720 Mar 16	10400 Jan 7 1993
MAXIMUM PEAK STAGE		4.62 Mar 16	5.40 Jan 7 1993
ANNUAL RUNOFF (AC-FT)	39800	56530	34880
10 PERCENT EXCEEDS	58	69	57
50 PERCENT EXCEEDS	46	52	34
90 PERCENT EXCEEDS	39	44	20

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA

LOCATION.—Lat 33° 53' 00", long 117° 38' 40", in La Sierra Grant, [Riverside County](#), Hydrologic Unit 18070203, on left bank of outlet channel, 2,500 ft downstream from axis of Prado Dam, and 4.5 mi west of Corona.

DRAINAGE AREA.—1,490 mi<sup>2</sup>, excludes 768 mi<sup>2</sup> above Lake Elsinore.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—May 1930 to November 1939 (irrigation seasons only), March 1940 to current year. Published as "at Santa Fe Railroad Bridge, near Prado" May 1930 to November 1931, as "at Atchison, Topeka, and Santa Fe Railroad Bridge, near Prado" May 1932 to November 1939, and as "below Prado Dam, near Prado" March 1940 to September 1950.

GAGE.—Water-stage recorder and concrete control since August 1944. Datum of gage is approximately 449 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers). Prior to Mar. 18, 1940, at about same site at various datums.

REMARKS.—Records excellent below 550 ft<sup>3</sup>/s and fair above, except for estimated daily discharges, which are poor. Flow regulated since 1940 by Prado Flood-Control Reservoir, capacity, 196,200 acre-ft. Natural streamflow affected by extensive ground-water withdrawals, diversion for irrigation, discharges of treated effluent, and return flow from irrigated areas. Releases of imported water are made to the basin by the California Water Project at times in some years, via San Antonio Creek from Rialto Pipeline below San Antonio Dam. During the current year, the California Water Project released 1,770 acre-ft to the basin. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,440 ft<sup>3</sup>/s, Feb. 21, 1980, gage height, 6.88 ft; maximum gage height, 7.29 ft, Jan. 19, 1993; minimum daily, 2.4 ft<sup>3</sup>/s, July 29 to Aug. 3, Sept. 20, 1978 (result of gate closure).

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 2, 1938, reached a discharge of 100,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow at site 2.5 mi downstream.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	192	228	261	255	248	503	503	506	309	213	205	194
2	189	225	288	257	257	475	486	509	325	213	201	203
3	167	222	299	276	250	474	482	494	346	208	200	190
4	163	235	297	267	269	372	478	476	343	207	205	184
5	169	209	295	270	246	471	475	487	338	201	217	182
6	173	206	294	257	250	520	474	513	336	200	218	178
7	160	206	293	257	251	514	472	513	334	205	208	182
8	149	210	290	259	244	508	499	511	331	210	198	188
9	139	234	270	296	249	503	509	509	329	212	198	202
10	141	250	256	308	247	498	502	506	323	214	200	209
11	143	254	254	306	256	494	497	501	318	215	200	210
12	145	426	254	304	293	488	492	501	326	209	196	215
13	147	472	251	355	3850	431	488	499	325	210	202	213
14	148	318	250	374	2530	308	489	495	322	209	199	221
15	149	189	248	369	536	287	506	345	317	205	210	222
16	207	190	217	385	526	2820	484	e262	333	210	199	213
17	227	190	1790	392	526	1270	479	e92	335	208	208	216
18	226	205	864	388	409	670	489	e90	335	215	208	215
19	224	234	732	383	356	600	488	e158	339	221	206	215
20	224	267	1710	381	356	567	485	281	326	217	189	219
21	223	283	806	395	357	532	485	308	317	215	195	226
22	222	282	439	396	350	512	483	435	310	207	188	222
23	222	280	279	392	350	512	482	337	317	207	182	213
24	222	278	266	386	348	511	480	287	297	210	181	211
25	199	271	265	380	1170	508	479	283	251	206	181	215
26	195	287	262	374	3190	507	478	280	223	203	177	223
27	196	274	257	381	984	507	480	279	216	196	182	222
28	222	261	257	376	532	497	486	282	218	197	182	230
29	236	263	258	363	---	494	499	294	215	215	185	226
30	232	262	257	354	---	492	502	310	216	214	193	217
31	232	---	256	292	---	510	---	310	---	217	192	---
TOTAL	5883	7711	13015	10428	19430	18355	14631	11653	9170	6489	6105	6276
MEAN	190	257	420	336	694	592	488	376	306	209	197	209
MAX	236	472	1790	396	3850	2820	509	513	346	221	218	230
MIN	139	189	217	255	244	287	472	90	215	196	177	178
AC-FT	11670	15290	25820	20680	38540	36410	29020	23110	18190	12870	12110	12450

e Estimated.

## SANTA ANA RIVER BASIN

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	112	141	208	319	414	395	251	182	149	123	101	96.4
MAX	344	322	709	3543	2733	2556	1101	915	736	446	352	372
(WY)	1984	1997	1967	1993	1998	1980	1980	1998	1983	1998	1983	1997
MIN	22.4	33.5	39.5	49.2	49.8	54.3	43.3	35.2	29.0	17.7	14.8	16.2
(WY)	1962	1963	1963	1963	1961	1961	1961	1961	1961	1960	1960	1960

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1941 - 2003	
ANNUAL TOTAL	91392		129146			
ANNUAL MEAN	250		354		206	
HIGHEST ANNUAL MEAN					789	
LOWEST ANNUAL MEAN					36.4	
HIGHEST DAILY MEAN	1790	Dec 17	3850	Feb 13	6440	Feb 23 1980
LOWEST DAILY MEAN	139	Oct 9	90	May 18	2.4	Jul 29 1978
ANNUAL SEVEN-DAY MINIMUM	145	Oct 8	145	Oct 8	3.0	Sep 24 1973
MAXIMUM PEAK FLOW			6120	Mar 16	7440	Feb 21 1980
MAXIMUM PEAK STAGE			7.06	Mar 16	7.29	Jan 19 1993
ANNUAL RUNOFF (AC-FT)	181300		256200		149600	
10 PERCENT EXCEEDS	300		506		357	
50 PERCENT EXCEEDS	233		266		127	
90 PERCENT EXCEEDS	177		192		39	

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1967 to current year.

CHEMICAL DATA: Water years 1967 to current year.

SPECIFIC CONDUCTANCE: Water years 1970 to current year.

WATER TEMPERATURE: Water years 1970 to current year.

BIOLOGICAL DATA: Water years 1975–81.

CHLORIDE: October 1970 to September 1971.

SEDIMENT DATA: Water years 1974–94, 1999 to current year.

PERIOD OF DAILY RECORD.—Water years 1970 to current year.

SPECIFIC CONDUCTANCE: October 1969 to current year.

WATER TEMPERATURE: October 1969 to current year.

CHLORIDE: October 1970 to September 1971.

SUSPENDED-SEDIMENT DISCHARGE: October 1973 to June 1982.

INSTRUMENTATION.—Water-quality monitor recording specific conductance and water temperature since October 1969.

REMARKS.—Specific conductance records rated fair, except for Oct. 3–12, Dec. 19 to Jan. 5, Apr. 4 to June 5, Aug. 7 to Sept. 10, and Sept. 18–30, which are rated good, and Oct. 25–30, Nov. 8–15, Dec. 15–19, Mar. 13–20, June 6–19, and July 31 to Aug. 6, which are rated poor. Temperature records rated fair, except for Dec. 2 to Feb. 24 and Apr. 23 to June 11, which are rated good. Specific conductance and water temperature values are affected by releases from Prado Dam. Interruptions in record at times due to malfunction of recording or sensing equipment. Sediment data and a portion of chemical data collected for the National Water-Quality Assessment (NAWQA) Program.

EXTREMES FOR PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: Maximum recorded, 1,830 microsiemens, Apr. 30, 1971; minimum recorded, 220 microsiemens, Feb. 20, 1978.

WATER TEMPERATURE: Maximum recorded, 36.0° C, Sept. 4, 1972, Sept. 8, 1984; minimum recorded, 2.5° C, Dec. 30, 1969.

SEDIMENT CONCENTRATION: Maximum daily mean, 2,870 mg/L, Mar. 5, 1978; minimum daily mean, 3 mg/L, Apr. 2, 1980, and several days during 1982.

SEDIMENT LOAD: Maximum daily, 18,900 tons, Mar. 5, 1978; minimum daily, 0.58 ton, Sept. 20, 1978.

EXTREMES FOR CURRENT YEAR.—

SPECIFIC CONDUCTANCE: Maximum recorded, 1,080 microsiemens, Jan. 29, 30; minimum recorded, 280 microsiemens, Mar. 16.

WATER TEMPERATURE: Maximum recorded, 30.0° C, July 29; minimum recorded, 11.5° C, Feb. 6.

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf 25 degC uS/cm (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)
OCT									
02...	1215	180	--	--	--	--	968	19.5	19.0
17...	1000	226	747	7.5	82	8.0	961	17.5	18.5
17...	1200	224	--	--	--	--	974	18.5	19.0
NOV									
01...	1200	226	--	--	--	--	948	--	18.0
15...	1245	187	--	--	--	--	654	26.0	17.0
DEC									
06...	1200	289	--	--	--	--	887	14.5	15.0
11...	1530	248	750	8.7	85	7.8	924	21.5	13.5
19...	1100	379	--	--	--	--	615	11.0	14.0
JAN									
03...	1145	277	--	--	--	--	792	18.0	13.0
15...	1600	366	752	9.1	91	8.2	1010	26.0	14.5
17...	1245	390	--	--	--	--	912	25.5	14.5
31...	1200	283	--	--	--	--	1040	30.0	17.0
FEB									
13...	1500	5730	745	10.0	98	8.0	363	17.0	13.5
19...	1230	356	--	--	--	--	614	15.5	16.0
MAR									
07...	1140	508	--	--	--	--	685	19.0	15.0
12...	1430	485	746	9.4	99	8.2	855	24.5	16.5
21...	1240	508	--	--	--	--	492	22.0	15.5
APR									
03...	1350	481	--	--	--	--	632	17.0	16.5
16...	1400	471	--	--	--	--	354	20.5	16.0
16...	1600	466	748	9.1	92	7.8	375	20.0	15.0
MAY									
02...	1000	512	--	--	--	--	764	19.0	19.0
16...	1000	280	--	--	--	--	834	20.5	19.5
JUN									
06...	1000	336	--	--	--	--	967	19.0	22.0
11...	1600	317	748	8.0	92	8.0	1020	26.0	21.0
19...	1050	339	--	--	--	--	998	20.0	23.0
JUL									
03...	1130	208	--	--	--	--	1000	28.0	24.0
18...	1015	218	--	--	--	--	964	22.5	24.0
AUG									
01...	1000	200	--	--	--	--	950	26.0	24.0
13...	1700	202	746	7.9	102	8.4	890	35.5	27.0
15...	1000	205	--	--	--	--	900	27.0	24.0
SEP									
05...	1030	185	--	--	--	--	942	32.0	24.5
19...	0920	216	--	--	--	--	873	27.0	22.0



## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

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

Date	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Carbon- ate, wat flt incrm. titr., field, mg/L (00452)	Chlor- ide, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT									
02...	--	--	--	--	--	591	--	--	--
17...	203	247	--	112	100	--	.92	<.04	4.35
17...	--	--	--	--	--	609	--	--	--
NOV									
01...	--	--	--	--	--	586	--	--	--
15...	--	--	--	--	--	427	--	--	--
DEC									
06...	--	--	--	--	--	555	--	--	--
11...	213	260	--	104	94.6	--	1.1	.34	2.87
19...	--	--	--	--	--	386	--	--	--
JAN									
03...	--	--	--	--	--	490	--	--	--
15...	220	269	--	112	115	--	.77	.05	5.44
17...	--	--	--	--	--	564	--	--	--
31...	--	--	--	--	--	657	--	--	--
FEB									
13...	82	100	--	28.9	35.9	--	2.0	.19	2.35
19...	--	--	--	--	--	389	--	--	--
MAR									
07...	--	--	--	--	--	429	--	--	--
12...	183	224	--	96.7	85.7	--	.96	<.04	4.93
21...	--	--	--	--	--	301	--	--	--
APR									
03...	--	--	--	--	--	381	--	--	--
16...	--	--	--	--	--	218	--	--	--
16...	96	117	--	29.4	33.6	--	1.2	<.04	1.51
MAY									
02...	--	--	--	--	--	467	--	--	--
16...	--	--	--	--	--	514	--	--	--
JUN									
06...	--	--	--	--	--	616	--	--	--
11...	235	286	--	113	99.8	--	1.0	e.03	3.15
19...	--	--	--	--	--	639	--	--	--
JUL									
03...	--	--	--	--	--	619	--	--	--
18...	--	--	--	--	--	605	--	--	--
AUG									
01...	--	--	--	--	--	604	--	--	--
13...	185	225	N	101	88.8	--	1.4	<.04	4.07
15...	--	--	--	--	--	559	--	--	--
SEP									
05...	--	--	--	--	--	596	--	--	--
19...	--	--	--	--	--	547	--	--	--

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

e Estimated.

N Presumptive evidence of presence of material.

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

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

Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00665)	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									
02...	--	--	--	--	--	--	--	--	--
17...	.158	1.08	1.14	<.006	<.006	<.006	<.004	<.005	.008
17...	--	--	--	--	--	--	--	--	--
NOV									
01...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
DEC									
06...	--	--	--	--	--	--	--	--	--
11...	.113	.95	1.02	<.006	e.006	<.006	<.004	<.005	.007
19...	--	--	--	--	--	--	--	--	--
JAN									
03...	--	--	--	--	--	--	--	--	--
15...	.079	.75	.75	<.006	e.006	<.006	<.004	<.005	e.007
17...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
FEB									
13...	.068	.26	1.17	<.006	<.006	.010	<.030	<.005	<.007
19...	--	--	--	--	--	--	--	--	--
MAR									
07...	--	--	--	--	--	--	--	--	--
12...	.071	.56	.66	<.006	<.006	<.006	<.004	<.005	<.007
21...	--	--	--	--	--	--	--	--	--
APR									
03...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	.084	.30	.81	<.006	<.006	<.006	<.004	<.005	<.007
MAY									
02...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
JUN									
06...	--	--	--	--	--	--	--	--	--
11...	.077	.72	.93	<.006	e.005	<.006	<.004	<.005	e.005
19...	--	--	--	--	--	--	--	--	--
JUL									
03...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
AUG									
01...	--	--	--	--	--	--	--	--	--
13...	.043	.55	.82	<.006	<.006	<.006	<.004	<.005	e.006
15...	--	--	--	--	--	--	--	--	--
SEP									
05...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--

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

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

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

Date	Azin- phos- methyl, water, fltrd 0.7u GF (82686) ug/L	Ben- flur- alin, water, fltrd 0.7u GF (82673) ug/L	Butyl- ate, water, fltrd, ug/L (04028)	Car- baryl, water, fltrd 0.7u GF (82680) ug/L	Carbo- furan, water, fltrd 0.7u GF (82674) ug/L	Chlor- pyrifos water, fltrd, ug/L (38933)	cis- Per- methrin water fltrd 0.7u GF (82687) ug/L	Cyana- zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF (82682) ug/L
OCT									
02...	--	--	--	--	--	--	--	--	--
17...	<.050	<.010	<.002	e.005	<.020	<.005	<.006	<.018	<.003
17...	--	--	--	--	--	--	--	--	--
NOV									
01...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
DEC									
06...	--	--	--	--	--	--	--	--	--
11...	<.050	<.010	<.002	e.007	<.020	<.005	<.006	<.018	<.003
19...	--	--	--	--	--	--	--	--	--
JAN									
03...	--	--	--	--	--	--	--	--	--
15...	<.050	<.010	<.002	e.015	<.020	<.005	<.006	<.018	.004
17...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
FEB									
13...	<.050	<.010	<.002	e.036	<.020	<.005	<.006	<.018	<.003
19...	--	--	--	--	--	--	--	--	--
MAR									
07...	--	--	--	--	--	--	--	--	--
12...	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
21...	--	--	--	--	--	--	--	--	--
APR									
03...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	<.050	<.010	<.002	e.084	<.020	<.005	<.006	<.018	.068
MAY									
02...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
JUN									
06...	--	--	--	--	--	--	--	--	--
11...	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	<.003
19...	--	--	--	--	--	--	--	--	--
JUL									
03...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
AUG									
01...	--	--	--	--	--	--	--	--	--
13...	<.050	<.010	<.002	<.041	<.020	<.005	<.006	<.018	e.002
15...	--	--	--	--	--	--	--	--	--
SEP									
05...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--

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

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

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

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									
02...	--	--	--	--	--	--	--	--	--
17...	<.004	.019	<.005	<.02	<.002	<.009	<.005	<.009	<.005
17...	--	--	--	--	--	--	--	--	--
NOV									
01...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
DEC									
06...	--	--	--	--	--	--	--	--	--
11...	<.004	.019	<.005	<.02	<.002	<.009	<.005	<.009	<.005
19...	--	--	--	--	--	--	--	--	--
JAN									
03...	--	--	--	--	--	--	--	--	--
15...	<.004	<.020	<.005	<.02	<.002	<.009	<.005	<.009	<.005
17...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
FEB									
13...	<.004	.088	<.005	<.02	<.002	<.009	<.005	<.009	<.005
19...	--	--	--	--	--	--	--	--	--
MAR									
07...	--	--	--	--	--	--	--	--	--
12...	<.004	.037	<.005	<.02	<.002	<.009	<.005	<.009	<.005
21...	--	--	--	--	--	--	--	--	--
APR									
03...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	<.004	.109	<.005	<.02	<.002	<.009	<.005	<.009	<.005
MAY									
02...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
JUN									
06...	--	--	--	--	--	--	--	--	--
11...	<.004	.015	<.005	<.02	<.002	<.009	<.005	<.009	<.005
19...	--	--	--	--	--	--	--	--	--
JUL									
03...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
AUG									
01...	--	--	--	--	--	--	--	--	--
13...	<.004	.014	<.005	<.02	<.002	<.009	<.005	<.009	<.005
15...	--	--	--	--	--	--	--	--	--
SEP									
05...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--

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

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

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

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									
02...	--	--	--	--	--	--	--	--	--
17...	<.005	<.007	<.003	<.004	<.035	<.027	<.006	<.013	<.006
17...	--	--	--	--	--	--	--	--	--
NOV									
01...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
DEC									
06...	--	--	--	--	--	--	--	--	--
11...	<.005	<.007	<.003	<.004	<.035	<.027	<.006	e.007	<.006
19...	--	--	--	--	--	--	--	--	--
JAN									
03...	--	--	--	--	--	--	--	--	--
15...	<.005	<.007	<.003	<.004	<.035	<.027	<.006	<.013	<.006
17...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
FEB									
13...	<.005	<.007	<.003	<.004	<.035	.060	<.006	<.013	<.006
19...	--	--	--	--	--	--	--	--	--
MAR									
07...	--	--	--	--	--	--	--	--	--
12...	<.005	<.007	<.003	<.004	<.035	<.027	<.006	<.013	<.006
21...	--	--	--	--	--	--	--	--	--
APR									
03...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	<.005	e.004	<.003	<.004	<.035	.051	<.006	e.008	<.006
MAY									
02...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
JUN									
06...	--	--	--	--	--	--	--	--	--
11...	<.005	<.007	<.003	<.004	<.035	<.027	<.006	<.013	<.006
19...	--	--	--	--	--	--	--	--	--
JUL									
03...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
AUG									
01...	--	--	--	--	--	--	--	--	--
13...	<.005	<.007	<.003	<.004	<.035	<.027	<.006	e.003	<.006
15...	--	--	--	--	--	--	--	--	--
SEP									
05...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--

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

## SANTA ANA RIVER BASIN

11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

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

Date	Molin- ate, 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)	Pron- amide, water, fltrd 0.7u GF (82676)
OCT									
02...	--	--	--	--	--	--	--	--	--
17...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	.02	<.004
17...	--	--	--	--	--	--	--	--	--
NOV									
01...	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--
DEC									
06...	--	--	--	--	--	--	--	--	--
11...	<.010	<.007	<.003	<.010	<.004	<.022	<.011	e.01	<.004
19...	--	--	--	--	--	--	--	--	--
JAN									
03...	--	--	--	--	--	--	--	--	--
15...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	e.01	<.004
17...	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--
FEB									
13...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	.04	<.004
19...	--	--	--	--	--	--	--	--	--
MAR									
07...	--	--	--	--	--	--	--	--	--
12...	<.010	<.007	<.003	<.010	<.004	<.022	<.011	.02	<.004
21...	--	--	--	--	--	--	--	--	--
APR									
03...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
16...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	.05	<.004
MAY									
02...	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--
JUN									
06...	--	--	--	--	--	--	--	--	--
11...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	.02	<.004
19...	--	--	--	--	--	--	--	--	--
JUL									
03...	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--
AUG									
01...	--	--	--	--	--	--	--	--	--
13...	<.002	<.007	<.003	<.010	<.004	<.022	<.011	e.01	<.004
15...	--	--	--	--	--	--	--	--	--
SEP									
05...	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--

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

e Estimated.

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

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

Date	Propa- chlor, water, fltrd, ug/L (04024)	Pro- panil, water, fltrd 0.7u GF (82679)	Propar- gite, water, fltrd 0.7u GF (82685)	Sima- zine, water, fltrd, ug/L (04035)	Tebu- thiuron water fltrd 0.7u GF (82670)	Terba- cil, water, fltrd 0.7u GF (82665)	Terbu- fos, water, fltrd 0.7u GF (82675)	Thio- bencarb water fltrd 0.7u GF (82681)	Tri- allate, water, fltrd 0.7u GF (82678)	Tri- flur- alin, water, fltrd 0.7u GF (82661)
OCT										
02...	--	--	--	--	--	--	--	--	--	--
17...	<.010	<.011	<.02	.039	<.02	<.034	<.02	<.005	<.002	<.009
17...	--	--	--	--	--	--	--	--	--	--
NOV										
01...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
DEC										
06...	--	--	--	--	--	--	--	--	--	--
11...	<.010	<.011	<.02	.196	<.02	<.034	<.02	<.005	<.002	<.009
19...	--	--	--	--	--	--	--	--	--	--
JAN										
03...	--	--	--	--	--	--	--	--	--	--
15...	<.010	<.011	<.02	.128	<.02	<.034	<.02	<.005	<.002	<.009
17...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
FEB										
13...	<.010	<.011	<.02	.362	<.02	<.034	<.02	<.005	<.002	<.009
19...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	--	--	--	--	--	--	--	--	--	--
12...	<.010	<.011	<.02	.053	<.02	<.034	<.02	<.005	<.002	<.009
21...	--	--	--	--	--	--	--	--	--	--
APR										
03...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
16...	<.010	<.011	<.02	.396	<.02	<.034	<.02	<.005	<.002	<.009
MAY										
02...	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--
JUN										
06...	--	--	--	--	--	--	--	--	--	--
11...	<.010	<.011	<.02	.028	<.02	<.034	<.02	<.005	<.002	<.009
19...	--	--	--	--	--	--	--	--	--	--
JUL										
03...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
AUG										
01...	--	--	--	--	--	--	--	--	--	--
13...	<.010	<.011	<.02	.024	<.02	<.034	<.02	<.005	<.002	<.009
15...	--	--	--	--	--	--	--	--	--	--
SEP										
05...	--	--	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--	--	--

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

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CENTIMETER AT 25 DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	971	935	972	925	816	728	857	702	1030	946	572	539
2	981	922	944	894	816	765	909	805	1000	941	659	556
3	962	917	916	893	879	816	866	780	989	965	687	589
4	917	888	900	795	864	845	820	754	1010	963	769	652
5	888	866	946	811	889	856	861	776	1020	976	812	705
6	878	839	1010	923	933	882	936	779	987	968	742	666
7	903	850	994	931	895	878	843	766	980	964	708	665
8	950	903	964	689	897	874	782	760	977	926	702	665
9	959	925	763	545	913	876	825	763	927	879	730	686
10	941	902	569	491	933	885	825	763	886	846	793	726
11	964	867	522	486	951	912	857	802	860	327	852	778
12	959	919	521	482	960	924	880	829	458	432	890	827
13	952	913	578	513	974	926	936	864	456	299	929	866
14	962	920	639	559	996	943	918	875	325	292	949	903
15	1020	923	744	637	1010	970	991	894	355	307	950	485
16	965	931	704	653	999	907	961	895	455	350	496	280
17	993	916	707	679	983	678	946	895	498	431	364	308
18	983	948	689	649	802	594	952	919	612	464	381	348
19	964	935	679	646	696	594	968	933	680	554	443	381
20	967	925	648	567	636	524	979	953	729	585	473	434
21	971	932	680	617	525	437	983	963	788	672	497	460
22	999	942	672	644	603	478	980	914	737	640	537	484
23	966	891	682	624	625	557	980	932	682	640	550	513
24	891	855	725	634	733	606	997	930	728	636	554	512
25	892	846	674	577	793	726	1030	980	768	369	561	525
26	901	882	706	628	792	757	1040	997	556	375	556	507
27	906	874	761	684	775	740	1050	1010	548	497	554	509
28	902	881	739	706	825	757	1050	1020	561	516	610	489
29	970	872	810	727	836	707	1080	1040	---	---	658	546
30	973	930	826	755	745	685	1080	1050	---	---	732	589
31	961	918	---	---	803	691	1060	1030	---	---	726	675
MONTH	1020	839	1010	482	1010	437	1080	702	1030	292	950	280
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	739	673	816	757	968	931	978	958	965	901	899	848
2	720	661	795	764	971	939	998	946	951	909	923	886
3	662	550	805	758	986	951	975	915	942	898	959	911
4	643	531	810	778	983	961	963	894	942	910	967	922
5	672	580	790	765	973	955	926	867	955	908	968	853
6	661	614	821	783	962	950	917	863	934	861	942	870
7	650	608	832	799	951	928	900	877	906	868	920	868
8	652	600	863	812	947	911	957	894	906	865	907	873
9	611	559	879	825	927	908	943	883	907	848	920	823
10	568	542	887	831	928	905	916	887	885	827	895	839
11	562	541	876	845	992	895	915	882	885	831	908	848
12	579	547	857	816	998	954	920	887	903	856	906	851
13	619	563	832	805	989	953	926	903	921	867	893	842
14	654	602	837	802	1000	951	956	924	932	887	897	842
15	653	349	861	807	1010	959	972	947	924	884	924	857
16	406	348	---	---	1020	968	987	923	917	869	936	876
17	447	402	---	---	1020	982	957	937	910	853	911	854
18	497	445	---	---	1030	989	972	948	899	845	919	858
19	571	495	---	---	1020	985	977	944	911	856	900	841
20	663	571	901	876	1020	996	973	940	974	909	878	809
21	733	651	897	884	1040	1000	981	924	958	899	845	790
22	726	696	901	878	1050	1020	979	951	942	887	837	801
23	728	680	945	888	1040	1030	980	933	920	859	845	788
24	805	727	937	907	1060	1030	957	921	955	881	885	819
25	827	769	936	918	1050	1020	960	923	950	898	877	830
26	819	792	940	919	1030	972	980	911	958	899	875	829
27	807	768	960	928	999	968	964	909	974	911	920	832
28	779	755	952	935	980	939	966	910	956	914	890	837
29	784	749	954	932	980	933	995	911	955	890	877	832
30	769	744	958	927	968	936	992	925	909	857	898	849
31	---	---	960	932	---	---	951	924	906	849	---	---
MONTH	827	348	960	757	1060	895	998	863	974	827	968	788



## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.0	19.5	18.0	17.5	15.5	15.0	13.0	12.0	20.0	16.5	14.5	13.5
2	21.0	17.5	18.0	17.5	15.5	15.0	13.5	13.0	19.0	17.0	15.5	14.0
3	21.0	17.5	17.5	17.0	15.5	15.0	13.5	13.0	18.0	14.5	14.5	14.0
4	21.0	18.0	17.0	16.5	15.5	14.5	13.0	12.5	17.0	13.0	14.5	14.0
5	21.5	19.0	17.0	16.0	15.0	14.5	14.0	13.0	16.0	13.0	14.5	14.0
6	21.5	19.5	17.0	16.0	15.0	14.5	14.5	14.0	15.5	11.5	14.5	14.0
7	21.5	20.0	17.0	16.0	15.0	14.5	14.5	13.5	15.5	12.0	14.5	14.0
8	21.5	20.0	16.5	16.0	15.0	14.5	13.5	13.5	17.0	13.5	15.0	14.5
9	21.5	20.0	17.0	16.5	15.0	14.5	14.0	13.0	17.0	13.0	15.5	14.5
10	21.5	20.5	17.5	17.0	15.0	14.5	14.0	13.0	16.0	13.0	16.0	15.5
11	21.0	20.0	18.0	17.0	15.0	14.0	14.0	13.5	16.0	13.5	16.5	16.0
12	20.5	19.5	17.0	16.5	14.5	14.0	14.5	14.0	14.0	14.0	17.0	16.5
13	19.5	19.0	17.0	16.5	14.5	14.0	15.0	14.0	14.5	14.0	17.5	17.0
14	20.0	19.5	17.0	16.5	14.0	14.0	14.5	14.0	15.0	14.5	18.0	17.5
15	20.0	19.5	17.0	16.5	14.0	14.0	15.5	14.5	15.5	15.0	18.0	16.5
16	19.5	19.5	17.0	16.5	14.5	14.0	15.0	14.0	15.5	15.0	16.5	15.0
17	19.5	19.0	16.5	16.0	14.5	14.0	14.5	14.0	15.5	15.5	15.5	15.0
18	19.0	19.0	16.5	16.0	14.0	14.0	14.5	14.0	16.0	15.5	15.5	15.0
19	19.0	18.5	16.5	15.5	14.0	13.5	14.5	14.5	16.0	15.5	15.5	15.0
20	19.0	18.5	16.0	15.5	13.5	13.0	15.0	14.5	16.0	15.5	15.5	15.0
21	19.0	18.5	16.5	16.0	13.0	12.5	15.5	15.0	16.0	15.5	15.5	15.0
22	18.5	18.5	16.0	16.0	13.0	12.5	15.5	15.0	16.0	15.5	15.5	15.5
23	18.5	18.5	16.5	16.0	13.0	13.0	15.5	15.5	15.5	15.5	15.5	15.5
24	18.5	18.5	16.5	16.0	13.0	12.5	16.0	15.5	15.5	15.5	15.5	15.5
25	18.5	18.0	16.0	16.0	13.0	12.5	16.5	15.5	16.0	13.0	16.0	15.5
26	18.0	17.5	16.0	15.5	13.0	12.5	17.0	16.0	14.5	13.0	16.0	15.5
27	18.0	17.5	15.5	15.0	13.0	12.0	17.5	16.5	14.0	13.5	16.0	15.5
28	18.0	17.5	15.5	15.0	13.0	12.5	17.5	16.5	14.5	14.0	17.0	16.0
29	18.0	17.5	15.5	15.5	12.5	12.0	17.0	16.5	---	---	17.0	16.0
30	18.5	18.0	15.5	15.0	12.5	12.0	18.5	16.5	---	---	17.0	16.0
31	18.0	17.5	---	---	13.0	12.0	20.0	16.0	---	---	16.5	16.0
MONTH	21.5	17.5	18.0	15.0	15.5	12.0	20.0	12.0	20.0	11.5	18.0	13.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17.0	16.5	19.0	18.5	22.5	22.0	28.5	23.0	28.5	24.0	27.5	23.5
2	16.5	16.5	19.0	18.5	22.5	22.0	28.5	23.0	28.5	23.5	28.0	24.0
3	16.5	16.0	19.0	19.0	22.5	22.0	28.0	22.5	28.0	23.0	27.5	24.0
4	16.5	16.5	19.0	19.0	22.5	22.0	28.5	22.5	28.0	22.5	28.0	23.5
5	17.0	16.5	19.5	19.0	22.0	22.0	28.5	23.0	27.0	22.5	28.0	23.5
6	17.0	16.5	19.5	19.0	22.0	21.5	28.0	23.0	27.0	22.0	27.0	23.0
7	17.5	16.5	19.5	19.0	21.5	21.0	27.0	23.0	27.0	22.5	27.0	23.0
8	17.0	17.0	19.5	19.0	21.5	21.0	27.5	22.5	27.5	23.0	26.0	22.0
9	17.0	17.0	19.5	19.0	21.0	21.0	28.0	22.5	27.5	23.5	24.5	22.0
10	17.5	17.0	19.5	19.0	21.0	20.5	29.0	23.5	28.5	23.5	24.5	21.5
11	17.5	17.0	19.5	19.0	21.5	20.5	29.0	24.5	26.5	23.5	25.5	21.5
12	18.0	17.5	19.5	19.0	21.0	20.5	28.5	23.5	28.0	23.0	25.5	22.5
13	18.5	18.0	19.5	19.0	21.5	21.0	29.0	23.5	27.5	23.5	25.5	22.0
14	18.5	18.0	19.5	19.0	21.5	21.0	29.0	24.0	27.5	23.0	26.0	22.5
15	18.5	16.0	19.5	19.0	22.0	21.0	29.5	24.0	27.5	24.0	25.5	22.5
16	16.5	16.0	---	---	23.0	22.0	29.0	24.5	28.0	23.5	25.0	22.0
17	16.5	16.5	---	---	23.5	23.0	27.5	24.5	28.0	24.0	24.5	21.5
18	17.0	16.5	---	---	23.5	23.0	27.0	24.0	28.0	24.0	24.5	21.5
19	17.5	17.0	---	---	23.5	22.5	28.0	24.0	27.5	24.0	25.0	21.5
20	18.0	17.5	20.5	19.5	22.5	21.5	29.5	24.0	28.0	23.5	25.0	21.5
21	18.0	17.5	20.5	20.0	21.5	20.5	28.5	24.0	27.5	24.5	25.5	21.5
22	18.0	18.0	21.0	20.0	20.5	20.0	26.5	23.5	27.0	23.5	25.5	22.0
23	18.5	18.0	21.5	21.0	22.0	20.5	28.5	23.0	27.0	22.5	25.0	22.0
24	18.5	18.0	21.5	21.0	24.5	20.5	28.5	23.5	28.0	23.0	24.0	22.0
25	18.5	18.0	21.5	21.0	26.5	20.5	28.5	23.5	28.0	24.0	24.5	21.5
26	18.5	18.5	21.5	21.0	27.5	21.0	28.0	23.0	27.5	24.0	24.5	21.5
27	19.0	18.5	21.5	21.0	27.5	22.0	28.5	23.5	27.5	23.0	25.0	21.5
28	19.0	18.5	22.0	21.0	27.5	22.0	28.5	23.5	27.5	23.5	25.0	22.0
29	19.0	18.5	22.0	21.0	28.0	22.0	30.0	24.0	27.0	22.5	25.0	22.0
30	19.0	18.5	22.0	21.5	28.5	22.5	29.0	24.5	27.0	22.5	25.0	22.5
31	---	---	22.5	21.5	---	---	29.0	24.0	27.5	23.0	---	---
MONTH	19.0	16.0	22.5	18.5	28.5	20.0	30.0	22.5	28.5	22.0	28.0	21.5

## 11074000 SANTA ANA RIVER BELOW PRADO DAM, CA—Continued

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sediment, sieve diameter, percent <.063mm (70331)	Suspended sediment concentration, mg/L (80154)	Suspended sediment load, tons/d (80155)
OCT						
17...SS	1000	226	18.5	23	22	13
DEC						
11...SS	1530	248	13.5	52	6	4.0
JAN						
15...SS	1600	366	14.5	75	<.5	<.49
FEB						
13...SS	1500	5730	13.5	93	653	10100
MAR						
12...SS	1430	485	16.5	88	5	6.5
APR						
16...SS	1600	466	15.0	98	227	286
JUN						
11...SS	1600	317	21.0	98	37	32
AUG						
13...SS	1700	202	27.0	90	124	68

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

Date	Time	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 unfiltered, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Location in X-section looking downstrm ft from l bank (00009)
AUG								
13...*	1721	746	7.9	102	8.4	889	27.0	6.00
13...*	1722	746	7.9	102	8.4	886	27.0	12.0
13...*	1723	746	7.9	102	8.4	888	27.0	18.0
13...*	1724	746	7.9	102	8.4	890	27.0	24.0
13...*	1725	746	7.9	102	8.4	892	27.0	30.0
SEP								
05...*	1120	--	--	--	--	958	24.5	30.0
05...*	1125	--	--	--	--	961	24.5	24.0
05...*	1130	--	--	--	--	962	24.5	18.0
05...*	1135	--	--	--	--	962	24.5	12.0
05...*	1140	--	--	--	--	960	24.5	6.00

SS Suspended-sediment data determined from a sample collected and processed according to National Water-Quality Assessment (NAWQA) Program protocol.

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

\* Instantaneous discharge at the time of cross-sectional measurements: Aug. 13, 198 ft<sup>3</sup>/s; Sept. 5, 180 ft<sup>3</sup>/s.



## 11075800 SANTIAGO CREEK AT MODJESKA, CA

LOCATION.—Lat 33° 42' 46", long 117° 38' 39", in NE 1/4 NE 1/4 sec.30, T.5 S., R.7 W., Orange County, Hydrologic Unit 18070203, on right bank, at Santiago Canyon Road Bridge, 0.9 mi northwest of Modjeska, 1.0 mi downstream from Harding Creek, and 1.5 mi downstream from Modjeska Reservoir.

DRAINAGE AREA.—13.0 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1961 to current year.

REVISED RECORDS.—WDR CA-73-1: 1969. WDR CA-86-1: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 1,210 ft above NGVD of 1929, from topographic map. Prior to Sept. 10, 1969, at site 0.6 mi upstream at datum approximately 48 ft higher. Sept. 10, 1969, to Feb. 6, 1985, at site 0.6 mi upstream at datum approximately 44 ft higher.

REMARKS.—Records good. Slight regulation by Modjeska Reservoir on Harding Creek. Santiago County Water District diverts water at Modjeska Reservoir on Harding Creek. See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,520 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 6.18 ft, site and datum then in use, from rating curve extended above 840 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow, maximum gage height, 12.03 ft, Feb. 23, 1998; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, from rating curve extended above 444 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)
Feb. 13	1430	191	5.49	Mar. 16	0330	825	6.71
Feb. 26	1745	132	5.28				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.11	0.00	15	7.7	2.8	e0.45	0.00	0.00	0.00
2	0.00	0.00	0.00	0.05	0.00	9.3	6.1	2.7	e0.47	0.00	0.00	0.00
3	0.00	0.00	0.00	0.03	0.00	6.8	4.5	4.0	e0.50	0.00	0.00	0.00
4	0.00	0.00	0.00	0.01	0.00	5.5	3.8	4.2	e0.42	0.00	0.00	0.00
5	0.00	0.00	0.00	0.06	0.00	4.0	4.4	3.8	e0.35	0.00	0.00	0.00
6	0.00	0.00	0.00	0.10	0.00	3.4	4.4	3.3	e0.38	0.00	0.00	0.00
7	0.00	0.00	0.00	0.02	0.00	3.0	4.2	3.4	e0.40	0.00	0.00	0.00
8	0.00	0.00	0.00	0.02	0.00	1.7	4.0	4.0	e0.41	0.00	0.00	0.00
9	0.00	4.9	0.00	0.00	0.00	1.2	4.0	3.4	e0.39	0.00	0.00	0.00
10	0.00	9.7	0.00	0.01	0.00	1.1	3.9	2.9	e0.38	0.00	0.00	0.00
11	0.00	0.84	0.00	0.03	0.02	0.93	3.7	2.5	e0.36	0.00	0.00	0.00
12	0.00	0.24	0.00	0.00	0.56	e0.90	3.7	2.2	e0.32	0.00	0.00	0.00
13	0.00	0.05	0.00	0.00	57	e0.88	3.8	2.0	e0.31	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	37	e0.86	23	1.9	e0.30	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	10	e87	29	1.9	e0.29	0.00	0.00	0.00
16	0.00	0.00	0.68	0.00	4.9	330	e18	1.8	e0.28	0.00	0.00	0.00
17	0.00	0.00	5.7	0.00	2.3	85	e12	1.4	e0.27	0.00	0.00	0.00
18	0.00	0.00	2.9	0.00	1.1	82	e10	e1.2	e0.24	0.00	0.00	0.00
19	0.00	0.00	1.1	0.00	0.08	66	e8.0	e1.1	e0.21	0.00	0.00	0.00
20	0.00	0.00	4.8	0.00	0.00	69	e7.0	e1.0	e0.16	0.00	0.00	0.00
21	0.00	0.00	3.4	0.00	0.00	60	e6.4	e0.90	e0.12	0.00	0.00	0.00
22	0.00	0.00	2.8	0.00	0.00	53	e5.8	e0.80	e0.09	0.00	0.00	0.00
23	0.00	0.00	2.0	0.00	0.00	44	5.4	e0.70	e0.05	0.00	0.00	0.00
24	0.00	0.00	1.2	0.00	0.00	38	5.0	e0.63	e0.03	0.00	0.00	0.00
25	0.00	0.00	0.91	0.00	18	33	4.8	e0.58	e0.02	0.00	0.00	0.00
26	0.00	0.00	0.72	0.00	62	27	4.7	e0.52	e0.01	0.00	0.00	0.00
27	0.00	0.00	0.61	0.00	64	20	4.7	e0.50	e0.00	0.00	0.00	0.00
28	0.00	0.00	0.48	0.00	31	18	4.3	e0.47	e0.00	0.00	0.00	0.00
29	0.00	0.00	0.43	0.00	---	17	3.7	e0.47	e0.00	0.00	0.00	0.00
30	0.00	0.00	0.27	0.00	---	15	3.0	e0.54	e0.00	0.00	0.00	0.00
31	0.00	---	0.14	0.00	---	9.9	---	e0.60	---	0.00	0.00	---
TOTAL	0.00	15.73	28.14	0.44	287.96	1108.47	213.0	58.21	7.21	0.00	0.00	0.00
MEAN	0.000	0.52	0.91	0.014	10.3	35.8	7.10	1.88	0.24	0.000	0.000	0.000
MAX	0.00	9.7	5.7	0.11	64	330	29	4.2	0.50	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.86	3.0	0.47	0.00	0.00	0.00	0.00
AC-FT	0.00	31	56	0.9	571	2200	422	115	14	0.00	0.00	0.00

e Estimated.

## 11075800 SANTIAGO CREEK AT MODJESKA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.17	1.62	5.11	15.7	36.6	22.5	6.29	3.36	1.40	0.37	0.12	0.065
MAX	5.00	33.5	97.4	179	404	137	33.7	27.0	8.76	2.84	1.68	1.07
(WY)	1984	1966	1967	1993	1998	1978	1983	1983	1998	1983	1983	1983
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1962	1962	1963	1963	2002	2002	2002	1992	1987	1963	1962	1962

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1962 - 2003	
ANNUAL TOTAL	43.87		1719.16			
ANNUAL MEAN	0.12		4.71		7.62	
HIGHEST ANNUAL MEAN					47.2	
LOWEST ANNUAL MEAN					0.000	
HIGHEST DAILY MEAN	9.7	Nov 10	330	Mar 16	3590	Feb 24 1969
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1961
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1961
MAXIMUM PEAK FLOW			825	Mar 16	6520	Feb 25 1969
MAXIMUM PEAK STAGE			6.71	Mar 16	12.03	Feb 23 1998
ANNUAL RUNOFF (AC-FT)	87		3410		5520	
10 PERCENT EXCEEDS	0.00		6.6		10	
50 PERCENT EXCEEDS	0.00		0.00		0.16	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 11077500 SANTIAGO CREEK AT SANTA ANA, CA

LOCATION.—Lat 33° 46' 13", long 117° 53' 01", in SW 1/4 NW 1/4 sec.1, T.5 S., R.10 W., [Orange County](#), Hydrologic Unit 18070203, on left bank, 500 ft upstream from Bristol Street Bridge at Santa Ana, and 1,625 ft upstream from mouth at Santa Ana River.

DRAINAGE AREA.—98.6 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1928 to current year. Monthly discharge only October to December 1928, published in WSP 1315-B.

REVISED RECORDS.—WSP 1635: 1934, 1935(M), 1936. WSP 1928: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 120 ft above NGVD of 1929, from topographic map. Prior to Sept. 8, 1969, at site 0.1 mi upstream at different datum; from Sept. 9, 1969, to July 21, 1976, at site 50 ft downstream at different datum; from July 22, 1976, to Sept. 30, 1993, at site 77 ft upstream at datum 5.25 ft lower.

REMARKS.—Records fair. Gage out of operation from Aug. 8, 2002, to Dec. 18, 2002, for bridge construction. Flow regulated since December 1931 by Santiago Reservoir, capacity, 25,000 acre-ft; since January 1963 by Villa Park Flood-Control Reservoir, capacity, 15,500 acre-ft, and affected by intervening gravel pits. Diversions upstream from station by Irvine Company and Serrano and Carpenter Irrigation Districts. See schematic diagram of [Santa Ana River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,600 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 9.10 ft, site and datum then in use; maximum gage height, 11.57 ft, Jan. 4, 1995; no flow for many days each year.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	0.00	0.00	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	0.00	0.00
3	---	---	---	0.00	0.00	0.00	0.00	16	0.00	0.00	0.00	0.00
4	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	---	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	---	---	---	0.00	0.00	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	0.00	0.00
9	---	---	---	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
11	---	---	---	0.00	18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	---	---	---	0.00	42	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	---	---	---	0.00	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	---	---	---	0.00	0.00	0.00	49	0.00	0.00	0.00	0.00	0.00
15	---	---	---	0.00	0.00	122	4.5	0.00	0.00	0.00	0.00	0.00
16	---	---	---	0.00	0.00	96	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
18	---	---	---	0.00	3.5	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
20	---	---	35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	---	---	0.11	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	1.4	0.00	0.00	0.00	0.00	0.00
23	---	---	0.00	0.00	0.00	0.00	3.5	0.00	0.00	0.00	0.00	0.00
24	---	---	0.00	0.00	0.00	0.00	3.0	0.00	0.00	0.00	0.00	0.00
25	---	---	0.00	0.00	38	0.00	2.2	0.00	0.00	0.00	0.00	0.00
26	---	---	0.00	0.00	2.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	---	---	0.00	0.00	4.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	---	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	---	---	0.00	0.00	---	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
31	---	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	---	---	---	0.00	127.30	218.00	63.60	16.00	0.00	0.00	0.00	0.00
MEAN	---	---	---	0.000	4.55	7.03	2.12	0.52	0.000	0.000	0.000	0.000
MAX	---	---	---	0.00	42	122	49	16	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
AC-FT	---	---	---	0.00	252	432	126	32	0.00	0.00	0.00	0.00

## 11077500 SANTIAGO CREEK AT SANTA ANA, 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	.079	.37	2.20	5.64	9.28	29.7	7.56	.32	.002	.000	.000	.053
MAX	2.61	3.03	9.71	62.3	94.6	329	159	3.85	.050	.000	.000	1.20
(WY)	1935	1945	1937	1952	1937	1938	1941	1941	1941	1931	1931	1939
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1931	1931	1931	1936	1952	1931	1932	1931	1931	1931	1931	1931

## SUMMARY STATISTICS

## WATER YEARS 1931 - 1963

ANNUAL MEAN	4.60
HIGHEST ANNUAL MEAN	40.0 1941
LOWEST ANNUAL MEAN	.067 1961
HIGHEST DAILY MEAN	2320 Mar 3 1938
LOWEST DAILY MEAN	.00 Oct 1 1930
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1 1930
MAXIMUM PEAK FLOW	4400 Mar 2 1938
MAXIMUM PEAK STAGE	9.85 Jan 16 1952
ANNUAL RUNOFF (AC-FT)	3330
10 PERCENT EXCEEDS	.40
50 PERCENT EXCEEDS	.00
90 PERCENT EXCEEDS	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.21	1.72	2.01	11.0	38.7	21.7	0.69	0.16	0.009	0.015	0.053	0.095
MAX	4.29	7.80	10.4	259	616	253	4.52	3.87	0.24	0.58	1.60	1.59
(WY)	1984	1983	1998	1993	1969	1978	1965	1998	1993	1984	1977	1976
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1965	1969	1964	1972	1964	1966	1966	1964	1964	1964	1964	1964

## SUMMARY STATISTICS

## WATER YEARS 1964 - 2003

ANNUAL MEAN	6.30
HIGHEST ANNUAL MEAN	71.7 1969
LOWEST ANNUAL MEAN	0.18 1987
HIGHEST DAILY MEAN	4270 Feb 25 1969
LOWEST DAILY MEAN	0.00 Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	0.00 Oct 1 1963
MAXIMUM PEAK FLOW	6600 Feb 25 1969
MAXIMUM PEAK STAGE	12.42 Mar 16 2003
ANNUAL RUNOFF (AC-FT)	4570
10 PERCENT EXCEEDS	0.00
50 PERCENT EXCEEDS	0.00
90 PERCENT EXCEEDS	0.00

## 11078000 SANTA ANA RIVER AT SANTA ANA, CA

LOCATION.—Lat 33° 45'04", long 117° 54'27", in NW 1/4 SE 1/4 sec.10, T.5 S., R.10 W., Orange County, Hydrologic Unit 18070203, on right bank, 850 ft upstream from Fifth Street Bridge in Santa Ana, and 1.6 mi downstream from Santiago Creek.

DRAINAGE AREA.—1,700 mi<sup>2</sup>, excludes 768 mi<sup>2</sup> above Lake Elsinore.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—January 1923 to September 1989, October 1990 to current year. Discharge measurements only, October 1989 to September 1990.

REVISED RECORDS.—WSP 1635: 1940(M), 1944. WDR CA-74-1: Drainage area. WDR CA-79-1: 1978(M).

GAGE.—Water-stage recorder and concrete-lined flood-control channel. Elevation of gage is 70 ft above NGVD of 1929, from topographic map. October 1990 to Feb. 12, 1991, at site 900 ft downstream at different datum. Feb. 13, 1991, to Apr. 4, 1994, at datum 3 ft lower. See WDR CA-90-1 for complete history of location and datum changes.

REMARKS.—Records fair. Natural flow affected by ground-water withdrawals, diversions, importation by Metropolitan Water District, municipal use, and return flow from irrigation. Since 1940, flow partially regulated by Prado Flood-Control Reservoir, capacity, 196,200 acre-ft. Natural flow affected by three small flood-control reservoirs, combined capacity, 31,900 acre-ft; Big Bear Lake (station 11049000); Seven Oaks Flood-Control Reservoir, capacity, 145,600 acre-ft; and Santiago Reservoir, capacity, 25,000 acre-ft. Discharge up to 100 ft<sup>3</sup>/s can be diverted from Carbon Creek to Coyote Creek 1.5 mi upstream from mouth of Carbon Creek. Gage out of operation from Apr. 5, through Nov. 14, 1994, due to channel work (lining). See schematic diagram of Santa Ana River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 46,300 ft<sup>3</sup>/s, Mar. 3, 1938, gage height, 10.20 ft, site and datum then in use, on basis of slope-area measurement of peak flow; no flow for many days each year.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.35	0.00	0.75	0.00	0.00	6.1	0.00	7.1	0.00	0.00	0.19	0.00
2	0.15	0.00	0.00	0.00	0.00	2.6	0.00	6.3	0.00	0.00	0.00	0.19
3	0.03	0.00	0.00	0.00	0.00	13	0.00	591	0.00	0.00	0.00	0.01
4	0.12	0.00	0.00	0.00	0.00	3.5	0.00	47	0.00	0.00	0.00	0.00
5	0.59	0.00	0.00	0.00	0.00	0.20	0.00	9.0	0.00	0.00	0.00	0.00
6	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.00	0.00	0.00	0.00
7	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.04	494	1.3	3.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	749	2.1	0.00	0.00	0.00	0.00	2.9	0.00	0.00	0.00	0.00
10	0.00	139	1.5	0.00	0.00	0.00	0.00	7.6	0.00	0.00	0.00	0.00
11	0.00	2.3	0.07	0.00	227	0.00	0.00	8.6	0.00	0.00	0.00	0.06
12	0.00	0.00	0.00	0.00	1180	0.00	0.00	3.9	0.00	0.00	0.00	0.00
13	0.00	350	0.00	0.04	4340	0.00	0.00	1.8	0.00	0.00	0.00	0.00
14	0.00	170	0.00	2.1	5250	0.00	1780	0.97	0.00	0.00	0.00	0.00
15	0.00	38	0.00	0.00	163	1960	531	0.65	0.00	0.00	0.00	0.20
16	0.00	2.9	1210	0.00	22	4820	28	0.03	0.00	0.00	0.00	0.05
17	0.00	2.1	2510	0.00	1.1	2690	7.5	0.00	0.23	0.00	0.00	0.11
18	0.00	1.7	847	0.00	1.3	1030	12	0.00	0.00	0.03	0.00	0.00
19	0.00	0.23	1330	0.00	0.16	105	16	0.00	0.00	0.08	0.00	0.07
20	0.00	0.00	2510	0.00	0.00	39	15	0.00	0.00	0.00	0.00	0.01
21	0.00	0.00	1950	0.00	0.00	34	11	0.00	0.00	0.10	0.00	0.00
22	0.00	0.00	631	0.00	0.00	4.0	4.3	0.00	0.00	0.18	0.00	0.08
23	0.00	0.00	56	0.00	0.00	0.42	6.4	0.00	0.00	0.13	0.00	0.04
24	0.00	0.00	13	0.00	1.7	0.00	3.2	0.00	0.00	0.02	0.00	0.03
25	0.32	0.00	0.81	0.00	1660	0.00	2.4	0.06	0.37	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	4110	0.00	2.8	1.7	0.00	0.00	0.00	0.00
27	0.00	0.01	0.00	0.00	2080	0.00	1.9	2.3	0.13	0.00	0.00	0.00
28	0.00	0.00	0.45	0.00	201	0.00	4.6	1.7	0.00	0.00	0.00	0.00
29	0.00	1.0	2.9	0.00	---	0.00	7.9	0.54	0.00	0.39	0.12	0.00
30	0.00	6.9	0.01	0.00	---	0.00	8.5	0.44	0.00	2.8	0.03	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.23	0.01	---
TOTAL	2.30	1957.14	11066.89	5.74	19237.26	10707.82	2442.50	694.45	0.73	3.96	0.35	0.85
MEAN	0.074	65.2	357	0.19	687	345	81.4	22.4	0.024	0.13	0.011	0.028
MAX	0.59	749	2510	3.6	5250	4820	1780	591	0.37	2.8	0.19	0.20
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	4.6	3880	21950	11	38160	21240	4840	1380	1.4	7.9	0.7	1.7



11078000 SANTA ANA RIVER AT SANTA ANA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1939, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.50	.46	5.97	5.50	106	137	29.0	.63	.000	.000	.000	.097
MAX	7.94	2.43	29.3	34.2	1028	2029	358	4.65	.000	.000	.000	1.65
(WY)	1935	1924	1939	1934	1927	1938	1926	1938	1923	1923	1923	1939
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1924	1925	1926	1926	1925	1929	1930	1925	1923	1923	1923	1923

SUMMARY STATISTICS

WATER YEARS 1923 - 1939

ANNUAL MEAN	23.7
HIGHEST ANNUAL MEAN	178 1938
LOWEST ANNUAL MEAN	.000 1931
HIGHEST DAILY MEAN	20300 Mar 3 1938
LOWEST DAILY MEAN	.00 Mar 16 1923
ANNUAL SEVEN-DAY MINIMUM	.00 Mar 21 1923
MAXIMUM PEAK FLOW	46300 Mar 3 1938
MAXIMUM PEAK STAGE	10.20 Mar 3 1938
ANNUAL RUNOFF (AC-FT)	17190
10 PERCENT EXCEEDS	3.6
50 PERCENT EXCEEDS	.00
90 PERCENT EXCEEDS	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.46	13.0	40.6	168	291	245	60.9	26.7	8.19	0.88	1.82	1.37
MAX	179	154	428	3962	3014	2342	889	686	433	31.0	102	40.6
(WY)	1984	1984	1985	1993	1980	1969	1980	1998	1983	1998	1983	1986
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1940	1940	1940	1976	1949	1949	1949	1940	1940	1940	1940	1940

SUMMARY STATISTICS

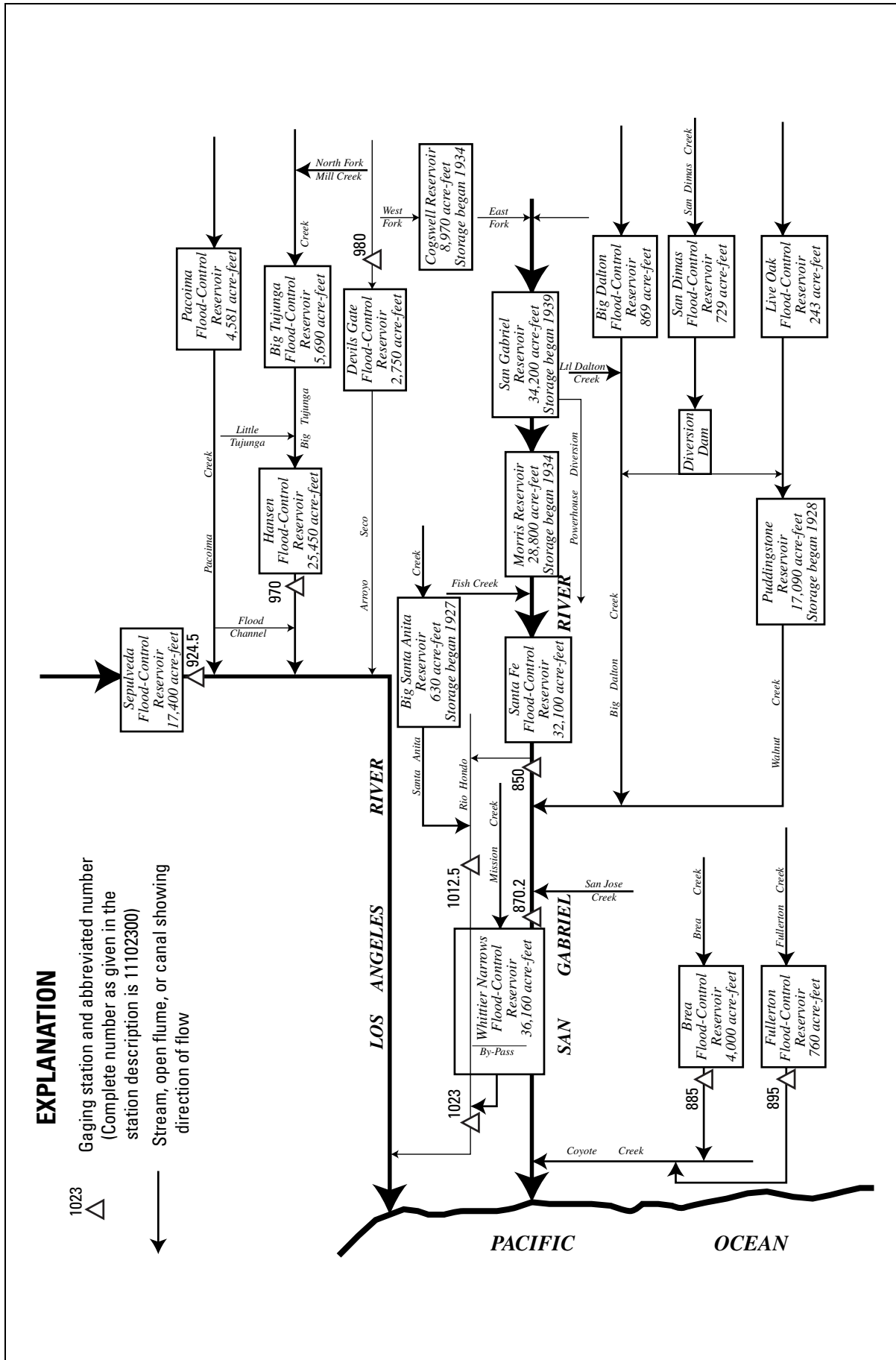
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1940 - 2003

ANNUAL TOTAL	13392.55	46119.99	
ANNUAL MEAN	36.7	126	70.7
HIGHEST ANNUAL MEAN			612 1993
LOWEST ANNUAL MEAN			0.006 1949
HIGHEST DAILY MEAN	2510 Dec 17	5250 Feb 14	11400 Feb 25 1969
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 9	0.00 Oct 1 1939
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 4	0.00 Oct 9	0.00 Oct 1 1939
MAXIMUM PEAK FLOW		8390 Feb 13	31700 Jan 4 1995
MAXIMUM PEAK STAGE		5.10 Feb 13	9.09 Jan 4 1995
ANNUAL RUNOFF (AC-FT)	26560	91480	51190
10 PERCENT EXCEEDS	1.7	18	13
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00





**EXPLANATION**

- △ 1023  
Gaging station and abbreviated number (Complete number as given in the station description is 11102300)
- Stream, open flume, or canal showing direction of flow

Figure 18. Diversions and storage in San Gabriel and Los Angeles River Basins.

## 11085000 SAN GABRIEL RIVER BELOW SANTA FE DAM, NEAR BALDWIN PARK, CA

LOCATION.—Lat 34° 06' 44", long 117° 58' 07", in NE 1/4 SW 1/4 sec.6, T.1 S., R.10 W., Los Angeles County, Hydrologic Unit 18070106, on left bank, at stilling basin of outlet of Santa Fe Flood-Control Dam, 500 ft downstream from axis of dam, and 1.7 mi north of Baldwin Park.

DRAINAGE AREA.—236 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1942 to current year.

REVISED RECORDS.—WSP 1315-B and 1635: 1943(M). WSP 1928: Drainage area. WDR CA-99-1: 1998.

GAGE.—Water-stage recorder. Auxiliary gage 500 ft downstream with crest-stage gage and concrete control. Datum of gage is 400.00 ft above NGVD of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.—Records poor. Flow regulated by Cogswell and San Gabriel Flood-Control Reservoirs, combined capacity, 43,170 acre-ft; Morris Reservoir, capacity, 28,800 acre-ft; and Santa Fe Flood-Control Reservoir, capacity, 32,100 acre-ft. Diversions upstream from station for irrigation, power development, and ground-water replenishment. At times water is diverted from side of stilling basin to headwaters of Rio Hondo; 2,130 acre-ft were diverted during the current year. See schematic diagram of [San Gabriel and Los Angeles River Basins](#).

COOPERATION.—Records of diversion to Rio Hondo provided by Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 30,900 ft<sup>3</sup>/s, Jan. 26, 1969, gage height, 22.20 ft; no flow for many days each year.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.14	0.00	0.00	3.9	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.01	0.00	0.00	3.4	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	3.0	0.00	14	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	2.0	0.00	12	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.03	0.00	3.2	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.01	0.00	2.0	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
8	0.00	3.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	6.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	6.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	5.9	0.00	0.00	1.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	5.9	0.00	0.00	93	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	100	0.00	0.00	223	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	64	0.00	0.00	164	0.00	4.0	0.00	0.00	0.00	0.00	0.00
15	0.00	12	0.00	0.00	64	48	6.8	0.00	0.00	0.00	0.00	0.00
16	0.00	0.47	12	0.00	15	214	0.02	0.00	0.00	0.00	0.00	0.00
17	0.00	0.01	15	0.00	9.0	191	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.12	0.00	7.8	111	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.01	0.00	6.2	6.5	0.00	0.00	0.00	0.00	0.80	0.00
20	0.00	0.00	4.3	0.00	2.8	0.03	0.00	0.00	0.00	0.00	5.0	0.00
21	0.00	0.00	0.04	0.00	2.4	0.02	0.00	0.00	0.00	0.00	4.8	0.00
22	0.00	0.00	0.01	0.00	1.9	0.01	0.00	0.00	0.00	0.00	2.7	0.00
23	0.00	0.00	0.00	0.00	1.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	1.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	3.2	0.00	0.00	0.00	0.00	0.00	71	0.00
26	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00
27	0.00	0.00	0.00	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	4.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.45	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	204.43	31.63	0.00	602.17	582.90	10.82	31.22	0.00	0.00	84.31	0.00
MEAN	0.000	6.81	1.02	0.000	21.5	18.8	0.36	1.01	0.000	0.000	2.72	0.000
MAX	0.00	100	15	0.00	223	214	6.8	14	0.00	0.00	71	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	405	63	0.00	1190	1160	21	62	0.00	0.00	167	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)
	2.57	74.6	0.000	1943	15.9	577	0.000	1943	27.8	514	0.000	1943	122	2151	0.000	1945
									222	3259	0.000	1947	192	2465	0.000	1947
									56.1	616	0.000	1978	64.2	768	0.000	1947
									64.2	768	0.000	1998	23.5	414	0.000	1945
									8.62	170	0.000	1958	8.62	170	0.000	1945
									5.56	121	0.000	1962	5.56	121	0.000	1943
									9.22	206	0.000	1946	9.22	206	0.000	1943

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1943 - 2003
ANNUAL TOTAL	236.06	1547.48	
ANNUAL MEAN	0.65	4.24	61.6
HIGHEST ANNUAL MEAN			540
LOWEST ANNUAL MEAN			0.000
HIGHEST DAILY MEAN	100	Nov 13	26000
LOWEST DAILY MEAN	0.00	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00
MAXIMUM PEAK FLOW			30900
MAXIMUM PEAK STAGE			22.20
ANNUAL RUNOFF (AC-FT)	468	3070	44640
10 PERCENT EXCEEDS	0.00	3.0	59
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

## 11087020 SAN GABRIEL RIVER ABOVE WHITTIER NARROWS DAM, CA

LOCATION.—Lat 34° 02' 03", long 118° 02' 14", in La Puente Grant, Los Angeles County, Hydrologic Unit 18070106, at Peck Road, 0.8 mi downstream from San Jose Flood Channel, 1.2 mi upstream from axis of Whittier Narrows Dam, and 1.8 mi south of El Monte.

DRAINAGE AREA.—442 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1955 to September 1957, October 1963 to current year.

REVISED RECORDS.—WDR CA-86-1: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 220 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair. Flow regulated by several reservoirs, combined capacity, 123,000 acre-ft. Many diversions upstream from station for irrigation, power development, and ground-water replenishment. Colorado River water released to the San Gabriel River at site 14.9 mi upstream from gage, at Metropolitan Water District aqueduct crossing on San Dimas Creek for ground-water replenishment. Los Angeles County Department of Public Works diverted 2,130 acre-ft from San Gabriel River below Santa Fe Dam to Rio Hondo during the current year. See schematic diagram of San Gabriel and Los Angeles River Basins.

COOPERATION.—Records of diversion to Rio Hondo provided by Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 46,600 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 10.90 ft, from rating curve extended above 29,000 ft<sup>3</sup>/s; no flow for part of some years.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	69	466	42	72	109	69	79	21	35	35	33
2	61	74	377	38	67	82	69	69	19	35	43	36
3	62	72	258	43	73	75	69	1330	21	36	36	34
4	42	71	276	34	74	129	68	99	30	36	37	34
5	61	69	273	34	70	102	72	46	18	29	36	18
6	60	68	285	60	70	74	70	80	30	33	37	35
7	41	68	291	70	70	76	73	192	34	35	35	36
8	38	1560	257	71	63	72	68	34	32	41	35	36
9	75	1440	84	71	62	67	68	29	34	35	38	34
10	69	105	75	71	67	70	69	27	34	53	34	35
11	71	124	74	77	562	70	69	22	38	65	32	35
12	69	198	70	74	4220	73	68	22	35	39	35	34
13	70	198	74	77	839	66	52	21	36	34	27	34
14	74	228	80	76	225	70	868	23	38	33	35	32
15	74	234	83	71	269	4160	524	23	37	34	33	34
16	74	232	1970	69	204	2070	79	25	36	35	35	34
17	75	216	199	54	147	611	55	33	38	33	20	33
18	79	330	97	76	125	481	72	20	35	34	26	33
19	76	471	290	73	86	195	73	19	55	30	37	32
20	75	360	1250	72	84	115	71	17	72	36	34	36
21	80	321	86	74	81	108	69	33	41	36	32	38
22	76	462	78	73	85	126	68	34	39	40	31	59
23	75	471	306	79	83	108	63	11	34	25	33	71
24	74	472	408	76	83	96	67	19	35	37	32	62
25	75	341	396	78	1040	78	165	23	36	37	32	61
26	82	289	394	73	273	75	138	30	36	40	30	44
27	71	450	378	74	463	76	65	23	35	37	21	31
28	73	472	402	70	118	74	45	21	34	32	32	35
29	71	573	492	72	---	70	48	16	36	37	34	34
30	70	467	193	74	---	70	75	14	37	36	31	33
31	70	---	63	74	---	75	---	29	---	36	31	---
TOTAL	2105	10505	10025	2070	9675	9723	3429	2463	1056	1134	1019	1136
MEAN	67.9	350	323	66.8	346	314	114	79.5	35.2	36.6	32.9	37.9
MAX	82	1560	1970	79	4220	4160	868	1330	72	65	43	71
MIN	38	68	63	34	62	66	45	11	18	25	20	18
AC-FT	4180	20840	19880	4110	19190	19290	6800	4890	2090	2250	2020	2250

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2003, BY WATER YEAR (WY)

MEAN	87.6	154	164	361	562	380	119	113	69.2	56.3	54.2	72.0
MAX	208	782	426	4150	4497	3796	590	1001	254	230	208	205
(WY)	1979	1966	1993	1993	1980	1978	1978	1998	1976	1973	1973	1978
MIN	0.000	0.000	9.84	19.0	0.000	0.000	0.47	0.14	0.000	0.000	0.000	0.000
(WY)	1956	1978	1977	1968	1956	1956	1956	1957	1956	1956	1956	1957

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1956 - 2003
ANNUAL TOTAL	45385	54340	
ANNUAL MEAN	124	149	181
HIGHEST ANNUAL MEAN			810
LOWEST ANNUAL MEAN			24.4
HIGHEST DAILY MEAN	1970	Dec 16	4220
LOWEST DAILY MEAN	22	Feb 5	11
ANNUAL SEVEN-DAY MINIMUM	28	Feb 4	20
MAXIMUM PEAK FLOW			21600
MAXIMUM PEAK STAGE			9.62
ANNUAL RUNOFF (AC-FT)	90020	107800	131000
10 PERCENT EXCEEDS	287		312
50 PERCENT EXCEEDS	72		69
90 PERCENT EXCEEDS	53		31

## 11088500 BREA CREEK BELOW BREA DAM, NEAR FULLERTON, CA

LOCATION.—Lat 33° 53' 16", long 117° 55' 32", in NE 1/4 NE 1/4 sec.28, T.3 S., R.10 W., Orange County, Hydrologic Unit 18070106, on right bank, 0.2 mi downstream from Brea Dam, and 1 mi north of Fullerton.

DRAINAGE AREA.—21.6 mi<sup>2</sup>.

PERIOD OF RECORD.—January 1942 to current year.

REVISED RECORDS.—WSP 1041: 1944(M). WSP 1635: 1956, 1958. WSP 1928: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 200 ft above NGVD of 1929, from topographic map. Prior to Dec. 4, 1964, at datum 1.03 ft higher.

REMARKS.—Records poor below 10 ft<sup>3</sup>/s and fair above. Flow regulated by Brea Flood-Control Reservoir, capacity, 4,000 acre-ft. No diversion upstream from station. Since August 1966, low flow mostly the result of irrigation wastewater from golf course 0.8 mi upstream. See schematic diagram of San Gabriel and Los Angeles River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 1,700 ft<sup>3</sup>/s, Feb. 18, 1980; no flow for parts of some years.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	0.62	0.12	20	0.17	11	6.5	e1.3	0.62	0.46	0.53	0.29
2	0.88	0.64	0.03	21	0.20	12	2.5	e1.2	0.67	0.46	0.66	e0.32
3	0.79	0.57	0.01	4.8	0.52	8.9	2.7	62	0.61	0.42	0.67	e0.36
4	0.69	0.66	0.01	3.7	0.46	6.8	2.0	7.7	0.61	0.42	0.71	e0.38
5	0.68	0.40	0.00	3.7	0.58	10	3.6	2.4	0.58	0.42	0.60	0.42
6	0.70	0.69	0.01	6.0	0.62	6.4	2.9	2.2	0.66	0.39	0.61	0.41
7	0.55	1.5	0.05	12	0.59	5.0	2.1	1.1	0.66	0.54	0.46	0.51
8	0.25	91	0.00	16	0.56	1.9	2.2	1.1	0.58	0.68	0.44	0.47
9	0.58	54	0.01	2.6	0.59	1.4	1.3	0.84	0.70	0.64	0.43	0.48
10	0.86	2.5	0.01	1.5	0.48	1.6	e1.1	0.75	0.58	0.65	0.35	0.47
11	0.68	0.34	0.00	1.2	38	1.1	e1.0	0.68	0.46	0.65	0.30	0.44
12	0.95	0.16	0.00	1.3	253	1.1	1.7	0.68	0.44	0.55	0.31	0.53
13	1.1	0.12	0.01	1.5	113	1.2	1.9	0.70	0.49	0.57	0.28	0.52
14	0.97	0.10	0.00	1.3	16	1.1	91	0.56	0.42	0.53	0.21	0.55
15	0.83	0.06	0.00	1.3	5.0	346	31	0.49	0.35	0.51	0.28	0.56
16	0.84	0.10	141	1.2	1.3	411	5.5	0.52	0.47	0.48	0.31	0.47
17	0.84	0.08	25	1.1	0.62	16	3.0	0.58	e0.50	0.46	0.29	0.51
18	0.68	0.19	3.1	1.0	0.83	8.3	2.4	0.52	0.54	0.47	0.28	0.69
19	0.70	0.60	5.4	0.95	1.9	3.7	2.2	0.52	0.91	0.43	0.27	0.47
20	0.72	0.75	150	0.96	8.0	0.67	3.9	0.45	0.93	0.40	0.27	0.45
21	0.72	0.53	42	0.84	4.3	0.86	1.8	0.49	0.96	e0.38	0.31	0.45
22	0.59	0.44	33	0.85	1.1	4.1	1.3	0.46	0.87	e0.36	0.26	0.48
23	0.32	0.07	24	0.79	1.2	1.5	1.3	0.46	0.91	e0.40	0.28	0.51
24	0.29	0.01	20	0.75	1.3	0.94	1.1	0.44	0.73	e0.42	0.27	0.45
25	0.53	0.00	20	0.49	129	e1.0	1.2	0.45	0.70	e0.40	0.27	0.59
26	0.91	0.00	17	0.26	25	e1.1	1.1	0.81	0.57	e0.38	0.25	0.74
27	0.05	0.01	16	0.24	28	e1.0	1.1	0.73	0.60	e0.38	0.25	0.73
28	0.00	0.09	25	0.23	12	e0.96	1.6	0.77	0.56	e0.40	0.25	0.72
29	0.00	1.1	36	0.29	---	2.0	1.5	0.77	0.57	e0.42	0.23	0.72
30	0.00	5.3	8.3	0.39	---	3.4	e1.4	0.75	0.63	e0.42	0.21	0.72
31	0.13	---	14	0.16	---	7.8	---	0.70	---	0.54	0.22	---
TOTAL	18.93	162.63	580.06	108.40	644.32	879.83	183.9	93.12	18.88	14.63	11.06	15.41
MEAN	0.61	5.42	18.7	3.50	23.0	28.4	6.13	3.00	0.63	0.47	0.36	0.51
MAX	1.1	91	150	21	253	411	91	62	0.96	0.68	0.71	0.74
MIN	0.00	0.00	0.00	0.16	0.17	0.67	1.0	0.44	0.35	0.36	0.21	0.29
AC-FT	38	323	1150	215	1280	1750	365	185	37	29	22	31

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2003, BY WATER YEAR (WY)

MEAN	1.14	3.25	4.95	10.1	15.3	10.2	3.50	1.47	0.82	0.59	0.66	0.90
MAX	15.3	31.6	26.6	95.8	165	79.9	50.3	31.9	7.83	3.92	4.68	7.02
(WY)	1984	1984	1989	1993	1980	1978	1983	1998	1998	1998	1983	1986
MIN	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1943	1943	1951	1951	1951	1951	1950	1942	1942	1942	1942	1942

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1942 - 2003
ANNUAL TOTAL	1276.28	2731.17	
ANNUAL MEAN	3.50	7.48	4.40
HIGHEST ANNUAL MEAN			23.9
LOWEST ANNUAL MEAN			0.001
HIGHEST DAILY MEAN	150	411	1700
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00	0.00
MAXIMUM PEAK FLOW		1520	a
MAXIMUM PEAK STAGE		6.38	a
ANNUAL RUNOFF (AC-FT)	2530	5420	3190
10 PERCENT EXCEEDS	3.1	9.3	3.9
50 PERCENT EXCEEDS	1.3	0.66	0.28
90 PERCENT EXCEEDS	0.27	0.21	0.00

e Estimated.

a Instantaneous peak discharge and stage for period of record are unknown, but probably occurred on Feb. 18, 1980

## 11089500 FULLERTON CREEK BELOW FULLERTON DAM, NEAR BREA, CA

LOCATION.—Lat 33° 53'45", long 117° 53'07", in NW 1/4 SW 1/4 sec.24, T.3 S., R.10 W., [Orange County](#), Hydrologic Unit 18070106, on left bank of outlet channel of Fullerton Dam, and 1.6 mi southeast of Brea.

DRAINAGE AREA.—4.94 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1941 to current year.

REVISED RECORDS.—WSP 1245: 1950(M). WSP 1928: Drainage area. WDR CA-82-1: 1981.

GAGE.—Water-stage recorder. Elevation of gage is 250 ft above NGVD of 1929, from topographic map. V-notch sharp-crested weir used Oct. 25, 1946, to Feb. 2, 1956. Prior to Dec. 3, 1971, at datum 3.00 ft higher.

REMARKS.—Records good. Flow regulated by Fullerton Flood-Control Reservoir, capacity, 760 acre-ft (resurvey of 1970). Small tributary formerly entering below station diverted into reservoir since December 1954. See schematic diagram of [San Gabriel and Los Angeles River Basins](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 392 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 8.25 ft, present datum; no flow at times some years.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.48	0.31	0.36	0.27	0.20	0.41	0.43	0.36	0.29	0.31	0.34	0.25
2	0.39	0.32	0.35	0.28	0.18	0.34	0.41	0.40	0.29	0.29	0.35	0.28
3	0.42	0.28	0.38	0.31	0.17	0.36	0.41	29	0.37	0.30	0.30	0.27
4	0.41	0.30	0.33	0.31	0.21	0.48	0.43	0.98	0.33	0.28	0.33	0.26
5	0.42	0.32	0.35	0.29	0.21	0.41	0.39	0.42	0.32	0.27	0.29	0.27
6	0.36	0.29	0.33	0.26	0.22	0.35	0.38	0.39	0.36	0.27	0.28	0.28
7	0.35	0.29	0.36	0.33	0.23	0.36	0.33	0.35	0.36	0.28	0.26	0.26
8	0.48	39	0.30	0.44	0.28	0.36	0.38	0.37	0.30	0.29	0.26	0.27
9	0.43	43	0.33	0.49	0.24	0.36	0.38	0.34	0.44	0.28	0.26	0.29
10	0.42	5.2	0.35	0.49	0.24	0.39	0.38	0.31	0.39	0.29	0.26	0.28
11	0.40	0.42	0.36	0.48	22	0.40	0.41	0.29	0.33	0.29	0.25	0.28
12	0.54	0.32	0.32	0.45	103	0.40	0.44	0.32	0.33	0.29	0.30	0.28
13	0.38	0.37	0.34	0.40	36	0.40	0.36	0.33	0.32	0.27	0.27	0.28
14	0.38	0.34	0.37	0.41	1.0	0.40	39	0.38	0.31	0.26	0.29	0.27
15	0.42	0.28	0.31	0.39	0.43	150	19	0.33	0.29	0.25	0.33	0.27
16	0.37	0.29	70	0.39	0.34	154	0.56	0.36	0.30	0.27	0.32	0.28
17	0.37	0.28	11	0.37	0.80	2.2	0.46	0.36	0.32	0.29	0.31	0.27
18	0.39	0.28	0.43	0.36	0.36	1.5	0.45	0.31	0.29	0.32	0.28	0.23
19	0.40	0.26	0.34	0.36	0.42	0.64	0.38	0.33	0.31	0.41	0.27	0.15
20	0.38	0.31	55	0.37	0.93	0.56	0.37	0.38	0.30	0.37	0.29	0.24
21	0.45	0.28	1.3	0.42	0.38	0.53	0.37	0.34	0.27	0.35	0.28	0.15
22	0.42	0.32	0.65	0.43	0.39	0.42	0.39	0.35	0.30	0.40	0.25	0.24
23	0.39	0.32	0.31	0.43	0.35	0.37	0.38	0.33	0.30	0.39	0.29	0.27
24	0.37	0.35	0.30	0.28	0.44	0.40	0.40	0.32	0.30	0.41	0.28	0.25
25	0.44	0.30	0.27	0.14	55	0.50	0.39	0.31	0.24	0.35	0.29	0.26
26	0.57	0.30	0.27	0.14	1.6	0.38	0.38	0.30	0.15	0.41	0.30	0.27
27	0.32	0.30	0.26	0.14	4.7	0.40	0.33	0.33	0.28	0.37	0.99	0.28
28	0.33	0.31	0.30	0.16	0.75	0.34	0.34	0.32	0.26	0.37	0.33	0.29
29	0.38	3.2	1.1	0.17	---	0.29	0.52	0.34	0.28	0.63	0.25	0.32
30	0.31	1.8	0.28	0.17	---	0.30	0.37	0.31	0.27	0.40	0.26	0.30
31	0.30	---	0.28	0.17	---	0.38	---	0.32	---	0.38	0.25	---
TOTAL	12.47	99.94	147.23	10.10	231.07	318.63	69.22	39.88	9.20	10.34	9.61	7.89
MEAN	0.40	3.33	4.75	0.33	8.25	10.3	2.31	1.29	0.31	0.33	0.31	0.26
MAX	0.57	43	70	0.49	103	154	39	29	0.44	0.63	0.99	0.32
MIN	0.30	0.26	0.26	0.14	0.17	0.29	0.33	0.29	0.15	0.25	0.25	0.15
AC-FT	25	198	292	20	458	632	137	79	18	21	19	16

## SAN GABRIEL RIVER BASIN

## 11089500 FULLERTON CREEK BELOW FULLERTON DAM, NEAR BREA, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1954, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	.030	.034	.99	.41	.75	.058	.000	.002	.001	.000	.000
MAX	.000	.31	.19	6.62	3.34	4.60	.36	.003	.020	.016	.000	.000
(WY)	1942	1945	1946	1952	1944	1943	1952	1945	1942	1942	1942	1942
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1942	1942	1942	1942	1942	1942	1942	1942	1943	1943	1942	1942

## SUMMARY STATISTICS

## WATER YEARS 1942 - 1954

ANNUAL MEAN	.19
HIGHEST ANNUAL MEAN	.92 1952
LOWEST ANNUAL MEAN	.000 1948
HIGHEST DAILY MEAN	79 Jan 19 1952
LOWEST DAILY MEAN	.00 Oct 1 1941
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1 1941
MAXIMUM PEAK FLOW	298 Mar 16 1943
MAXIMUM PEAK STAGE	3.80 Mar 16 1943
ANNUAL RUNOFF (AC-FT)	137
10 PERCENT EXCEEDS	.00
50 PERCENT EXCEEDS	.00
90 PERCENT EXCEEDS	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2003, BY WATER YEAR (WY)

	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
MEAN	0.56	1.23	2.01	4.12	5.37	3.38	1.03	0.53	0.35	0.31	0.36	0.45																																					
MAX	5.31	5.76	9.96	28.0	32.1	18.6	6.28	5.87	1.66	1.01	1.72	2.53																																					
(WY)	1984	1986	1993	1993	1998	1983	1958	1998	1995	1991	1977	1986																																					
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																																					
(WY)	1955	1955	1955	1963	1964	1966	1955	1961	1955	1955	1955	1955																																					

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1955 - 2003

ANNUAL TOTAL	405.97	965.58	
ANNUAL MEAN	1.11	2.65	1.62
HIGHEST ANNUAL MEAN			5.16 1993
LOWEST ANNUAL MEAN			0.028 1964
HIGHEST DAILY MEAN	70 Dec 16	154 Mar 16	221 Mar 1 1983
LOWEST DAILY MEAN	0.14 Aug 19	0.14 Jan 25	0.00 Oct 1 1954
ANNUAL SEVEN-DAY MINIMUM	0.27 Aug 30	0.16 Jan 25	0.00 Oct 1 1954
MAXIMUM PEAK FLOW		360 Dec 16	392 Mar 1 1983
MAXIMUM PEAK STAGE		8.13 Dec 16	8.25 Mar 1 1983
INSTANTANEOUS LOW FLOW		0.02 Sep 19	0.02 Sep 19 2003
ANNUAL RUNOFF (AC-FT)	805	1920	1180



## 11092450 LOS ANGELES RIVER AT SEPULVEDA DAM, CA

LOCATION.—Lat 34° 09' 42", long 118° 27' 57", in Mission de San Fernando Grant, Los Angeles County, Hydrologic Unit 18070105, on right bank of outlet channel, 0.6 mi downstream from Sepulveda Dam, 200 ft upstream from Sepulveda Boulevard in city of Los Angeles, and 1.8 mi southwest of Van Nuys.

DRAINAGE AREA.—158 mi<sup>2</sup>.

PERIOD OF RECORD.—January 1929 to February 1938, May 1938 to September 1979, and October 2002 to September 2003. See WSP 1315-B, and 1735 for history of records prior to September 1950.

GAGE.—Water-stage recorder and concrete-lined flood-control channel. Datum of gage is 652.7 ft above NGVD of 1929. See WSP 1735 for history of changes prior to August 29, 1953.

REMARKS.—Records good above 800 ft<sup>3</sup>/s and poor below. Flow regulated since December 1941 by Sepulveda Flood-Control Reservoir, capacity, 17,400 acre-ft. Some diversion above station. At times, the city of Los Angeles discharges imported Owens River water into the Los Angeles River from upstream distributing reservoirs. Most of the base flow at this station represents releases of treated effluent from the city of Los Angeles Donald C. Tillman Water Reclamation Plant, upstream of Sepulveda Dam.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 14,700 ft<sup>3</sup>/s, Mar. 4, 1978, gage height, 12.04 ft; no flow on Sept. 19, 20, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 2, 1938, estimated to be 12,000 ft<sup>3</sup>/s.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	89	95	66	79	84	80	100	83	92	87	82
2	78	86	89	71	78	82	84	267	81	92	88	85
3	80	83	90	74	75	85	87	2180	83	98	90	84
4	77	84	88	76	78	180	88	139	81	94	91	83
5	78	85	91	66	78	110	88	113	79	94	90	80
6	78	84	95	68	78	89	89	107	80	93	84	76
7	79	104	93	75	79	84	87	104	81	94	89	81
8	84	1890	91	80	77	85	89	93	81	92	81	87
9	84	404	97	82	76	82	90	97	84	94	84	88
10	84	112	93	78	82	82	92	94	86	91	83	85
11	86	85	90	77	714	84	92	88	89	84	85	84
12	88	92	91	76	8750	86	89	89	88	83	83	85
13	85	94	95	83	485	87	99	86	88	83	81	84
14	86	81	97	88	e152	86	1880	82	87	87	84	82
15	87	78	115	82	e137	3520	199	86	89	88	85	83
16	89	94	2080	78	e98	806	113	86	89	86	85	84
17	93	93	173	57	e95	131	104	85	88	90	84	85
18	93	88	105	79	e93	105	102	85	88	94	88	86
19	94	52	104	77	e84	91	100	85	87	91	91	85
20	94	81	1710	96	e84	87	97	85	84	90	85	84
21	92	87	156	76	85	85	100	86	82	95	90	84
22	90	89	111	78	85	83	91	86	83	93	91	91
23	79	87	85	76	83	79	99	86	87	89	90	86
24	72	85	85	72	261	82	98	84	88	95	86	84
25	68	83	80	74	421	82	99	81	89	95	84	82
26	81	79	76	71	91	80	99	81	92	92	85	82
27	75	90	79	75	129	74	99	85	81	90	69	81
28	79	85	102	76	89	76	103	83	83	100	75	81
29	84	116	103	74	---	76	101	86	83	82	82	86
30	84	313	76	75	---	74	102	63	88	84	81	88
31	87	---	78	75	---	75	---	82	---	87	80	---
TOTAL	2592	4973	6613	2351	12716	6912	4740	5054	2552	2812	2631	2518
MEAN	83.6	166	213	75.8	454	223	158	163	85.1	90.7	84.9	83.9
MAX	94	1890	2080	96	8750	3520	1880	2180	92	100	91	91
MIN	68	52	76	57	75	74	80	63	79	82	69	76
AC-FT	5140	9860	13120	4660	25220	13710	9400	10020	5060	5580	5220	4990

e Estimated.

## LOS ANGELES RIVER BASIN

## 11092450 LOS ANGELES RIVER AT SEPULVEDA DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.5	54.4	55.3	102	117	79.9	33.9	17.6	12.2	14.6	16.8	15.5
MAX	83.6	491	247	767	644	739	202	163	85.1	90.7	84.9	83.9
(WY)	2003	1966	1966	1969	1962	1978	1958	2003	2003	2003	2003	2003
MIN	1.44	1.67	3.76	4.65	4.19	4.27	3.94	3.17	2.87	2.22	2.23	1.93
(WY)	1978	1978	1954	1976	1951	1951	1977	1951	1951	1951	1951	1951

## SUMMARY STATISTICS

## FOR 2003 WATER YEAR

## WATER YEARS 1943 - 2003

ANNUAL TOTAL	56464		
ANNUAL MEAN	155		43.9
HIGHEST ANNUAL MEAN			158 1978
LOWEST ANNUAL MEAN			7.09 1950
HIGHEST DAILY MEAN	8750	Feb 12	9750 Mar 4 1978
LOWEST DAILY MEAN	52	Nov 19	0.46 Nov 10 1977
ANNUAL SEVEN-DAY MINIMUM	71	Jan 1	0.84 Nov 25 1977
MAXIMUM PEAK FLOW	14500	Feb 12	14700 Mar 4 1978
MAXIMUM PEAK STAGE	12.01	Feb 12	12.04 Mar 4 1978
ANNUAL RUNOFF (AC-FT)	112000		31820
10 PERCENT EXCEEDS	104		44
50 PERCENT EXCEEDS	86		8.5
90 PERCENT EXCEEDS	77		4.2

## 11097000 BIG TUJUNGA CREEK BELOW HANSEN DAM, CA

LOCATION.—Lat 34° 15' 13", long 118° 23' 17", in Mission San Fernando Grant, Los Angeles County, Hydrologic Unit 18070105, in city of Los Angeles, on left bank of outlet channel, 0.5 mi downstream from Hansen Dam, 0.1 mi upstream from Glen Oaks Boulevard, and 3 mi southeast of San Fernando.

DRAINAGE AREA.—153 mi<sup>2</sup>.

PERIOD OF RECORD.—May 1932 to February 1938, August 1940 to current year. Monthly discharge only for some periods, published in WSP 1315-B. Prior to October 1975, published as "Tujunga Creek below Hansen Dam."

REVISED RECORDS.—WDR CA-84-1: 1978(M). WDR CA-01-1: 1992.

GAGE.—Water-stage recorder and concrete-lined flood-control channel. Datum of gage is 943.32 ft above NGVD of 1929 (U.S. Army Corps of Engineers benchmark). See WSP 1735 for history of changes prior to Oct. 1, 1953.

REMARKS.—Records fair except for discharges below 100 ft<sup>3</sup>/s, which are poor. Flow regulated since July 1931 by Big Tujunga Flood-Control Reservoir, capacity, 5,690 acre-ft, and since September 1940 by Hansen Flood-Control Reservoir, capacity, 25,450 acre-ft. Several small diversions for domestic use and irrigation. Since about 1948, Los Angeles County Department of Public Works has diverted water 0.3 mi upstream from gage to spreading grounds, as shown in footnote below table. See schematic diagram of San Gabriel and Los Angeles River Basins.

COOPERATION.—Records of diversion provided by Los Angeles County Department of Public Works.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,200 ft<sup>3</sup>/s, Feb. 10, 1978, Mar. 2, 1983, maximum gage height, 7.64 ft, Mar. 2, 1983; no flow for many days in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 54,000 ft<sup>3</sup>/s, estimated, Mar. 2, 1938.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	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	0.15	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.3	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.5	0.00	0.00	0.13	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	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	17	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.27	0.00	0.07	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	58	0.00	0.00	0.00	0.15
16	0.00	0.00	0.00	0.00	0.00	129	0.00	89	0.17	0.00	0.00	0.50
17	0.00	0.00	0.00	0.00	0.00	44	0.00	85	0.00	0.00	0.00	0.50
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	85	0.00	0.00	0.00	0.50
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	87	0.00	0.00	0.00	0.42
20	0.00	0.00	0.00	0.00	0.00	5.6	0.00	97	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	3.3	0.00	100	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.46	0.00	0.27
30	0.00	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.50
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	17.33	181.90	0.07	640.95	0.17	0.46	0.13	2.84
MEAN	0.000	0.000	0.000	0.000	0.62	5.87	0.002	20.7	0.006	0.015	0.004	0.095
MAX	0.00	0.00	0.00	0.00	17	129	0.07	100	0.17	0.46	0.13	0.50
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	34	361	0.1	1270	0.3	0.9	0.3	5.6
a	134	442	1080	102	1690	1290	609	1590	116	106	101	116

a Combined discharge, in acre-feet, of creek and diversion.

## LOS ANGELES RIVER BASIN

## 11097000 BIG TUJUNGA CREEK BELOW HANSEN DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.36	7.28	3.64	37.5	90.3	76.9	27.0	23.7	6.88	2.50	2.01	2.98
MAX	32.2	153	65.3	742	1218	1387	252	446	81.1	52.4	33.1	41.4
(WY)	1984	1984	1984	1993	1993	1983	1983	1998	1998	1998	1998	1983
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1948	1948	1950	1949	1949	1950	1950	1949	1948	1948	1948	1948

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1948 - 2003	
ANNUAL TOTAL	0.86		843.85			
ANNUAL MEAN	0.002		2.31		23.2	
HIGHEST ANNUAL MEAN					224	
LOWEST ANNUAL MEAN					0.000	
HIGHEST DAILY MEAN	0.43	Jun 20	129	Mar 16	11400	Mar 2 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
MAXIMUM PEAK FLOW			678	Mar 16	15200	Feb 10 1978
MAXIMUM PEAK STAGE			2.03	Mar 16	7.64	Mar 2 1983
ANNUAL RUNOFF (AC-FT)	1.7		1670		16830	
10 PERCENT EXCEEDS	0.00		0.00		17	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 11098000 ARROYO SECO NEAR PASADENA, CA

LOCATION.—Lat 34° 13'20", long 118° 10'36", in NW 1/4 NE 1/4 sec.31, T.2 N., R.12 W., Los Angeles County, Hydrologic Unit 18070105, on right bank, 0.7 mi east of Angeles Crest Highway, 1.5 mi upstream from Millard Canyon, and 5.5 mi northwest of Pasadena.

DRAINAGE AREA.—16.0 mi<sup>2</sup>.

PERIOD OF RECORD.—December 1910 to January 1913 (fragmentary), April 1913 to November 1915, April 1916 to current year.

REVISED RECORDS.—WSP 1315-B: 1914(M), 1918(M), 1920–21(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder. Broad-crested weir since November 1938. Datum of gage is 1,397.88 ft above NGVD of 1929. Prior to Oct. 1, 1916, nonrecording gage at different datum. Oct. 1, 1916, to Oct. 19, 1945, water-stage recorder at datum 4.00 ft lower.

REMARKS.—Records fair above 1 ft<sup>3</sup>/s and poor below. No regulation or diversion upstream from station. See schematic diagram of San Gabriel and Los Angeles River Basins.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,620 ft<sup>3</sup>/s, Mar. 2, 1938, gage height, 9.42 ft, present datum, on basis of slope-area measurement of peak flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 150 ft<sup>3</sup>/s, or maximum, from rating curve extended above 1,170 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	1640	433	3.53	Mar. 16	0005	217	3.04

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.30	0.16	0.77	1.4	1.0	4.8	3.2	4.2	2.3	0.72	0.28	0.15
2	0.27	0.15	0.76	1.3	1.0	4.4	3.4	4.2	2.2	0.69	0.26	0.15
3	0.18	0.12	0.71	1.2	0.97	4.1	3.3	18	2.2	0.62	0.26	0.13
4	0.14	0.13	0.72	1.1	0.97	4.1	3.3	17	2.3	0.56	0.24	0.11
5	0.11	0.17	0.75	1.1	0.97	4.3	3.2	9.4	2.4	e0.55	0.21	0.07
6	0.08	0.17	0.77	1.2	0.96	3.6	3.0	7.6	2.6	e0.54	0.22	0.07
7	0.07	0.20	0.77	1.3	0.94	3.5	2.8	7.3	2.4	0.53	0.27	0.07
8	0.04	1.4	0.77	1.4	0.93	3.2	2.7	7.3	2.2	0.52	0.25	0.09
9	0.06	4.9	0.74	1.4	0.92	3.0	2.5	6.9	2.2	0.54	0.17	0.13
10	0.11	6.0	0.75	1.4	0.91	2.9	2.4	6.5	2.5	0.49	0.16	0.14
11	0.16	2.0	0.73	1.4	1.6	2.8	2.5	6.1	2.5	0.45	0.16	0.12
12	0.12	1.5	0.69	1.4	131	2.7	2.7	5.8	2.4	0.38	0.16	0.09
13	0.11	1.2	0.69	1.4	52	2.6	2.9	5.5	2.2	0.35	0.16	0.10
14	0.10	0.94	0.69	1.4	21	2.6	36	5.5	1.9	0.35	0.15	0.09
15	0.11	0.72	0.69	1.4	12	33	26	5.4	1.8	0.35	0.16	0.09
16	0.15	0.61	4.6	1.3	8.6	82	12	4.9	1.6	0.33	0.16	0.09
17	0.15	0.59	6.4	1.3	6.8	23	9.0	4.7	1.5	0.37	0.16	0.10
18	0.12	0.78	3.1	1.2	5.8	14	7.9	4.5	1.5	0.39	0.16	0.10
19	0.10	0.87	2.2	1.2	5.0	11	7.2	4.3	1.6	0.34	0.17	0.07
20	0.09	0.77	10	1.2	4.4	9.2	6.7	3.8	1.7	0.32	0.17	0.06
21	0.08	0.77	7.0	1.2	3.8	8.0	6.4	3.4	2.0	0.25	0.19	0.04
22	0.12	0.73	4.4	1.2	3.5	7.2	6.2	3.3	2.1	0.27	0.19	0.02
23	0.11	0.82	3.1	1.2	3.3	6.3	5.8	3.7	2.0	0.28	0.18	0.03
24	0.11	0.76	2.5	1.2	3.2	5.8	5.6	4.1	1.8	0.27	0.16	0.10
25	0.13	0.72	2.2	1.1	11	5.3	5.5	4.2	1.6	0.27	0.15	0.11
26	0.11	0.86	2.0	1.1	7.1	5.0	5.1	3.5	1.4	0.23	0.15	0.09
27	0.11	0.95	1.9	1.1	6.2	4.4	4.9	3.1	1.2	0.22	0.15	0.09
28	0.10	0.66	1.8	1.1	5.5	3.9	4.9	2.7	1.1	0.23	0.14	0.08
29	0.12	0.61	1.6	1.1	---	3.6	4.6	2.5	0.98	0.37	0.14	0.09
30	0.12	0.84	1.5	1.1	---	3.4	4.3	2.5	0.81	0.31	0.15	0.11
31	0.14	---	1.5	1.0	---	3.2	---	2.4	---	0.30	0.15	---
TOTAL	3.82	31.10	66.80	38.4	301.37	276.9	196.0	174.3	56.99	12.39	5.68	2.78
MEAN	0.12	1.04	2.15	1.24	10.8	8.93	6.53	5.62	1.90	0.40	0.18	0.093
MAX	0.30	6.0	10	1.4	131	82	36	18	2.6	0.72	0.28	0.15
MIN	0.04	0.12	0.69	1.0	0.91	2.6	2.4	2.4	0.81	0.22	0.14	0.02
AC-FT	7.6	62	132	76	598	549	389	346	113	25	11	5.5

e Estimated.

## LOS ANGELES RIVER BASIN

## 11098000 ARROYO SECO NEAR PASADENA, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.13	3.74	8.49	17.9	32.8	27.6	13.8	7.10	3.45	1.66	0.99	1.02
MAX	8.54	97.4	132	251	344	235	91.5	77.1	22.9	10.7	7.70	8.26
(WY)	1984	1966	1922	1969	1914	1938	1941	1998	1998	1969	1983	1976
MIN	0.000	0.060	0.12	0.58	0.93	1.02	0.63	0.45	0.28	0.042	0.000	0.000
(WY)	1927	1934	1991	1991	1924	2002	2002	2002	2002	1960	1925	1925

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1911 - 2003	
ANNUAL TOTAL	287.46		1166.53			
ANNUAL MEAN	0.79		3.20		9.87	
HIGHEST ANNUAL MEAN					57.8	1969
LOWEST ANNUAL MEAN					0.65	2002
HIGHEST DAILY MEAN	17	Jan 28	131	Feb 12	3690	Feb 20 1914
LOWEST DAILY MEAN	0.02	Sep 22	0.02	Sep 22	0.00	Aug 18 1920
ANNUAL SEVEN-DAY MINIMUM	0.04	Sep 9	0.06	Sep 17	0.00	Aug 18 1920
MAXIMUM PEAK FLOW			433	Feb 12	8620	Mar 2 1938
MAXIMUM PEAK STAGE			3.53	Feb 12	9.42	Mar 2 1938
ANNUAL RUNOFF (AC-FT)	570		2310		7150	
10 PERCENT EXCEEDS	1.5		6.2		16	
50 PERCENT EXCEEDS	0.48		1.1		1.8	
90 PERCENT EXCEEDS	0.08		0.11		0.20	



## 11102300 RIO HONDO BELOW WHITTIER NARROWS DAM, CA

LOCATION.—Lat 34° 01' 00", long 118° 05' 15", in Paso de Bartolo Grant, Los Angeles County, Hydrologic Unit 18070105, on right levee, 0.2 mi upstream from Beverly Boulevard, 0.4 mi downstream from axis of Whittier Narrows Dam, and 1.0 mi northeast of Montebello.

DRAINAGE AREA.—124 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1966 to current year.

GAGE.—Water-stage recorder and concrete-lined flood-control channel. Elevation of gage is 175 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good except for discharges below 500 ft<sup>3</sup>/s, which are poor. Flow regulated by Whittier Narrows Flood-Control Reservoir, capacity, 36,160 acre-ft. There are several small flood-control reservoirs (combined capacities, 1,700 acre-ft) and several small debris basins above Whittier Narrows Dam. Many diversions for domestic use and irrigation. At times flow is diverted from San Gabriel River to Rio Hondo from sites below Santa Fe Dam and above Whittier Narrows Dam. See schematic diagram of [San Gabriel and Los Angeles River Basins](#).

COOPERATION.—Discharge records for current year provided by Los Angeles County Department of Public Works for the following dates: Oct. 1 to Nov. 7, Nov. 10–12, Dec. 10–15, 18, 21–23, Dec. 31 to Feb. 10, Feb. 14–24, 26, Mar. 5–14, Mar. 23 to Apr. 13, Apr. 16 to May 2, and May 4–11.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 38,800 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 13.82 ft, from rating curve extended above 15,000 ft<sup>3</sup>/s, on basis of gate openings at dam at gage heights 12.32 and 13.82 ft; no flow at times in most years.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	48	185	62	68	134	24	5.7	e21	e35	e33	e31
2	0.00	51	178	55	64	115	20	0.31	e19	e35	e36	e31
3	0.00	49	167	53	71	106	0.00	1370	e21	e36	e33	e30
4	0.00	50	165	47	73	150	0.00	49	e30	e36	e34	e30
5	0.00	50	168	46	77	38	0.00	17	e18	e29	e34	e28
6	0.00	49	178	58	77	21	0.00	61	e30	e33	e33	e31
7	0.00	28	183	72	60	85	0.00	124	e34	e35	e33	e31
8	0.00	874	181	72	58	84	0.00	45	e32	e41	e31	e30
9	0.00	948	82	70	56	73	0.00	43	e34	e35	e32	e30
10	0.00	195	76	72	58	75	0.00	38	e34	e53	e30	e29
11	0.00	25	83	71	684	80	0.00	34	e38	e65	e30	e29
12	0.00	69	77	71	4920	82	0.00	e22	e35	e39	e31	e28
13	0.00	116	78	73	816	78	0.00	e21	e36	e34	e28	e29
14	0.00	125	80	73	76	80	1070	e23	e38	e33	e31	e29
15	3.0	131	80	55	187	5310	506	e23	e37	e31	e30	e28
16	5.0	126	1970	4.3	176	3050	13	e25	e36	e35	e31	e30
17	5.0	121	486	6.8	144	414	6.4	e33	e38	e31	e28	e28
18	5.0	133	66	7.9	133	413	5.5	e20	e35	e33	e28	e28
19	5.0	199	145	6.6	101	136	6.7	e19	e55	e31	e32	e28
20	5.0	214	1290	6.8	93	79	6.0	e17	e72	e35	e32	e29
21	0.00	142	53	3.3	87	92	5.7	e33	e41	e34	e31	e30
22	0.00	227	26	31	88	130	36	e34	e39	e37	e31	e31
23	0.00	253	76	69	84	124	64	e11	e34	e28	e32	e36
24	0.35	259	130	71	69	114	65	e19	e35	e35	e31	e32
25	25	200	115	68	838	96	131	e23	e36	e33	e31	e30
26	33	114	168	67	26	94	129	e30	e36	e33	e30	e31
27	32	254	228	70	175	102	75	e23	e35	e32	e28	e28
28	35	281	277	64	137	94	46	e21	e34	e30	e31	e29
29	35	299	320	66	---	89	10	e16	e36	e30	e31	e28
30	37	223	209	67	---	86	7.6	e14	e37	e32	e30	e28
31	36	---	99	71	---	73	---	e29	---	e33	e30	---
TOTAL	261.35	5853	7619	1629.7	9496	11697	2226.90	2243.01	1056	1092	966	890
MEAN	8.43	195	246	52.6	339	377	74.2	72.4	35.2	35.2	31.2	29.7
MAX	37	948	1970	73	4920	5310	1070	1370	72	65	36	36
MIN	0.00	25	26	3.3	26	21	0.00	0.31	18	28	28	28
AC-FT	518	11610	15110	3230	18840	23200	4420	4450	2090	2170	1920	1770

e Estimated.



## 11102300 RIO HONDO BELOW WHITTIER NARROWS DAM, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	95.3	137	158	326	500	329	117	107	96.7	66.9	49.8	67.0
MAX	302	362	522	2378	3459	2265	371	323	355	205	244	413
(WY)	1984	1992	1992	1993	1969	1983	1983	1998	1992	1993	1991	1991
MIN	0.001	7.08	10.3	29.2	22.1	15.6	4.25	0.000	0.000	0.000	0.000	0.000
(WY)	1978	1978	1977	1976	1984	1972	1977	1999	2001	2001	2000	2001

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1967 - 2003	
ANNUAL TOTAL	27858.97		45029.96			
ANNUAL MEAN	76.3		123		169	
HIGHEST ANNUAL MEAN					638	
LOWEST ANNUAL MEAN					40.9	
HIGHEST DAILY MEAN	1970	Dec 16	5310	Mar 15	21200	Mar 2 1983
LOWEST DAILY MEAN	0.00	Jan 20	0.00	Oct 1	0.00	Oct 29 1966
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 20	0.00	Oct 1	0.00	Sep 10 1969
MAXIMUM PEAK FLOW			17800	Mar 15	38800	Jan 25 1969
MAXIMUM PEAK STAGE			9.15	Mar 15	13.82	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	55260		89320		122500	
10 PERCENT EXCEEDS	164		178		244	
50 PERCENT EXCEEDS	55		35		71	
90 PERCENT EXCEEDS	0.00		5.0		1.9	

## 11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA

LOCATION.—Lat 34° 10'46", long 119° 02'20", in Guadaluca Grant, [Ventura County](#), Hydrologic Unit 18070103, on downstream side of county road bridge, 1.0 mi northeast of Camarillo State Hospital, and 1.4 mi downstream from Conejo Creek.

DRAINAGE AREA.—248 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—Water years 1969–83, October 1996 to current year.

GAGE.—Water-stage recorder. Datum of gage is 58.42 ft above NGVD of 1929 (levels by Ventura County Watershed Protection District).

REMARKS.—Records good. Flow partially diverted since April 2002, at Conejo Creek Diversion, located approximately 3.5 miles upstream and operated by Camrosa Water District. Pumping for irrigation in valley 1.0 mi above station. Sustained flow from city of Thousand Oaks Reclamation Plant.

COOPERATION.—Records were furnished by Ventura County Watershed Protection District and reviewed by U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 25,900 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 10.08 ft, maximum gage height, 10.54 ft, Feb. 16, 1980, from rating curve extended above 4,600 ft<sup>3</sup>/s, on basis of slope-conveyance study of maximum flow; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,100 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)
Nov. 8	0515	2,360	3.75	Feb. 12	1625	9,270	6.41
Dec. 16	2040	2,370	3.76	Mar. 15	1315	7,820	5.97
Dec. 20	0550	3,720	4.44	May 3	1130	1,160	2.95

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	9.6	46	27	17	37	31	20	15	14	12	12
2	11	9.8	25	25	20	34	30	54	14	13	11	11
3	12	10	27	21	16	34	31	497	15	16	12	9.3
4	15	6.6	27	16	14	34	31	49	14	15	12	9.7
5	15	4.7	24	17	13	33	33	23	13	12	9.9	11
6	15	5.9	21	16	12	31	36	19	13	14	11	9.7
7	13	10	22	16	11	30	33	17	12	15	9.9	14
8	10	1230	23	15	11	26	32	15	14	12	9.2	13
9	11	535	22	14	13	25	32	14	16	10	8.7	9.7
10	13	154	16	14	15	24	30	12	13	11	9.6	11
11	14	37	17	15	198	20	31	14	13	11	12	11
12	12	26	18	16	4410	17	35	14	18	11	11	9.1
13	13	15	17	15	719	18	66	15	19	8.8	10	9.8
14	8.7	14	19	18	98	18	325	15	12	9.1	13	11
15	7.8	12	35	14	53	2430	69	16	12	10	16	13
16	9.5	12	410	14	45	385	31	15	12	12	9.2	12
17	6.6	22	140	14	41	73	29	14	13	11	11	11
18	7.9	20	33	14	39	53	31	17	13	12	12	11
19	7.6	15	26	14	37	43	29	18	14	12	12	9.2
20	8.7	13	1010	13	28	31	28	16	14	11	12	9
21	8.8	15	74	12	23	27	25	12	12	11	11	10
22	7.1	16	109	13	28	25	23	12	14	9.9	12	11
23	9.8	15	38	13	37	29	27	12	12	11	11	10
24	9.6	21	33	15	47	29	28	11	10	10	13	11
25	11	19	30	13	292	35	26	14	12	8.7	12	11
26	7.9	16	30	15	65	28	21	16	10	10	13	10
27	12	13	28	14	86	27	23	16	9.5	13	12	11
28	8.2	15	28	16	44	26	19	14	9.8	12	12	12
29	4.5	14	44	18	---	25	19	12	10	13	12	12
30	6.5	35	29	17	---	26	19	13	13	11	13	12
31	5.8	---	27	17	---	29	---	13	---	13	12	---
TOTAL	310.8	2340.6	2448	491	6432	3702	1223	1019	391.3	362.5	356.5	326.5
MEAN	10.0	78.0	79.0	15.8	230	119	40.8	32.9	13.0	11.7	11.5	10.9
MAX	15	1230	1010	27	4410	2430	325	497	19	16	16	14
MIN	4.5	4.7	16	12	11	17	19	11	9.5	8.7	8.7	9.0
AC-FT	616	4640	4860	974	12760	7340	2430	2020	776	719	707	648

11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.8	30.9	47.2	92.1	174	111	27.7	19.5	14.0	11.9	11.3	13.3
MAX	33.5	119	227	462	1147	677	72.4	73.0	33.7	24.5	23.6	36.4
(WY)	1997	1971	1998	1969	1998	1983	1983	1998	1998	1983	1983	1983
MIN	1.83	2.61	2.84	3.94	5.61	6.17	3.45	1.83	1.20	0.47	0.090	1.07
(WY)	1971	1969	1969	1970	1971	1972	1970	1970	1971	1971	1970	1970

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1969 - 2003	
ANNUAL TOTAL	10218.7		19403.2			
ANNUAL MEAN	28.0		53.2		46.5	
HIGHEST ANNUAL MEAN					149 1998	
LOWEST ANNUAL MEAN					8.46 1970	
HIGHEST DAILY MEAN	1230	Nov 8	4410	Feb 12	9690	Mar 1 1983
LOWEST DAILY MEAN	3.2	Sep 18	4.5	Oct 29	0.00	Apr 24 1970
ANNUAL SEVEN-DAY MINIMUM	4.1	Sep 12	7.5	Oct 31	0.00	Jul 19 1970
MAXIMUM PEAK FLOW			9270	Feb 12	25900	Mar 1 1983
MAXIMUM PEAK STAGE			6.41	Feb 12	10.54	Feb 16 1980
ANNUAL RUNOFF (AC-FT)	20270		38490		33720	
10 PERCENT EXCEEDS	32		37		42	
50 PERCENT EXCEEDS	16		14		15	
90 PERCENT EXCEEDS	6.0		9.8		3.0	

## 11106550 CALLEGUAS CREEK AT CAMARILLO STATE HOSPITAL, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1969–78, October 1996 to current year.

WATER TEMPERATURE: Water years 1971–78, October 1996 to current year.

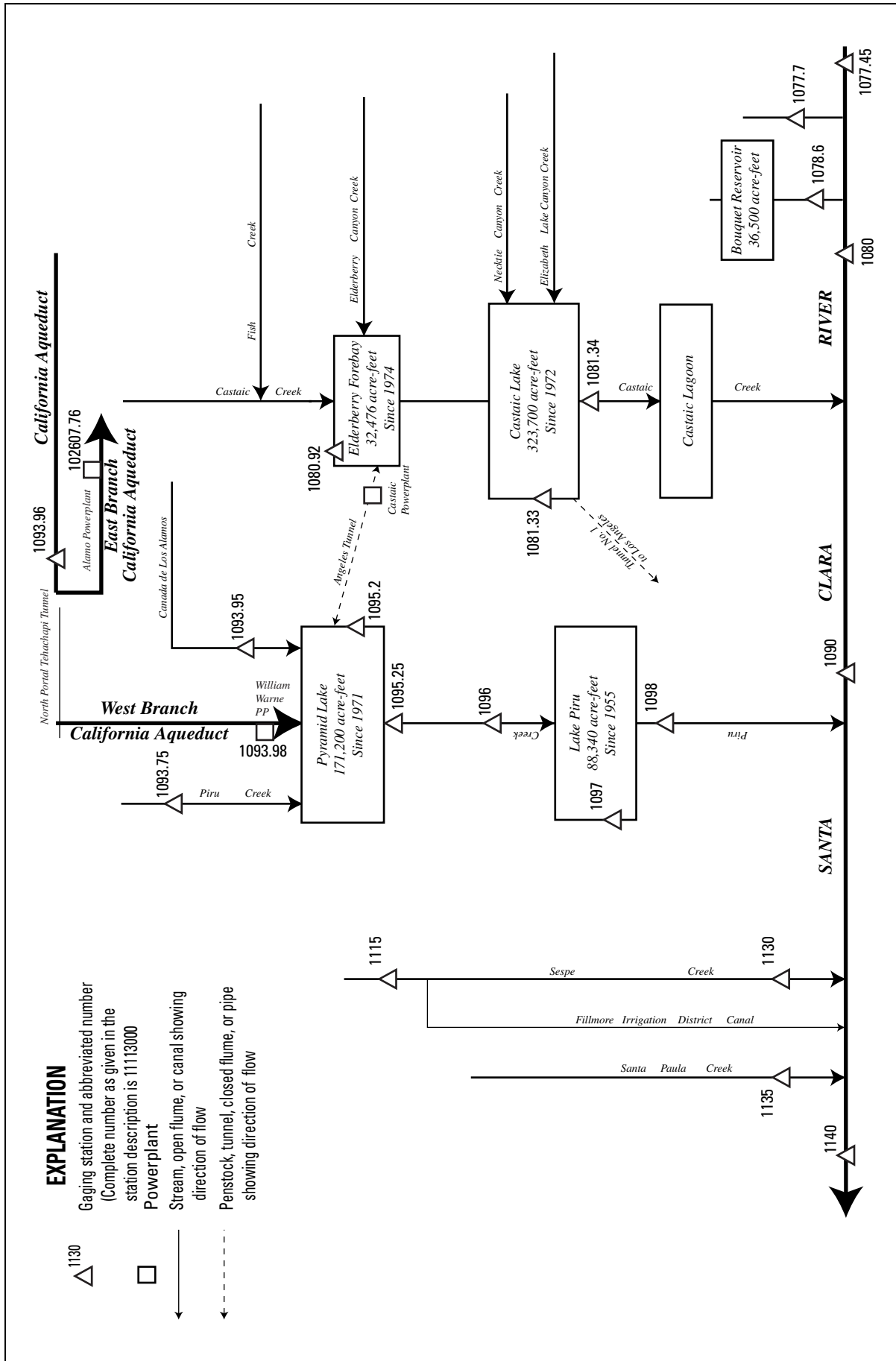
SEDIMENT DATA: Water years 1969–78, October 1996 to current year.

PERIOD OF DAILY RECORD.—Water years 1969–78, October 1996 to September 2002.

SEDIMENT DATA: Water years 1969–78, October 1996 to September 2002.

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
JAN					
16...	1235	11	16.5	10	.30
FEB					
06...	1625	12	14.0	26	.84
13...	1340	345	16.0	1220	1130
21...	1400	24	19.0	8	.52
26...	0755	66	12.5	96	17
MAR					
14...	0730	16	17.0	8	.35
16...	0810	455	15.0	2040	2510
16...	0835	417	15.0	1640	1850
APR					
09...	0835	32	15.5	10	.86
15...	1730	41	--	26	2.9
29...	1125	23	19.0	10	.62
MAY					
03...	1055	819	15.0	4660	10300
03...	1115	883	15.0	4710	11200



**EXPLANATION**

- △ 1130 Gaging station and abbreviated number (Complete number as given in the station description is 1113000)
- Powerplant
- Stream, open flume, or canal showing direction of flow
- - - Penstock, tunnel, closed flume, or pipe showing direction of flow

Figure 19. Diversions and storage in Santa Clara River Basin.

## 11107745 SANTA CLARA RIVER ABOVE RAILROAD STATION, NEAR LANG, CA

LOCATION.—Lat 34° 25' 47", long 118° 21' 16", in NE 1/4 SW 1/4 sec.16, T.4 N., R.14 W., Los Angeles County, Hydrologic Unit 18070102, on right bank, 0.2 mi upstream from railroad bridge, 1.8 mi downstream from Agua Dulce Canyon, and 1.0 mi southeast of Lang.

DRAINAGE AREA.—157 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1949 to September 1968, October 1969 to September 1977, February 2002 to current year. Monthly discharges only for water years 1950–68, 1970 published in WDR CA-71-1. Daily discharges are available in the files of the U.S. Geological Survey. Records prior to February 2002 were furnished by the Los Angeles County Department of Public Works and reviewed by the U.S. Geological Survey.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 1,790 ft above NAVD of 1988, from topographic map. For history of station locations during previous periods of station operation, see WDR CA-77-1.

REMARKS.—Records poor. No regulation above station. Small diversions for irrigation and recreation above station. See schematic diagram of [Santa Clara River Basin](#). This station is designated by the Los Angeles County Department of Public Works as station F93B-R.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,200 ft<sup>3</sup>/s, Jan. 16, 1952, Nov. 21, 1967, gage height unknown; maximum recorded gage height, 5.15 ft, Feb. 12, 2003; no flow for all or most of each year.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 5,910 ft<sup>3</sup>/s, estimated, Feb. 25, 1969.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	e0.22	e2.3	e2.5	e0.02	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	e0.20	e2.3	e2.5	e0.01	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	e0.17	e2.3	e15	e0.01	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	e1.0	e2.2	e7.0	e0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	e0.70	e2.2	e5.1	e0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	e0.60	e2.2	e4.3	e0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	e0.54	e2.2	e3.2	e0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	e0.40	e2.2	e2.6	e0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	e0.30	e2.1	e2.1	e0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	e0.18	e2.1	e1.6	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	e0.12	e1.9	e1.3	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	e185	e0.07	e1.8	e1.1	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	e7.5	e0.01	e3.0	e1.0	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	e3.0	e0.00	e80	e0.90	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	e2.0	e35	e20	e0.75	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	e1.0	e15	e7.0	e0.60	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	e0.50	e10	e4.1	e0.50	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	e0.15	e7.2	e3.3	e0.45	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	e0.02	e6.3	e3.1	e0.40	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	e0.00	e4.9	e3.0	e0.32	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	e0.00	e4.0	e3.0	e0.29	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	e0.00	e3.3	e2.9	e0.27	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	e0.00	e3.1	e2.7	e0.25	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	e3.0	e3.0	e2.7	e0.21	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	e0.49	e2.8	e2.6	e0.16	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	e0.41	e2.7	e2.6	e0.12	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	e0.30	e2.5	e2.6	e0.10	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	e0.25	e2.4	e2.5	e0.09	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	e2.4	e2.5	e0.07	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	e2.3	e2.5	e0.05	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	e2.3	---	e0.03	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	203.62	113.71	175.9	54.86	0.04	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	7.27	3.67	5.86	1.77	0.001	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	185	35	80	15	0.02	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	1.8	0.03	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	404	226	349	109	0.08	0.00	0.00	0.00

e Estimated.

## 11107745 SANTA CLARA RIVER ABOVE RAILROAD STATION, NEAR LANG, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.99	2.52	4.72	9.49	6.57	9.12	8.04	3.89	1.87	1.03	0.85	0.77
MAX	5.18	21.9	53.7	157	34.3	115	76.5	30.6	12.2	3.45	2.24	1.60
(WY)	1970	1966	1966	1952	1962	1952	1958	1967	1967	1967	1952	1958
MIN	0.000	0.000	0.000	0.000	0.13	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1973	1976	1976	1976	1977	2002	2002	2002	2002	1977	1976	1972

## SUMMARY STATISTICS

## FOR 2003 WATER YEAR

## WATER YEARS 1950 - 2003

ANNUAL TOTAL	548.13		
ANNUAL MEAN	1.50		4.22
HIGHEST ANNUAL MEAN			29.3
LOWEST ANNUAL MEAN			0.20
HIGHEST DAILY MEAN	185	Feb 12	1280
LOWEST DAILY MEAN	0.00	Oct 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 1	0.00
MAXIMUM PEAK FLOW	e998	Feb 12	4200
MAXIMUM PEAK STAGE	5.15	Feb 12	5.15
ANNUAL RUNOFF (AC-FT)	1090		3060
10 PERCENT EXCEEDS	2.6		7.0
50 PERCENT EXCEEDS	0.00		1.3
90 PERCENT EXCEEDS	0.00		0.10

e Estimated.

## 11107770 MINT CANYON CREEK AT FITCH AVENUE, NEAR SAUGUS, CA

LOCATION.—Lat 34° 26' 48", long 118° 25' 37", in SE 1/4 NW 1/4 sec.11, T.4 N., R.15 W., Los Angeles County, Hydrologic Unit 18070102, on right bank, on upstream side of Fitch Avenue Bridge, 2.9 mi upstream from confluence with Santa Clara River, and 4.0 mi east of Saugus.

DRAINAGE AREA.—27.4 mi<sup>2</sup>.

PERIOD OF RECORD.—November 2001 to current year.

GAGE.—Water-stage recorder. Auxiliary gage 0.3 mi upstream with crest-stage gage and concrete road crossing. Elevation of gage is 1,660 ft above NAVD of 1988, from topographic map.

REMARKS.—Records poor. No regulation or diversion upstream from station. This station is designated by the Los Angeles County Department of Public Works as station F328-R.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 539 ft<sup>3</sup>/s, Feb. 12, 2003, gage height, 8.67 ft, from rating curve extended above 175 ft<sup>3</sup>/s; maximum gage height, 8.74 ft, Nov. 24, 2001; no flow for many days each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 50 ft<sup>3</sup>/s, or maximum, from rating curve extended above 175 ft<sup>3</sup>/s:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 12	0830	539	8.67	Mar. 16	0000	54	7.34

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.25	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	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	0.15	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	2.5	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	0.00	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	0.00	0.00	0.00	0.00	0.00
8	0.00	0.08	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	0.08	0.88	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	152	0.48	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	4.7	0.00	0.18	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	6.1	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	3.2	1.4	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.61	0.00	0.00	3.2	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	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.01	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	3.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	2.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	4.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.23	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.16	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.04	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	0.08	1.45	0.00	166.90	10.53	7.68	0.15	0.00	0.00	0.00	0.00
MEAN	0.000	0.003	0.047	0.000	5.96	0.34	0.26	0.005	0.000	0.000	0.000	0.000
MAX	0.00	0.08	0.61	0.00	152	3.2	6.1	0.15	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	0.2	2.9	0.00	331	21	15	0.3	0.00	0.00	0.00	0.00



## 11107770 MINT CANYON CREEK AT FITCH AVENUE, NEAR SAUGUS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	SUG	SEP
MEAN	0.000	0.003	0.052	0.023	2.98	0.18	0.13	0.002	0.000	0.000	0.000	0.000
MAX	0.000	0.003	0.056	0.046	5.96	0.34	0.26	0.005	0.000	0.000	0.000	0.000
(WY)	2003	2003	2002	2002	2003	2003	2003	2003	2002	2002	2002	2002
MIN	0.000	0.003	0.047	0.000	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	2003	2003	2003	2003	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 2002 - 2003
ANNUAL TOTAL	3.62	186.79	
ANNUAL MEAN	0.010	0.51	0.51
HIGHEST ANNUAL MEAN			0.51 2003
LOWEST ANNUAL MEAN			0.51 2003
HIGHEST DAILY MEAN	0.74 Jan 27	152 Feb 12	152 Feb 12 2003
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Nov 5 2001
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 7	0.00 Oct 1	0.00 Nov 5 2001
MAXIMUM PEAK FLOW		539 Feb 12	539 Feb 12 2003
MAXIMUM PEAK STAGE		8.67 Feb 12	8.74 Nov 24 2001
ANNUAL RUNOFF (AC-FT)	7.2	370	371
10 PERCENT EXCEEDS	0.00	0.00	0.00
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

## 11107860 BOUQUET CREEK NEAR SAUGUS, CA

LOCATION.—Lat 34° 26' 56", long 118° 30' 22", in NE 1/4 NE 1/4 sec.12, T.4 N., R.16 W., Los Angeles County, Hydrologic Unit 18070102, on left bank, 100 ft upstream from Urbandale Avenue Bridge, 0.3 mi upstream from Haskell Canyon, and 3.2 mi northeast of Saugus.

DRAINAGE AREA.—51.6 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1970 to September 1975, January 2002 to September 2003 (discontinued).

GAGE.—Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 1,305 ft above NAVD of 1988, from topographic map. October 1970 to September 1975, at same site at different datum.

REMARKS.—Records poor. Partial regulation by Bouquet Reservoir, capacity, 36,500 acre-ft, principally used as equalizing reservoir to city of Los Angeles aqueduct. Some pumping of wells for irrigation upstream from station. This station is designated by the Los Angeles County Department of Public Works as station F377-R.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 750 ft<sup>3</sup>/s, Feb. 11, 1973, gage height, 3.04 ft, datum then in use, maximum gage height, 4.24 ft, Feb. 12, 2003; no flow at times in each year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.04	0.00	0.09	0.00	0.00	0.00	0.00	e0.10	0.00	0.00	0.00	e0.00
2	0.03	0.01	0.00	0.00	0.00	0.00	0.00	e0.65	0.00	0.00	0.00	e0.00
3	e0.02	0.00	0.00	0.00	0.00	0.00	0.00	e18	0.00	0.00	e0.02	e0.00
4	e0.01	0.13	0.11	0.00	0.00	0.05	0.00	e2.0	0.00	0.00	e0.18	e0.00
5	e0.00	0.00	0.04	0.00	0.00	0.00	0.00	e1.4	0.00	0.00	e0.05	e0.00
6	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	e1.2	0.00	0.00	e0.01	e0.00
7	e0.00	2.1	0.00	0.00	0.00	0.00	0.00	e0.31	0.00	0.00	e0.00	e0.00
8	e0.00	16	0.00	0.00	0.00	0.00	0.00	e0.07	0.00	0.00	e0.00	e0.00
9	e0.00	1.2	0.00	0.00	0.00	0.00	0.00	e0.02	0.00	0.00	e0.00	0.00
10	e0.00	0.34	0.00	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	e0.00	0.00
11	e0.01	0.25	0.00	0.00	0.36	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
12	e0.00	0.17	0.00	0.00	122	0.00	0.00	0.00	0.00	0.00	e0.00	0.00
13	e0.00	0.29	0.00	0.00	0.17	0.00	0.20	0.00	0.00	0.00	e0.00	0.00
14	e0.01	0.08	0.00	0.00	0.00	0.00	39	0.01	0.00	0.00	e0.00	0.00
15	e0.01	0.07	0.00	0.00	0.00	e20	e10	0.00	0.00	0.00	e0.00	0.00
16	e0.00	0.09	1.9	0.00	0.00	e3.0	e1.0	0.00	0.00	0.00	e0.00	0.00
17	e0.00	0.11	0.00	0.00	0.00	e0.00	e0.15	0.00	0.00	0.00	e0.00	0.00
18	e0.00	0.06	0.00	0.00	0.00	0.00	e0.08	0.00	0.00	0.00	e0.00	0.00
19	e0.00	0.13	0.04	0.00	0.00	0.01	e0.01	0.00	0.00	0.00	e0.00	0.00
20	e0.00	0.12	7.5	0.00	0.15	0.33	e0.00	0.00	0.00	0.00	e0.00	0.00
21	e0.01	0.00	0.47	0.00	0.00	0.02	e0.00	0.00	0.00	0.00	e0.00	0.00
22	e0.00	0.00	0.02	0.00	0.00	0.01	e0.00	0.00	0.00	0.00	e0.00	0.00
23	e0.01	0.01	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	e0.00	0.00
24	e0.01	0.04	0.00	0.00	1.9	0.00	e0.00	0.00	0.00	0.00	e0.00	e0.00
25	e0.01	0.04	0.00	0.00	0.19	0.00	e0.00	0.00	0.00	0.00	e0.00	e0.00
26	0.01	0.07	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	e0.00	e0.00
27	0.01	0.03	0.00	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	e0.00	e0.00
28	0.00	0.14	0.01	0.00	0.00	0.00	e0.00	0.00	0.00	0.00	e0.00	e0.00
29	0.00	0.11	0.02	0.00	---	0.01	e0.00	0.00	0.00	0.00	e0.00	e0.00
30	0.00	0.58	0.00	0.00	---	e0.00	e0.00	0.00	0.00	0.00	e0.00	e0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	e0.00	---
TOTAL	0.19	22.17	10.20	0.00	124.77	23.43	50.44	23.76	0.00	0.00	0.26	0.00
MEAN	0.006	0.74	0.33	0.000	4.46	0.76	1.68	0.77	0.000	0.000	0.008	0.000
MAX	0.04	16	7.5	0.00	122	20	39	18	0.00	0.00	0.18	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	0.4	44	20	0.00	247	46	100	47	0.00	0.00	0.5	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2003, BY WATER YEAR (WY)

	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				
MEAN	0.34	0.68	1.28	0.92	1.91	0.67	0.24	0.11	0.022	0.079	0.44	0.41																									
MAX	1.90	2.88	3.70	4.23	4.54	2.36	1.68	0.77	0.080	0.48	2.99	2.75																									
(WY)	1972	1972	1971	1971	1973	1971	2003	2003	1971	1971	1971	1971																									
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000																									
(WY)	1973	1974	1973	1975	1972	1972	1972	1971	1972	1972	1972	1972																									

## SUMMARY STATISTICS

## FOR 2003 WATER YEAR

## WATER YEARS 1971 - 2003

ANNUAL TOTAL	255.22	
ANNUAL MEAN	0.70	0.63
HIGHEST ANNUAL MEAN		1.77
LOWEST ANNUAL MEAN		0.045
HIGHEST DAILY MEAN	122	Feb 12 2003
LOWEST DAILY MEAN	0.00	Oct 5 1970
ANNUAL SEVEN-DAY MINIMUM	0.00	Dec 6 1970
MAXIMUM PEAK FLOW	562	Feb 12 1973
MAXIMUM PEAK STAGE	4.24	Feb 12 2003
ANNUAL RUNOFF (AC-FT)	506	455
10 PERCENT EXCEEDS	0.11	1.4
50 PERCENT EXCEEDS	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00

e Estimated.

## 11108000 SANTA CLARA RIVER NEAR SAUGUS, CA

LOCATION.—Lat 34° 25' 34", long 118° 35' 09", in San Francisco Grant, Los Angeles County, Hydrologic Unit 18070102, on left bank, on downstream side of The Old Road Bridge, and 2.8 mi northwest of Saugus.

DRAINAGE AREA.—411 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1929 to September 1955, February 2002 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Auxiliary gage 120 ft downstream with crest-stage gage and concrete drop structure. Elevation of gage is 1,045 ft above NAVD of 1988, from topographic map. From Sept. 21, 1938, to September 1955, at same site at different datum. Prior to Sept. 21, 1938, at site 1,000 ft downstream at different datum.

REMARKS.—Records poor. Flow slightly regulated by Bouquet Reservoir, capacity, 36,500 acre-ft, principally used as an equalizing reservoir for the city of Los Angeles Aqueduct. Base flow may be affected by pumping from wells along the river for irrigation. Releases of treated wastewater from the city of Saugus Water Reclamation Plant supplies most of the base flow at this station. This station is designated by the Los Angeles County Department of Public Works as station F92B-R.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 24,000 ft<sup>3</sup>/s, estimated, Mar. 2, 1938, gage height unknown; maximum recorded gage height, 15.07 ft, Jan. 1, 1934, site and datum then in use; no flow at times in 1933, 1935–38, and 1955.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	2.7	4.2	4.6	12	10	5.8	e4.8	4.4	3.5	3.5	2.4
2	2.3	2.7	3.4	4.8	13	9.8	5.6	6.8	5.4	3.5	3.3	2.5
3	2.3	2.8	3.3	5.0	12	8.0	6.5	54	5.4	3.5	3.5	2.7
4	2.4	2.8	3.3	4.8	8.8	7.5	5.4	6.2	5.8	4.6	2.9	2.7
5	2.4	2.8	3.4	5.2	9.1	9.0	5.1	4.3	5.7	4.1	3.4	2.9
6	2.4	2.7	3.3	6.3	9.8	7.9	4.4	4.9	5.7	3.4	3.8	2.8
7	2.4	51	3.1	6.8	10	7.5	4.3	4.5	4.8	4.9	3.8	2.9
8	2.4	186	3.1	7.6	12	6.4	5.1	5.1	4.6	5.7	3.7	3.0
9	2.4	7.5	3.4	7.7	9.0	5.8	4.6	5.4	4.8	5.6	3.3	3.2
10	2.4	4.3	3.5	7.5	8.3	5.3	4.6	5.1	4.5	5.6	3.6	3.1
11	2.5	3.7	3.6	7.8	63	5.6	5.2	5.0	4.6	4.8	3.3	2.9
12	2.5	3.8	3.7	8.0	e1600	5.4	5.2	4.7	4.9	3.3	2.9	2.7
13	2.5	3.7	3.8	9.5	e75	5.5	7.3	5.3	4.3	3.4	2.3	2.8
14	2.5	3.7	3.8	8.9	16	5.5	288	5.3	4.1	5.0	2.3	2.6
15	2.6	3.7	3.9	9.0	12	113	85	4.4	4.0	5.5	2.3	2.5
16	2.6	3.5	222	9.3	8.9	25	e7.6	4.2	3.9	4.6	2.1	2.4
17	2.6	3.6	16	7.5	6.6	9.6	e7.2	4.9	3.9	2.6	2.1	2.4
18	2.6	3.8	10	8.0	5.6	e7.8	e6.5	5.6	4.0	3.3	2.0	2.3
19	2.6	3.7	11	9.7	5.5	7.4	e6.2	6.2	4.1	2.9	2.1	2.4
20	2.6	3.8	213	9.3	5.8	6.2	e6.0	5.6	4.1	3.2	2.4	2.4
21	2.6	3.7	6.7	8.9	7.8	5.3	e5.7	5.8	3.9	2.9	2.7	2.3
22	2.7	3.6	5.9	9.8	7.1	4.6	e5.6	5.0	4.1	2.6	2.8	2.2
23	2.7	3.7	5.1	11	5.1	5.3	e5.5	4.8	4.2	4.1	2.6	2.1
24	2.8	3.5	4.8	9.8	14	5.6	e5.4	4.5	3.8	4.7	2.6	2.1
25	2.8	3.5	4.7	10	22	6.6	e5.4	5.1	3.6	4.7	2.6	2.2
26	2.8	3.5	4.1	10	13	6.0	e5.2	5.3	3.5	3.3	2.7	2.1
27	2.8	3.4	4.1	10	10	5.6	e5.2	5.1	3.4	2.9	2.7	2.1
28	2.7	3.6	4.0	12	9.9	5.9	e5.2	4.3	4.0	3.2	2.7	2.1
29	2.7	4.9	4.2	12	---	4.7	e5.1	5.6	4.8	3.6	2.7	2.0
30	2.7	28	4.6	9.6	---	5.0	e5.0	5.6	4.9	3.5	2.5	1.9
31	2.7	---	5.1	11	---	6.4	---	5.0	---	3.3	2.3	---
TOTAL	79.4	363.7	578.1	261.4	1991.3	329.2	528.9	208.4	133.2	121.8	87.5	74.7
MEAN	2.56	12.1	18.6	8.43	71.1	10.6	17.6	6.72	4.44	3.93	2.82	2.49
MAX	2.8	186	222	12	1600	113	288	54	5.8	5.7	3.8	3.2
MIN	2.3	2.7	3.1	4.6	5.1	4.6	4.3	4.2	3.4	2.6	2.0	1.9
AC-FT	157	721	1150	518	3950	653	1050	413	264	242	174	148

e Estimated.

## SANTA CLARA RIVER BASIN

## 11108000 SANTA CLARA RIVER NEAR SAUGUS, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.25	2.43	8.63	30.3	45.0	58.8	13.5	4.39	2.49	1.67	1.21	1.11
MAX	6.45	12.1	35.5	297	504	396	139	32.4	10.1	6.39	4.35	4.57
(WY)	1945	2003	1939	1943	1944	1938	1941	1941	1944	1944	1944	1944
MIN	0.000	0.000	0.11	0.10	0.22	0.11	0.21	0.20	0.030	0.000	0.000	0.000
(WY)	1937	1937	1938	1938	1953	1955	1954	1936	1936	1936	1936	1936

## SUMMARY STATISTICS

## FOR 2003 WATER YEAR

## WATER YEARS 1930 - 2003

ANNUAL TOTAL	4757.6		
ANNUAL MEAN	13.0	14.3	
HIGHEST ANNUAL MEAN		68.6	1944
LOWEST ANNUAL MEAN		0.30	1951
HIGHEST DAILY MEAN	1600	Feb 12	9360 Feb 22 1944
LOWEST DAILY MEAN	1.9	Sep 30	0.00 Jul 16 1933
ANNUAL SEVEN-DAY MINIMUM	2.1	Sep 24	0.00 Jul 16 1933
MAXIMUM PEAK FLOW	7290	Feb 12	e24000 Mar 2 1938
MAXIMUM PEAK STAGE	7.76	Feb 12	15.07 Jan 1 1934
ANNUAL RUNOFF (AC-FT)	9440		10320
10 PERCENT EXCEEDS	9.8		14
50 PERCENT EXCEEDS	4.6		1.0
90 PERCENT EXCEEDS	2.5		0.10

e Estimated.

## 11108092 ELDERBERRY FOREBAY NEAR CASTAIC, CA

LOCATION.—Lat 34° 33' 46", long 118° 37' 58", in SW 1/4 SE 1/4 sec.36, T.6 N., R.17 W., Los Angeles County, Hydrologic Unit 18070102, Angeles National Forest, in outlet tower in Elderberry Forebay, and 5 mi north of Castaic.

PERIOD OF RECORD.—October 1995 to current year. Prior to October 1995 in files of California Department of Water Resources.

GAGE.—Water-stage recorder. Elevation of gage is NGVD of 1929 (levels by Los Angeles Department of Water and Power).

REMARKS.—Forebay is formed by a concrete dam on Castaic Creek completed in 1974. Capacity, 32,476 acre-ft, at spillway crest on dam, at elevation 1,540 ft. Storage at normal minimum pool, 12,228 acre-ft, at elevation 1,490 ft. Forebay receives water from Pyramid Lake (station 11109520) via Castaic Powerplant. Water is pumped at times to Pyramid Lake during off-peak periods to be re-released through the powerplant. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of [Santa Clara River Basin](#).

COOPERATION.—Records were provided by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2426. Contents not rounded to U.S. Geological Survey standards.

EXTREMES (AT 2400 HOURS) FOR PERIOD OF RECORD.—Maximum contents, 31,537 acre-ft, Oct. 5, 2000, elevation, 1,538.09 ft; minimum, 15,716 acre-ft, Feb. 9, 1996, elevation, 1,500.54 ft.

EXTREMES (AT 2400 HOURS) FOR CURRENT YEAR.—Maximum contents, 29,829 acre-ft, June 6, elevation, 1,534.56 ft; minimum, 16,358 acre-ft, Mar. 8, elevation, 1,502.36 ft.

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

Based on table provided by California Department of Water Resources dated Jan. 27, 1995)

1,490	12,228	1,510	19,183	1,530	27,680	1,540	32,476
1,500	15,527	1,520	23,240				

## RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22084	23888	20656	23138	20096	18048	23104	23484	19107	24078	24478	26400
2	26044	21392	23092	24470	17762	17695	21778	24666	23019	25803	22217	25865
3	25062	21458	23049	23716	17754	19057	21307	19138	23147	25393	19331	26116
4	22905	21197	22969	20250	17566	18771	18668	19338	23992	27161	19982	26668
5	20163	21323	22154	19115	17273	19400	17354	21319	26121	23750	20704	27151
6	19335	21980	24187	19192	17662	19319	18585	22275	29829	19633	21848	24666
7	22677	22724	21976	20167	17386	19856	19327	24435	23253	22013	22749	19836
8	22892	24178	20720	21868	17588	16358	20171	26959	20801	22254	22188	22013
9	25416	20131	19676	22850	17884	16841	21274	28146	23854	22484	24899	22918
10	24767	17029	21478	23241	18756	20274	21980	23241	23888	24675	26387	23501
11	24789	18676	22568	22555	19223	21161	21939	20258	25847	25973	20644	23578
12	23322	23531	22133	22711	19903	21242	18460	22104	25181	26098	21221	25460
13	21254	23879	22338	21433	17829	21043	18916	22854	26360	24583	22129	21274
14	21185	24732	20680	21360	20202	23888	22063	21099	21478	23772	21543	19019
15	21250	25513	19350	21364	20560	22417	22313	23686	18653	22009	21400	21749
16	21409	21634	18055	21749	20837	21745	22067	26296	22200	23053	20660	22396
17	23232	19919	22476	22254	18824	22346	22017	22791	22998	20861	20167	23992
18	24969	23394	23236	22221	18744	22568	22964	20628	25642	21980	20934	23841
19	23970	20974	27677	20942	19254	21778	21099	22471	25181	21124	21494	25416
20	20524	21926	24295	20765	20321	22317	20321	23300	25780	19342	21984	21769
21	22158	22943	20881	20199	21356	22425	19362	24005	21704	22952	22384	20688
22	21433	25704	19583	20853	19997	22644	18370	27617	17585	22150	24785	21396
23	21185	23232	20568	21671	19887	23962	23219	28067	20472	22017	20938	21368
24	23407	21490	22430	21968	20476	22017	24057	22825	21556	21802	19400	21589
25	23130	23707	21654	20433	19711	21568	20417	18543	24083	21906	22770	21531
26	20049	28127	22787	19100	21262	21059	18205	22568	24693	19385	23475	21535
27	16733	29271	22589	18257	21079	21523	18385	22665	24009	19439	24566	21128
28	18615	25740	20262	18904	19879	23373	19161	28053	21282	20740	25212	19115
29	18145	26781	19142	19727	---	20457	20692	27349	20191	24156	26891	20789
30	20841	21773	21197	20760	---	20516	22171	28699	22943	24561	26332	20740
31	21103	---	21396	21584	---	25803	---	22564	---	26868	24457	---
MAX	26044	29271	27677	24470	21356	25803	24057	28699	29829	27161	26891	27151
MIN	16733	17029	18055	18257	17273	16358	17354	18543	17585	19342	19331	19019
a	1514.86	1516.50	1515.58	1516.04	1511.79	1525.87	1517.46	1518.40	1519.30	1528.23	1522.82	1513.96
b	-728	+670	-377	+188	-1705	+5924	-3632	+393	+379	+3925	-2411	-3717

CAL YR 2002 b -394

WTR YR 2003 b -1091

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

## 11108133 CASTAIC LAKE NEAR CASTAIC, CA

LOCATION.—Lat 34° 31' 22", long 118° 36' 43", in NW 1/4 NE 1/4 sec.13, T.5 N., R.16 W., Los Angeles County, Hydrologic Unit 18070102, in intake tower in Castaic Lake, and 2.3 mi north of Castaic.

DRAINAGE AREA.—137 mi<sup>2</sup>, excludes 18.1 mi<sup>2</sup> noncontributing area in Elizabeth Canyon Creek Basin.

PERIOD OF RECORD.—October 1988 to current year. Prior to October 1988 in files of California Department of Water Resources.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929.

REMARKS.—Lake is formed by earthfill dam. Storage began April 1972. Dead storage below outlet tower to downstream distribution system, 1,799 acre-ft, elevation, 1,213 ft. Capacity below spillway level, 323,700 acre-ft, elevation, 1,515 ft. Lake receives West Branch California Aqueduct water diverted from Pyramid Lake (station 11109520) via Castaic Powerplant to Elderberry Forebay (station 11108092). Water is released downstream through Castaic Tunnel No. 1 and to Castaic Lagoon. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of [Santa Clara River Basin](#).

COOPERATION.—Records were collected by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2426. Contents not rounded to U.S. Geological Survey standards.

EXTREMES (AT 2400 HOURS) FOR PERIOD OF RECORD.—Maximum contents, 322,962 acre-ft, Mar. 25, 1998, elevation, 1,514.67 ft; minimum, 142,325 acre-ft, Jan. 7, 1995, elevation, 1,415.48 ft.

EXTREMES (AT 2400 HOURS) FOR CURRENT YEAR.—Maximum contents, 320,868 acre-ft, Jan. 3, elevation, 1,513.73 ft; minimum, 245,169 acre-ft, Feb. 26, elevation, 1,477.02 ft.

Capacity table (elevation in feet, and contents, in acre-feet)  
(Based on table provided by California Department of Water Resources in 1978)

1,450	196,414	1,470	231,964	1,490	270,629	1,510	310,451
1,460	213,807	1,480	250,894	1,500	291,186	1,520	334,985

## RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	310996	274122	288986	315359	278316	250295	280961	299616	316990	316234	304897	316858
2	308905	274791	290745	318007	276357	249465	282197	301177	315073	316146	305761	318538
3	310342	274791	292216	320868	274386	251667	283063	303281	316615	317189	303496	318693
4	310844	273474	293671	319602	272322	254250	284408	301713	318892	314941	305718	318804
5	311499	274304	295341	318538	270168	256475	285112	303367	319335	315799	307667	319092
6	308948	276031	297187	317542	268200	258986	282795	305027	317542	313754	308948	318826
7	306388	279093	298656	316262	266199	260878	283414	306713	319136	311652	310647	316615
8	306713	280838	296741	314875	264246	263432	283642	308426	317653	311652	313009	316615
9	304056	281908	298528	313491	262282	262084	283580	309797	316174	312571	310494	316725
10	304444	282485	299082	312308	260246	260720	283704	311630	317542	314413	310167	317653
11	305178	283787	299958	311455	258396	262143	284573	309797	315733	314963	312308	318914
12	302722	281929	302400	310146	257611	263491	285029	311433	317587	312111	312877	318604
13	300471	283249	304142	308644	259438	264843	282877	313250	318959	309557	313272	318073
14	298230	284387	303755	307146	258023	266159	280838	314347	319158	310800	313930	315887
15	295871	285092	301885	305675	256592	268500	282403	316681	317631	312133	313403	315645
16	293523	286338	302400	304078	255478	266958	285320	318936	315821	313316	314391	316372
17	284451	284221	300792	302529	254133	268180	287733	320090	316902	314655	312352	316968
18	288735	281990	301906	300856	253900	269143	289635	318361	315029	315139	311892	317830
19	286359	283414	300621	299445	252578	270350	290808	316769	316284	313689	313140	319225
20	286109	284843	303088	297910	251222	271979	288672	318228	317542	311455	313864	318826
21	283745	286275	305221	296571	249851	274163	290724	319646	318671	309079	315491	316637
22	284408	288171	303733	295299	248387	276072	292869	317697	317078	310451	316218	315909
23	284470	288860	305199	294030	246833	274386	290661	319424	315557	311499	318206	315645
24	282176	286608	306951	292659	245455	275848	292869	319136	316350	312417	316416	315689
25	282465	287796	308796	290766	246431	276785	294854	317454	315293	313425	314171	315755
26	282836	288338	310691	288819	245169	278009	296528	315865	316813	312242	315425	316460
27	280612	289907	311870	287045	246948	278930	294304	317189	318206	309862	316615	314941
28	278336	291165	313930	285175	248734	279688	295256	315315	318804	307363	318693	312636
29	278725	288840	313140	283187	---	280899	296974	316637	317167	304983	317482	312571
30	276255	290557	314325	281126	---	278745	298400	318051	314523	306020	317377	314325
31	277009	---	315953	280386	---	279360	---	318316	---	303539	319114	---
MAX	311499	291165	315953	320868	278316	280899	298400	320090	319335	317189	319114	319225
MIN	276255	273474	288986	280386	245169	249465	280838	299616	314523	303539	303496	312571
a	1493.15	1499.70	1511.51	1494.80	1978.88	1494.30	1503.41	1512.58	1510.86	1505.81	1512.94	1510.77
b	-32614	+23548	+25396	-35567	-31652	+30626	+19040	+19916	-3793	-10984	+15575	-4789
CAL YR 2002 b	+34580											
WTR YR 2003 b	+4702											

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

11108134 CASTAIC CREEK BELOW METROPOLITAN WATER DISTRICT DIVERSION, BELOW CASTAIC LAKE, NEAR CASTAIC, CA

LOCATION.—Lat 34° 31' 10", long 118° 36' 34", in NE 1/4 SE 1/4 sec.13, T.5 N., R.17 W., Los Angeles County, Hydrologic Unit 18070102, in outlet structure below Castaic Dam, and 1.9 mi north of Castaic.

DRAINAGE AREA.—138 mi<sup>2</sup>, excludes 18.1 mi<sup>2</sup> noncontributing area in Elizabeth Canyon Creek Basin.

PERIOD OF RECORD.—October 1994 to current year. Records for 1995 water year published as station 11108135. Records for station 11108135 for October 1976 to September 1978 and October 1988 to September 1994 are not equivalent at low flows due to evaporation and seepage. Published as "Castaic Creek Release Flow below Castaic Lake, near Castaic" prior to October 2000.

GAGE.—Flow meters on outlet pipes. Elevation of gage is 1,240 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow regulated by Castaic Lake (station 11108133). See schematic diagram of Santa Clara River Basin.

COOPERATION.—Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2426.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 3,080 ft<sup>3</sup>/s, Feb. 23, 1998; no flow for many days each year.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 7,670 ft<sup>3</sup>/s, Mar. 2, 1983, at station 11108135; no flow for many days in each year.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7	5.0	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7	5.0	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8	5.0	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8	5.0	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8	5.0	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8	5.0	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	53	10	5.0	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	100	11	5.0	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	100	12	5.0	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	100	13	5.0	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	100	13	5.0	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	100	13	5.0	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	100	12	5.0	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	80	9	5.0	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	60	8	5.0	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	50	7	5.0	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	45	7	5.0	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	30	7	5.0	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	26	7	5.0	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	19	7	5.0	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	19	3	5.0	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	19	3	6.0	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	19	3	6.0	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	19	3	6.0	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	19	3	6.0	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	19	3	6.0	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	19	3	6.0	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	19	3	6.0	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	19	2	6.0	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	19	1.5	6.0	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	1	---	0.00	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	1153.00	210.5	159.0	0.00	0.00	0.00
MEAN	0.000	0.000	0.000	0.000	0.000	0.000	38.4	6.79	5.30	0.000	0.000	0.000
MAX	0.00	0.00	0.00	0.00	0.00	0.00	100	13	6.0	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.0	5.0	0.00	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	0.00	2290	418	315	0.00	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

	0.55	1.22	2.24	3.25	42.3	39.0	31.0	22.0	10.4	6.28	4.11	0.87
MEAN	0.55	1.22	2.24	3.25	42.3	39.0	31.0	22.0	10.4	6.28	4.11	0.87
MAX	4.94	11.0	15.1	19.3	352	175	81.4	123	57.3	34.2	29.9	7.80
(WY)	1999	1999	1999	1998	1998	1998	1996	1998	2000	1995	1995	1998
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1995	1995	1995	1995	1995	1995	1995	1995	1996	1996	1996	1995

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1995 - 2003	
ANNUAL TOTAL	0.00		1522.50			
ANNUAL MEAN	0.000		4.17		13.4	
HIGHEST ANNUAL MEAN					63.9	
LOWEST ANNUAL MEAN					0.000	
HIGHEST DAILY MEAN	0.00	Jan 1	100	Apr 8	3080	Feb 23 1998
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1994
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1994
ANNUAL RUNOFF (AC-FT)	0.00		3020		9710	
10 PERCENT EXCEEDS	0.00		8.0		22	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 11109000 SANTA CLARA RIVER NEAR PIRU, CA

LOCATION.—Lat 34° 24' 13", long 118° 44' 18", in San Francisco Grant, [Ventura County](#), Hydrologic Unit 18070102, on right downstream bank, on private property owned by Newhall Farms, 0.1 mi south of Highway 126, 3 mi east of Piru, and 8 mi west of intersection of Highway 126 and Interstate Highway 5.

DRAINAGE AREA.—645 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1927 to September 1932, October 1996 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 750 ft above NGVD of 1929, from topographic map.

REMARKS.—Records poor. Base flow affected by pumping from wells along stream for irrigation. Flow partly regulated since January 1972 by Castaic Lake (station 11108133), capacity, 323,700 acre-ft. Imported water from California Water Project stored and released at Castaic Dam. See schematic diagram of [Santa Clara River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,000 ft<sup>3</sup>/s, Feb. 23, 1998, from rating curve extended above 3,100 ft<sup>3</sup>/s, gage height, 10.85 ft, from floodmark; maximum gage height, 11.08 ft, Feb. 12, 2003; no flow for many days during the summers of 1929–32.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	23	40	52	42	54	78	62	37	35	21	28
2	16	21	33	49	44	54	76	57	39	34	23	27
3	17	23	31	48	44	53	72	120	39	30	20	26
4	24	24	33	45	41	52	73	75	37	33	19	29
5	27	23	31	44	40	51	75	67	40	32	15	27
6	26	27	33	42	41	47	78	57	39	33	20	26
7	30	52	37	38	40	49	82	50	38	31	19	28
8	29	316	39	40	43	54	100	46	39	28	17	28
9	27	59	39	41	47	52	103	48	40	30	18	26
10	25	31	34	41	48	50	120	43	40	32	20	27
11	24	31	36	40	89	50	120	43	37	31	19	26
12	25	31	35	42	e1190	50	117	42	38	32	15	26
13	26	33	38	44	e138	50	120	41	36	29	17	29
14	25	32	45	44	82	50	245	40	37	29	17	31
15	25	31	47	44	72	194	153	38	38	24	17	27
16	20	32	269	43	62	131	109	37	35	29	16	25
17	22	33	147	42	63	73	98	38	32	27	20	25
18	24	33	70	43	61	66	92	38	31	25	21	22
19	25	33	67	44	58	58	89	36	31	27	22	27
20	26	32	328	45	55	55	80	36	33	27	20	27
21	24	32	61	47	54	64	78	35	30	26	20	28
22	23	33	60	46	54	57	73	36	36	22	23	28
23	23	32	63	44	60	56	70	37	39	19	26	22
24	22	35	68	43	60	57	70	36	36	23	33	22
25	22	33	73	42	90	56	68	37	34	23	29	26
26	20	30	76	45	64	60	68	38	38	27	24	25
27	23	27	80	44	58	61	64	39	35	23	23	28
28	22	33	75	43	55	65	65	37	33	21	19	31
29	21	33	70	44	---	66	62	37	31	20	20	30
30	21	48	64	44	---	67	62	37	36	20	25	31
31	20	---	59	43	---	70	---	34	---	20	27	---
TOTAL	724	1256	2181	1356	2795	1972	2760	1417	1084	842	645	808
MEAN	23.4	41.9	70.4	43.7	99.8	63.6	92.0	45.7	36.1	27.2	20.8	26.9
MAX	30	316	328	52	1190	194	245	120	40	35	33	31
MIN	16	21	31	38	40	47	62	34	30	19	15	22
AC-FT	1440	2490	4330	2690	5540	3910	5470	2810	2150	1670	1280	1600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

MEAN	21.6	30.8	47.7	46.7	230	91.8	51.8	73.1	30.7	18.8	15.7	16.5
MAX	61.0	62.2	92.7	95.5	1880	413	158	569	89.3	64.0	57.5	43.3
(WY)	1997	1928	1997	1998	1998	1998	1998	1998	1998	1998	1998	1998
MIN	0.000	4.03	7.32	20.4	16.6	15.5	2.93	3.00	0.000	0.000	0.000	0.000
(WY)	1931	1931	1930	1929	1930	1931	1931	1930	1930	1930	1929	1930

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL	12647.6		17840			
ANNUAL MEAN	34.7		48.9		55.2	
HIGHEST ANNUAL MEAN					282	
LOWEST ANNUAL MEAN					8.04	
HIGHEST DAILY MEAN	328	Dec 20	1190	Feb 12	10000	Feb 3 1998
LOWEST DAILY MEAN	7.2	Aug 16	15	Aug 5	0.00	Jun 14 1929
ANNUAL SEVEN-DAY MINIMUM	9.5	Aug 12	17	Aug 10	0.00	Jun 14 1929
MAXIMUM PEAK FLOW			2330		10000	
MAXIMUM PEAK STAGE			11.08		11.08	
ANNUAL RUNOFF (AC-FT)	25090		35390		39990	
10 PERCENT EXCEEDS	49		73		78	
50 PERCENT EXCEEDS	32		37		26	
90 PERCENT EXCEEDS	15		22		0.70	

e Estimated.



## 11109375 PIRU CREEK BELOW BUCK CREEK, NEAR PYRAMID LAKE, CA

LOCATION.—Lat 34° 39' 58", long 118° 49' 24", in SE 1/4 SE 1/4 sec.30, T.7 N., R.18 W., [Ventura County](#), Hydrologic Unit 18070102, Los Padres National Forest, on left bank, 300 ft downstream from the confluence of Piru Creek and Buck Creek, 2.3 mi southeast of U.S. Forest Service Hardluck Campground, and 3.7 mi northwest of Pyramid Dam.

DRAINAGE AREA.—198 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1976 to September 1978, October 1988 to current year. February 1975 to September 1976, October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 2,700 ft above NGVD of 1929, from topographic map.

REMARKS.—No regulation or diversion upstream from station. See schematic diagram of [Santa Clara River Basin](#).

COOPERATION.—Records were collected by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2426.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,700 ft<sup>3</sup>/s, Feb. 23, 1998, gage height, 16.45 ft; no flow for many days in most years.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	3.3	4.4	7.6	6.1	22	15	25	8.2	2.0	0.92	1.4
2	2.9	3.4	4.3	7.4	6.1	21	14	34	7.8	1.9	4.8	1.6
3	2.8	3.4	4.2	7.3	6.1	18	13	266	7.5	1.8	5.0	1.5
4	2.7	3.4	4.3	7.2	6.0	19	12	209	7.3	1.7	3.2	1.4
5	2.6	3.4	4.3	7.2	5.7	17	12	95	7.0	1.5	2.6	1.4
6	2.4	3.4	4.3	7.3	5.5	16	11	66	6.7	1.4	2.3	1.3
7	2.3	3.5	4.3	7.4	5.4	15	10	56	6.5	1.2	2.2	1.3
8	2.2	9.0	4.4	7.6	5.4	14	9.6	48	6.0	1.0	2.1	1.3
9	2.2	5.4	4.4	8.3	5.3	14	9.1	39	5.9	0.99	2.0	1.4
10	2.2	5.0	4.4	8.1	5.1	13	8.7	34	6.1	0.93	1.9	1.5
11	2.3	5.1	4.5	7.8	10	13	8.4	30	6.1	0.88	1.9	1.4
12	2.4	4.5	4.5	7.6	565	12	8.1	27	5.9	0.80	1.8	1.3
13	2.5	4.3	4.5	7.5	380	12	21	25	5.6	0.73	1.8	1.2
14	2.5	4.2	4.5	7.3	113	12	207	24	5.1	0.66	1.7	1.0
15	2.6	4.1	4.6	7.1	60	266	120	26	4.8	0.57	1.5	0.97
16	2.9	4.0	13	7.0	42	232	55	21	4.5	0.47	1.4	1.0
17	3.0	4.0	8.1	6.8	33	106	38	19	4.3	0.42	1.2	1.1
18	3.1	4.0	8.1	6.7	28	69	29	18	4.0	0.40	1.0	1.2
19	3.0	4.0	20	6.7	23	53	23	16	4.0	0.69	0.87	1.2
20	3.0	4.0	12	6.7	21	43	20	15	4.2	1.2	0.91	1.2
21	3.0	3.9	8.8	6.7	19	36	19	14	4.3	1.1	1.0	1.2
22	3.1	3.9	8.1	6.7	17	31	18	13	4.2	0.85	1.3	1.2
23	3.1	4.0	7.5	6.7	15	28	18	12	4.0	0.71	1.5	1.2
24	3.2	4.0	6.7	6.6	29	25	17	12	3.8	0.59	1.4	1.2
25	3.3	4.0	6.5	6.5	51	23	17	11	3.5	0.52	1.3	1.4
26	3.5	4.0	6.3	6.4	33	20	16	11	3.3	0.46	1.3	1.4
27	3.5	4.0	6.3	6.4	28	19	16	10	2.9	0.39	1.4	1.4
28	3.4	4.0	6.2	6.4	23	18	17	9.7	2.6	0.40	1.5	1.4
29	3.3	4.0	6.6	6.4	---	17	17	9.1	2.4	0.47	1.5	1.4
30	3.3	4.3	7.9	6.3	---	16	17	8.8	2.1	0.61	1.4	1.5
31	3.4	---	7.7	6.2	---	15	---	8.5	---	0.83	1.4	---
TOTAL	88.7	125.5	205.7	217.9	1546.7	1235	815.9	1212.1	150.6	28.17	56.10	38.97
MEAN	2.86	4.18	6.64	7.03	55.2	39.8	27.2	39.1	5.02	0.91	1.81	1.30
MAX	3.5	9.0	20	8.3	565	266	207	266	8.2	2.0	5.0	1.6
MIN	2.2	3.3	4.2	6.2	5.1	12	8.1	8.5	2.1	0.39	0.87	0.97
AC-FT	176	249	408	432	3070	2450	1620	2400	299	56	111	77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2003, BY WATER YEAR (WY)

	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
MEAN	5.75	7.36	17.7	70.1	204	167	84.5	45.9	18.5	8.79	5.25	5.38															
MAX	18.2	21.3	63.3	501	1062	674	235	237	93.7	37.3	19.1	19.7															
(WY)	1999	1999	1998	1995	1998	1978	1978	1998	1998	1998	1998	1998															
MIN	0.099	1.16	1.62	2.28	5.36	5.31	2.67	1.21	0.46	0.001	0.000	0.000															
(WY)	1978	1978	1991	1991	1990	1990	1990	1990	1990	1990	1989	1990															

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1977 - 2003	
ANNUAL TOTAL	1796.19		5721.34			
ANNUAL MEAN	4.92		15.7		52.5	
HIGHEST ANNUAL MEAN					163	
LOWEST ANNUAL MEAN					2.45	
HIGHEST DAILY MEAN	20	Dec 19	565	Feb 12	11700	Feb 23 1998
LOWEST DAILY MEAN	0.73	Aug 17	0.39	Jul 27	0.00	Sep 6 1977
ANNUAL SEVEN-DAY MINIMUM	0.78	Aug 13	0.49	Jul 24	0.00	Sep 6 1977
MAXIMUM PEAK FLOW			1490		11700	
MAXIMUM PEAK STAGE			5.94		16.45	
ANNUAL RUNOFF (AC-FT)	3560		11350		38010	
10 PERCENT EXCEEDS	9.7		26		114	
50 PERCENT EXCEEDS	4.0		5.1		9.0	
90 PERCENT EXCEEDS	1.0		1.2		1.2	

## 11109395 CANADA DE LOS ALAMOS ABOVE PYRAMID LAKE, CA

LOCATION.—Lat 34° 41' 31", long 118° 47' 25", in SW 1/4 SE 1/4 sec.16, T.7 N., R.18 W., Los Angeles County, Hydrologic Unit 18070102, on right bank, 1.1 mi south of Hungry Valley Road off-ramp from Interstate Highway 5, and 0.4 mi upstream of Pyramid Lake.

DRAINAGE AREA.—61.9 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1976 to September 1978, October 1988 to current year. March 1965 to September 1976 and October 1978 to September 1988 in files of California Department of Water Resources.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 2,800 ft above NGVD of 1929, from topographic map.

REMARKS.—No regulation or diversion upstream from station. See schematic diagram of [Santa Clara River Basin](#).

COOPERATION.—Records were collected by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2426.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,640 ft<sup>3</sup>/s, Dec. 6, 1997, gage height, 5.73 ft; minimum daily, 0.30 ft<sup>3</sup>/s, May 10, 1977.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	3.2	3.6	3.8	4.0	3.4	4.2	3.4	2.5	2.1	2.6	2.1
2	3.5	3.2	3.6	3.8	3.9	3.4	4.3	3.7	2.3	2.0	2.6	2.2
3	3.5	3.2	3.6	3.8	3.8	3.4	4.5	7.1	2.4	1.9	2.6	2.2
4	3.4	3.2	3.6	3.8	3.9	3.7	4.6	4.5	2.5	1.7	2.5	2.1
5	3.3	3.2	3.6	3.8	3.9	3.6	4.7	4.2	2.6	1.7	2.5	2.0
6	3.3	3.4	3.8	3.6	3.8	3.6	4.6	4.2	2.6	1.6	2.4	2.1
7	3.3	3.6	3.8	3.6	3.9	3.6	4.6	4.4	2.6	1.7	2.4	2.2
8	3.4	5.0	3.8	3.8	3.8	3.6	4.8	4.1	2.3	1.7	2.2	2.4
9	3.5	4.4	3.8	3.8	3.6	3.7	4.7	3.8	2.5	1.8	2.1	2.4
10	3.4	3.8	3.7	3.8	3.7	3.8	4.4	3.8	2.7	1.8	2.1	2.2
11	3.4	3.5	3.6	3.8	5.6	3.8	4.1	3.7	2.6	1.9	2.0	2.1
12	3.3	3.4	3.5	4.0	66	3.8	3.7	3.6	2.5	2.0	1.9	2.1
13	3.2	3.6	3.4	4.1	8.1	3.8	5.2	3.4	2.4	2.2	1.8	2.1
14	3.3	3.5	3.5	4.1	4.8	3.8	5.0	3.6	2.5	2.4	1.7	2.0
15	3.7	3.4	3.6	3.9	4.8	11	4.4	3.9	2.9	2.6	1.7	2.0
16	3.2	3.4	5.4	3.8	4.6	4.6	3.7	3.4	3.2	1.9	1.6	1.9
17	3.2	3.4	3.8	3.8	4.4	4.3	4.2	3.4	2.3	1.4	1.6	1.8
18	3.1	3.4	3.4	3.8	4.2	3.9	4.1	3.3	1.7	1.6	1.7	1.7
19	3.0	3.4	7.0	3.8	4.1	4.0	3.7	3.1	2.0	2.2	1.7	1.7
20	3.2	3.4	3.7	3.8	4.0	3.9	3.6	3.1	2.3	2.1	2.1	1.7
21	3.2	3.3	3.8	3.8	3.8	3.7	3.6	3.0	2.3	2.1	2.5	1.6
22	3.3	3.3	3.8	3.8	3.8	3.7	3.6	2.9	2.5	2.2	2.6	1.5
23	3.2	3.4	3.8	3.9	3.8	3.7	3.5	2.9	2.6	2.2	2.5	1.5
24	3.4	3.4	3.8	3.7	4.6	3.7	3.6	3.2	2.4	2.3	2.6	1.7
25	3.3	3.4	3.8	5.0	7.2	3.6	3.6	3.1	2.2	2.2	2.7	1.7
26	3.2	3.4	3.8	4.9	3.9	3.7	3.5	3.1	2.1	2.2	2.9	1.9
27	3.2	3.6	3.8	4.7	3.8	4.0	3.5	2.9	2.0	2.3	2.8	2.2
28	3.2	3.6	3.8	3.8	3.5	3.9	3.6	2.9	2.0	2.2	1.9	2.2
29	3.3	3.6	3.8	3.8	---	3.8	3.5	2.8	1.9	2.4	1.7	2.1
30	3.3	3.6	3.8	3.7	---	3.9	3.4	2.7	2.0	2.7	1.8	2.2
31	3.4	---	3.8	3.6	---	4.1	---	2.7	---	2.7	1.9	---
TOTAL	102.8	105.2	119.6	121.2	183.3	124.5	122.5	109.9	71.4	63.8	67.7	59.6
MEAN	3.32	3.51	3.86	3.91	6.55	4.02	4.08	3.55	2.38	2.06	2.18	1.99
MAX	3.7	5.0	7.0	5.0	66	11	5.2	7.1	3.2	2.7	2.9	2.4
MIN	3.0	3.2	3.4	3.6	3.5	3.4	3.4	2.7	1.7	1.4	1.6	1.5
AC-FT	204	209	237	240	364	247	243	218	142	127	134	118

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2003, BY WATER YEAR (WY)

	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
MEAN	2.41	2.84	5.45	4.94	12.1	7.24	3.36	2.75	2.23	1.96	1.92	2.07															
MAX	3.34	3.73	42.0	22.0	64.3	40.5	6.28	5.15	3.15	3.80	2.97	2.95															
(WY)	1997	2002	1998	1995	1978	1978	1998	1998	1998	1999	1999	1999															
MIN	1.40	1.56	1.93	2.38	1.80	1.80	1.50	0.83	1.18	0.97	1.32	1.27															
(WY)	1977	1978	1977	1978	1977	1977	1977	1977	1978	1977	1977	1977															

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1977 - 2003

ANNUAL TOTAL	1180.9	1251.5		
ANNUAL MEAN	3.24	3.43	4.06	
HIGHEST ANNUAL MEAN			10.1	1998
LOWEST ANNUAL MEAN			1.54	1977
HIGHEST DAILY MEAN	7.0	Dec 19	66	Feb 12
LOWEST DAILY MEAN	1.3	Jul 1	1.4	Jul 17
ANNUAL SEVEN-DAY MINIMUM	1.7	Jun 28	1.6	Sep 18
MAXIMUM PEAK FLOW			135	Feb 12
MAXIMUM PEAK STAGE			3.56	Feb 12
ANNUAL RUNOFF (AC-FT)	2340	2480	2940	
10 PERCENT EXCEEDS	4.1	4.2	4.1	
50 PERCENT EXCEEDS	3.3	3.4	2.7	
90 PERCENT EXCEEDS	2.3	1.9	1.5	

## 11109396 CALIFORNIA AQUEDUCT AT NORTH PORTAL TEHACHAPI TUNNEL, NEAR GORMAN, CA

LOCATION.—Lat 34° 55' 46", long 118° 48' 17", unsurveyed, in Los Alamos Y Caliente Grant, T.10 N., R.18 E., Kern County, Hydrologic Unit 18030003, at entrance to Tehachapi Tunnel, 1.5 mi southeast of A.D. Edmonston Pumping Plant, and 10 mi north of Gorman.

PERIOD OF RECORD.—October 1995 to current year. Prior to October 1995 in files of California Department of Water Resources. Published as "North Portal Tehachapi Tunnel near Gorman" prior to October 2000.

GAGE.—Acoustic-velocity meter. Elevation of gage is 3,220 ft above NGVD of 1929, from topographic map.

REMARKS.—Records represent flow pumped from the California Aqueduct through the A.D. Edmonston Pumping Plant to southern California. Downstream, the flow splits as it leaves Tehachapi Afterbay. The East Branch California Aqueduct flows through Alamo Powerplant (station 10260776), and the West Branch California Aqueduct flows through William Warne Powerplant (station 11109398). See schematic diagram of [Santa Clara River Basin](#).

COOPERATION.—Records were computed by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project 2426.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 4,070 ft<sup>3</sup>/s, May 18, Aug. 3, 2003; no flow at times in some years.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3230	1540	2630	3900	1290	2520	3980	2580	3900	2430	3030	3260
2	3260	2030	2760	1180	1560	3450	3950	2860	3000	2540	3370	2860
3	3400	1170	2800	1070	1010	1830	3290	3380	2690	2370	4070	2930
4	3520	1160	2730	1280	1000	2160	3000	3970	2580	2920	3050	2740
5	3570	1900	2780	1950	1010	2660	3060	3010	2570	2590	3050	3180
6	2280	2520	2920	1030	932	2410	3470	3060	2690	3570	3070	3560
7	2090	2510	2920	930	918	2490	2220	2930	3230	2480	3080	3030
8	1720	2510	2790	918	1070	3060	2190	2940	3900	2370	3370	3040
9	1740	2810	2790	781	1110	4050	2770	2880	2130	2670	3720	2730
10	1720	1430	2800	304	932	2570	2780	3090	2190	2480	3340	2920
11	1730	2000	2730	412	990	2610	2440	4060	2140	2600	3010	2760
12	2850	2200	2800	660	921	2460	2710	3000	1820	2770	3150	2930
13	1700	2120	2920	257	829	2910	2590	3060	1940	3980	3300	3110
14	2520	2100	2810	507	658	3030	2580	3010	2190	3010	3270	3020
15	2470	2610	2660	750	563	3130	3160	2950	2820	2800	3310	2800
16	2500	2740	2430	656	551	4060	2660	2990	1770	2930	3620	2790
17	2540	1680	2800	577	563	2710	2630	3210	2230	3030	3870	3010
18	2520	1670	2850	742	591	2540	2670	4070	2530	3030	3610	2740
19	3050	1630	2820	728	507	2520	2490	2620	2770	3150	3270	2890
20	2010	1640	3220	587	562	2640	3060	2650	2730	3930	3360	3030
21	2460	1760	3250	603	562	2210	2490	2470	2840	3260	3330	3190
22	2500	2360	3020	769	562	329	2380	2510	3900	3260	3480	2500
23	2430	2980	2650	907	811	2270	2520	2440	2550	3250	3940	2460
24	1700	2450	2730	826	522	1590	2360	2580	2450	3220	3680	2320
25	2350	2520	2920	812	990	1980	2780	3050	2240	2840	3040	2640
26	1900	2450	2350	879	905	2730	3190	3150	2380	2640	3230	2690
27	1260	2920	2730	588	2190	3980	3980	2330	2530	2610	3170	2670
28	1290	2800	1790	782	2320	3710	2750	2570	2550	2490	2910	2600
29	1470	2920	1650	1140	---	3820	2690	2460	3330	2500	2780	2800
30	1230	2520	2050	1340	---	3940	2810	2760	2300	2600	3070	3100
31	1520	---	2490	1100	---	3840	---	2980	---	2540	3890	---
TOTAL	70530	65650	83590	28965	26429	86209	85650	91620	78890	88860	103440	86300
MEAN	2275	2188	2696	934	944	2781	2855	2955	2630	2866	3337	2877
MAX	3570	2980	3250	3900	2320	4060	3980	4070	3900	3980	4070	3560
MIN	1230	1160	1650	257	507	329	2190	2330	1770	2370	2780	2320
AC-FT	139900	130200	165800	57450	52420	171000	169900	181700	156500	176300	205200	171200

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	1518	1393	1395	966	828	1514	1995	1949
MAX	2429	2944	2780	1930	1816	2781	2855	2955
(WY)	2001	2001	2001	2000	2002	2003	2003	2002
MIN	104	349	213	62.5	48.1	219	970	859
(WY)	1996	1996	1999	1999	1999	1998	1998	1998

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1996 - 2003
ANNUAL TOTAL	873499	896133	
ANNUAL MEAN	2393	2455	1633
HIGHEST ANNUAL MEAN			2455
LOWEST ANNUAL MEAN			941
HIGHEST DAILY MEAN	3900	May 19	4070
LOWEST DAILY MEAN	416	Jul 13	257
ANNUAL SEVEN-DAY MINIMUM	1450	Oct 29	507
ANNUAL RUNOFF (AC-FT)	1733000	1777000	1183000
10 PERCENT EXCEEDS	3210		3370
50 PERCENT EXCEEDS	2450		2630
90 PERCENT EXCEEDS	1530		920

## 11109398 WEST BRANCH CALIFORNIA AQUEDUCT AT WILLIAM WARNE POWERPLANT, NEAR GORMAN, CA

LOCATION.—Lat 34° 41' 07", long 118° 47' 16", in SW 1/4 NE 1/4 sec.21, T.7 N., R.18 W., Los Angeles County, Hydrologic Unit 18070102, in powerplant at upper end of Pyramid Lake, on Canado de Los Alamos arm, and 8.5 mi southeast of Gorman.

PERIOD OF RECORD.—October 1995 to current year. Prior to October 1995 in files of California Department of Water Resources. Published as "William Warne Powerplant" prior to October 1999.

GAGE.—Acoustic-velocity meters in both penstocks. Datum of gage is 2,582 ft above NGVD of 1929.

REMARKS.—Upstream the flow splits as it leaves the Tehachapi Tunnel. Flow at this site represents West Branch California Aqueduct water flowing southwest to Pyramid Lake (station 11109520). The East Branch California Aqueduct flows through Alamo Powerplant (station 10260776). See schematic diagram of [Santa Clara River Basin](#).

COOPERATION.—Records were computed by California Department of Water Resources, under the general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2426.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 2,830 ft<sup>3</sup>/s, Sept. 6, 2000; no flow at times in some years.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	966	959	1370	1660	0.00	1600	1610	1510	1070	1010	1660	1650
2	1040	819	1570	553	0.00	1180	1660	1660	1260	713	1660	1210
3	998	655	1530	682	0.00	1020	1670	1660	1250	1020	1660	1190
4	924	1510	1470	546	0.00	1520	1640	1660	1180	998	1540	713
5	513	1560	1420	550	0.00	1520	1670	1600	1200	1070	1600	709
6	1480	1470	1430	1.0	0.00	1080	1600	1660	1100	984	1660	703
7	899	1470	1630	0.00	0.00	1380	1240	1530	1420	1040	1660	768
8	763	1450	1580	0.00	0.00	1310	1320	1520	1400	1080	1650	967
9	732	1600	1440	0.00	0.00	990	1400	1620	501	1160	1590	1090
10	776	1170	1400	0.00	0.00	1260	1360	1600	506	1080	1650	1030
11	815	1160	1420	0.00	0.00	1220	1330	1610	551	1130	1570	1030
12	726	1340	1240	0.00	32	976	1350	1660	558	933	1550	704
13	766	1190	1540	0.00	0.00	1610	790	1610	460	940	1650	1040
14	38	1210	1630	0.00	0.00	1660	1370	1540	482	1490	1650	1000
15	0.00	1210	1590	0.00	0.00	1490	1660	1460	522	1490	1650	1310
16	0.00	1190	1590	0.00	0.00	1010	1370	1650	1060	1470	1570	1310
17	0.00	1180	421	0.00	0.00	1420	1500	1640	1030	1480	1650	1290
18	0.00	1310	0.00	0.00	0.00	1420	1430	1460	1060	1490	1600	1030
19	597	1410	125	0.00	0.00	1520	1380	841	1070	1470	1600	1240
20	750	1100	792	0.00	0.00	1460	1100	859	1180	1300	1630	1210
21	789	1310	1060	0.00	0.00	1380	1520	1010	1040	1390	1660	1040
22	468	1550	797	0.00	0.00	408	1580	857	1050	1370	1650	1060
23	789	1460	1290	0.00	0.00	1630	1610	949	1230	1280	1650	925
24	791	1570	1560	0.00	286	1020	1660	850	1040	639	1640	827
25	787	1360	1640	0.00	133	1020	1480	971	1020	817	1660	870
26	739	1400	1480	0.00	0.00	1200	1470	762	1070	817	1480	996
27	803	1370	1610	0.00	1530	1650	1660	822	1120	818	1660	961
28	726	1380	1610	329	1540	1550	1380	911	1060	818	1660	396
29	710	1380	1380	396	---	1470	1340	1060	986	819	1650	1580
30	717	1350	1520	0.00	---	1370	1640	975	877	954	1620	1670
31	745	---	1490	0.00	---	1580	---	971	---	998	1650	---
TOTAL	20847.00	39093	40625.00	4717.00	3521.00	40924	43790	40488	29353	34068	50430	31519
MEAN	672	1303	1310	152	126	1320	1460	1306	978	1099	1627	1051
MAX	1480	1600	1640	1660	1540	1660	1670	1660	1420	1490	1660	1670
MIN	0.00	655	0.00	0.00	0.00	408	790	762	460	639	1480	396
AC-FT	41350	77540	80580	9360	6980	81170	86860	80310	58220	67570	100000	62520

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	659	837	631	419	334	701	875	761
MAX	1113	1562	1310	821	699	1320	1460	1445
(WY)	2001	2001	2003	2001	2002	2003	2003	2002
MIN	71.4	131	0.000	0.000	0.000	0.000	0.000	68.7
(WY)	1996	1999	1999	1999	1999	1998	1998	1998

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1996 - 2003
ANNUAL TOTAL	399554.00	379375.00	
ANNUAL MEAN	1095	1039	661
HIGHEST ANNUAL MEAN			1052
LOWEST ANNUAL MEAN			318
HIGHEST DAILY MEAN	1660	May 7	2830
LOWEST DAILY MEAN	0.00	Oct 15	0.00
ANNUAL SEVEN-DAY MINIMUM	198	Oct 14	0.00
ANNUAL RUNOFF (AC-FT)	792500	752500	479000
10 PERCENT EXCEEDS	1600	1640	1470
50 PERCENT EXCEEDS	1060	1160	634
90 PERCENT EXCEEDS	603	0.00	0.00

## 11109520 PYRAMID LAKE NEAR GORMAN, CA

LOCATION.—Lat 34° 38' 41", long 118° 45' 47", in NE 1/4 NW 1/4 sec.2, T.6 N., R.18 W., Los Angeles County, Hydrologic Unit 18070102, Angeles National Forest, in control structure near left abutment of Pyramid Dam on Piru Creek, and 11.7 mi southeast of Gorman.

DRAINAGE AREA.—295 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1988 to current year. Prior to October 1988 in files of California Department of Water Resources.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929.

REMARKS.—Reservoir is formed by earthfill dam. Storage began 1971. Dead storage below outlet to Angeles Tunnel, 5,720 acre-ft, elevation, 2,345 ft, included in contents. Capacity below invert of radial gate, 133,600 acre-ft, elevation, 2,547.72 ft; below top of radial gate, 169,901 acre-ft, elevation, 2,578 ft; below spillway level, 171,200 acre-ft, elevation, 2,579 ft. Lake receives imported water from West Branch California Aqueduct via William Warne Powerplant (station 11109398). Water is released through the Angeles Tunnel to Castaic Powerplant and during periods of low electricity demand, water from Elderberry Forebay (station 11108092) is pumped back to Pyramid Lake. Records, including extremes, represent contents at 2400 hours. See schematic diagram of [Santa Clara River Basin](#).

COOPERATION.—Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project no. 2426. Contents not rounded to U.S. Geological Survey standards.

EXTREMES (at 2400 hours) FOR PERIOD OF RECORD.—Maximum contents, 170,457 acre-ft, Feb. 9, 1996, elevation, 2,578.43 ft; minimum, 137,883 acre-ft, Nov. 26, 1991, elevation, 2,551.53 ft.

EXTREMES (at 2400 hours) FOR CURRENT YEAR.—Maximum contents, 168,883 acre-ft, Dec. 16, elevation, 2,577.21 ft; minimum, 153,630 acre-ft, Nov. 27, elevation, 2,564.98 ft.

Capacity table (elevation in feet, and contents, in acre-feet)  
(Based on table provided by California Department of Water Resources in 1978)

2,545	130,601	2,555	141,850	2,565	153,364	2,575	166,057
2,550	136,154	2,560	147,680	2,570	159,778	2,580	172,497

## RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

## DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	163023	161870	165803	166502	165701	166668	162145	159902	166770	162321	159952	165194
2	160946	162986	162760	162070	167664	168845	162973	158430	165130	158344	162158	164081
3	160250	164093	162283	159989	167895	165917	163312	164283	163854	157310	168177	164258
4	160897	164169	161883	164599	168074	165523	165371	167447	161296	157396	166146	162571
5	161445	164056	161945	166796	168331	164447	166732	165156	158837	159394	163778	160623
6	165067	163300	159035	166757	167997	162885	168729	163677	157175	165358	162008	162459
7	163325	162296	161258	165752	168331	161908	167204	160847	163275	164776	160150	168729
8	161495	160921	165460	163816	168049	164119	165701	157593	168421	164043	159035	166108
9	160250	165257	165422	162810	167754	165625	164586	156318	166248	162095	159184	164814
10	159184	168318	163489	162358	166847	164447	163602	160598	163993	158208	158628	163011
11	157433	165612	161920	163086	166464	162898	162622	166783	162998	156061	162509	161458
12	160262	163262	160088	162935	168331	161770	165879	164611	161046	157630	161695	158949
13	163791	161770	158813	164232	168395	161908	167217	163161	157593	160909	160747	163363
14	163866	159939	162058	164333	166184	159035	167153	164586	161633	160710	161146	167626
15	163740	158628	166528	164283	165968	161395	166464	160909	165333	161308	162233	165422
16	163451	161695	168883	163892	165803	164662	164611	157261	163766	159245	162258	164270
17	161583	165638	165232	163338	167844	164662	163300	160822	161645	160461	165346	162145
18	159691	164662	161370	163350	166630	164675	161108	165701	160897	159072	165549	161096
19	161795	166019	157188	164599	166210	165853	162684	165333	160163	161833	164030	158196
20	164611	163388	158763	164788	165067	164940	165676	162760	158628	166057	163325	162396
21	164422	160984	160710	165358	164030	163715	165358	160635	161895	164966	161995	165574
22	162873	156673	163627	164712	165473	160648	165042	158492	167921	164396	159642	165219
23	162208	159035	162246	163866	165536	162559	163312	156184	167383	163262	162120	164991
24	161445	163917	160399	163627	165765	163300	161233	161708	165663	161009	166566	163904
25	160536	160921	161470	165118	164750	163023	163489	167741	164422	158714	166222	163451
26	162371	156330	160175	166490	163237	162747	164548	165194	162471	161445	164788	162271
27	167255	153630	161183	167319	163363	162308	167703	163375	161870	162822	163262	163803
28	166643	156391	163463	167306	164535	160548	166413	159592	163841	162998	161458	166617
29	165676	157999	167076	167306	---	163111	163514	158800	166273	160971	159245	165790
30	164359	162045	165574	166222	---	165701	161683	155866	165105	158368	162898	165092
31	162847	---	165473	164232	---	160436	---	161683	---	158230	164106	---
MAX	167255	168318	168883	167319	168395	168845	168729	167741	168421	166057	168177	168729
MIN	157433	153630	157188	159989	163237	159035	161108	155866	157175	156061	158628	158196
a	2572.46	2571.82	2574.54	2573.56	2573.80	2570.53	2571.53	2571.53	2574.25	2568.75	2573.46	2574.26
b	-2050	-802	3428	-1241	303	-4099	1247	0	3422	-6875	5876	986

CAL YR 2002 b 1329

WTR YR 2003 b 190

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

## 11109525 PIRU CREEK BELOW PYRAMID LAKE, NEAR GORMAN, CA

LOCATION.—Lat 34° 38' 30", long 118° 45' 49", in SW 1/4 NW 1/4 sec.2, T.6 N., R.18 W., Los Angeles County, Hydrologic Unit 18070102, Los Padres National Forest, at downstream base of dam, and 11.7 mi southeast of Gorman.

DRAINAGE AREA.—295 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1988 to current year. Prior to October 1988 in files of California Department of Water Resources.

GAGE.—Flow meters with totalizer and rated radial gate on top of dam. Elevation of gage is 2,200 ft above NGVD of 1929, from topographic map.

REMARKS.—Flow regulated beginning 1971 by Pyramid Lake (station 11109520). See schematic diagram of [Santa Clara River Basin](#).

COOPERATION.—Records were collected by California Department of Water Resources, under general supervision of the U.S. Geological Survey, in connection with Federal Energy Regulatory Commission project 2426.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 6,000 ft<sup>3</sup>/s, Feb. 23 1998; minimum daily, 4.0 ft<sup>3</sup>/s, Nov. 1–5, 1996.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	14	6.2	6.2	6.2	6.1	26	27	50	52	53	26
2	35	14	6.1	6.1	6.2	6.1	26	27	50	52	53	25
3	35	14	6.2	6.1	6.2	6.2	26	28	50	52	53	24
4	35	12	6.1	6.1	6.2	6.2	26	145	50	52	53	23
5	35	11	6.1	6.0	6.2	6.1	26	100	50	52	53	22
6	35	9.0	6.1	6.2	6.2	6.1	27	100	50	52	53	21
7	35	8.9	6.0	6.2	6.2	6.1	27	100	50	52	53	20
8	35	7.0	6.1	6.1	6.2	6.1	26	100	50	52	52	20
9	34	6.2	6.2	6.1	6.2	6.1	27	100	50	52	51	19
10	33	6.2	6.2	6.1	6.2	6.1	26	100	50	51	49	18
11	32	6.3	6.2	6.1	6.2	6.1	26	100	50	51	48	16
12	31	6.2	6.1	6.1	6.2	6.1	26	100	51	52	47	16
13	30	6.3	6.1	6.2	6.2	6.1	26	100	51	52	46	15
14	29	6.2	6.1	6.1	6.2	6.1	122	100	52	52	45	14
15	28	6.1	6.2	6.2	6.1	6.0	188	100	52	52	44	13
16	27	6.0	6.2	6.1	6.2	6.0	75	100	52	52	43	12
17	26	6.1	6.2	6.1	6.2	6.1	60	100	51	51	42	11
18	24	6.2	6.2	6.1	6.2	6.1	41	100	52	51	41	9.9
19	23	6.2	6.1	6.1	6.1	6.1	40	78	52	51	40	8.9
20	23	6.1	6.0	6.2	6.1	35	40	75	52	51	39	7.9
21	22	6.1	6.1	6.1	6.1	35	26	51	52	51	38	6.8
22	21	6.1	6.1	6.1	6.1	35	27	51	52	51	37	6.8
23	20	6.0	6.1	6.1	6.1	35	26	51	52	51	36	6.8
24	19	6.1	6.1	6.1	6.1	26	26	50	52	51	35	6.8
25	18	6.1	6.1	6.1	6.1	26	26	51	52	51	34	6.8
26	17	6.1	6.1	6.1	6.1	26	27	51	52	51	33	6.8
27	16	6.0	6.1	6.2	6.1	26	27	51	52	51	32	6.8
28	15	6.0	6.1	6.2	6.1	26	27	51	52	51	31	6.8
29	14	6.0	6.2	6.2	---	26	27	50	52	51	30	6.8
30	14	6.1	6.2	6.2	---	26	27	50	51	51	29	6.0
31	14	---	6.2	6.2	---	26	---	50	---	51	28	---
TOTAL	810	224.6	190.1	190.1	172.5	463.9	1173	2337	1534	1595	1321	408.9
MEAN	26.1	7.49	6.13	6.13	6.16	15.0	39.1	75.4	51.1	51.5	42.6	13.6
MAX	35	14	6.2	6.2	6.2	35	188	145	52	52	53	26
MIN	14	6.0	6.0	6.0	6.1	6.0	26	27	50	51	28	6.0
AC-FT	1610	445	377	377	342	920	2330	4640	3040	3160	2620	811

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)

MEAN	22.0	23.7	23.7	70.7	136	98.6	40.9	32.5	26.5	26.2	24.9	23.8
MAX	75.6	90.2	64.0	422	780	492	132	97.3	51.1	51.5	42.6	54.7
(WY)	1999	1999	1996	1995	1998	2001	1993	1991	2003	2003	2003	2000
MIN	5.00	4.80	5.00	5.00	5.00	5.10	5.57	10.6	12.5	13.6	12.9	13.0
(WY)	1997	1998	2001	1991	1991	1995	1992	1990	1990	1989	1989	1990

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1989 - 2003	
ANNUAL TOTAL	7476.3		10420.1			
ANNUAL MEAN	20.5		28.5		45.3	
HIGHEST ANNUAL MEAN					119	
LOWEST ANNUAL MEAN					10.8	
HIGHEST DAILY MEAN	36	Jul 28	188	Apr 15	6000	Feb 23 1998
LOWEST DAILY MEAN	6.0	Nov 16	6.0	Nov 16	4.0	Nov 1 1996
ANNUAL SEVEN-DAY MINIMUM	6.0	Nov 23	6.0	Nov 23	4.1	Nov 24 1997
ANNUAL RUNOFF (AC-FT)	14830		20670		32800	
10 PERCENT EXCEEDS	35		52		62	
50 PERCENT EXCEEDS	26		26		25	
90 PERCENT EXCEEDS	6.1		6.1		5.0	

## 11109600 PIRU CREEK ABOVE LAKE PIRU, CA

LOCATION.—Lat 34° 31' 23", long 118° 45' 22", in NE 1/4 NW 1/4 sec.15, T.5 N., R.18 W., [Ventura County](#), Hydrologic Unit 18070102, on left bank near Blue Point, 1.3 mi downstream from Agua Blanca Creek, 4.3 mi upstream from Santa Felicia Dam, 8.0 mi northeast of Piru, and 15 mi downstream from Pyramid Dam.

DRAINAGE AREA.—372 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1955 to current year.

CHEMICAL DATA: Water years 1972–80.

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 1,058.55 ft above NGVD of 1929 (levels by U.S. Forest Service). Prior to Dec. 15, 1972, at site 0.3 mi upstream at different datum.

REMARKS.—Records fair. Flow regulated beginning December 1971 by Pyramid Lake (station 11109520). Imported water from the California Water Project stored and released at Pyramid Dam. See schematic diagram of [Santa Clara River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 38,000 ft<sup>3</sup>/s, Feb. 23, 1998, gage height, 13.38 ft, from floodmark, from rating curve extended above 20,000 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 11.36 ft, maximum gage height, 18.6 ft, Feb. 25, 1969, site and datum then in use; no flow at times in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 2, 1938, reached a discharge of 35,000 ft<sup>3</sup>/s.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	12	7.1	8.6	8.3	18	33	33	50	51	47	22
2	33	11	7.0	8.5	8.2	17	34	35	50	50	47	21
3	33	11	6.9	8.4	8.2	16	34	194	51	50	47	20
4	32	11	6.9	8.3	8.1	16	34	238	52	49	48	18
5	33	9.6	6.9	8.3	8.2	16	34	152	52	48	48	17
6	32	8.9	6.8	8.2	8.1	15	34	134	52	48	47	16
7	31	8.6	6.9	8.3	8.2	14	33	130	52	48	47	14
8	31	27	6.9	8.7	8.1	14	33	127	52	48	47	14
9	31	14	6.9	8.9	8.1	14	33	122	53	48	47	14
10	30	9.4	6.9	8.8	8.1	13	33	120	54	48	45	13
11	29	7.6	6.9	8.9	11	13	33	119	54	47	44	12
12	28	6.9	6.9	8.8	246	13	33	118	54	47	44	11
13	27	6.5	7.0	8.9	126	13	64	117	53	47	43	10
14	26	6.3	7.1	9.0	42	12	198	116	52	47	41	9.4
15	25	6.3	7.2	9.1	29	139	260	115	51	47	40	8.7
16	25	6.2	17	9.1	23	105	131	113	52	47	40	8.1
17	24	6.3	16	9.1	20	51	86	111	51	47	39	7.5
18	23	6.3	9.5	9.0	18	35	78	111	52	48	37	6.6
19	22	6.2	8.8	8.9	16	29	57	107	53	49	37	5.8
20	20	6.2	63	9.1	15	25	53	80	54	48	36	5.2
21	19	6.3	18	9.1	15	42	52	57	53	48	35	4.8
22	19	6.3	13	9.2	14	44	40	52	53	48	34	4.3
23	18	6.5	11	9.0	14	44	37	52	54	48	33	4.0
24	17	6.5	10	8.6	14	43	37	52	53	47	32	4.1
25	16	6.4	10	8.6	51	36	38	53	52	47	31	4.2
26	15	6.4	9.5	8.6	28	35	37	52	51	47	30	4.1
27	14	6.4	9.2	8.7	21	34	35	51	51	47	28	3.9
28	14	6.4	9.0	8.8	19	34	35	51	50	48	26	3.9
29	13	6.5	9.2	8.5	---	34	35	50	51	48	25	4.1
30	12	6.9	8.9	8.3	---	33	34	50	51	48	24	4.1
31	12	---	8.9	8.3	---	33	---	50	---	47	23	---
TOTAL	737	251.9	335.3	270.6	803.6	1000	1708	2962	1563	1485	1192	294.8
MEAN	23.8	8.40	10.8	8.73	28.7	32.3	56.9	95.5	52.1	47.9	38.5	9.83
MAX	33	27	63	9.2	246	139	260	238	54	51	48	22
MIN	12	6.2	6.8	8.2	8.1	12	33	33	50	47	23	3.9
AC-FT	1460	500	665	537	1590	1980	3390	5880	3100	2950	2360	585

## SANTA CLARA RIVER BASIN

## 11109600 PIRU CREEK ABOVE LAKE PIRU, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1971, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2.14	54.7	52.8	106	229	100	102	33.7	12.6	4.22	2.00	1.86
MAX	11.9	503	291	992	1657	569	741	165	53.4	22.4	11.3	9.63
(WY)	1970	1966	1966	1969	1969	1969	1958	1967	1969	1969	1969	1969
MIN	.000	.34	2.91	9.24	7.50	7.26	3.96	1.34	.12	.000	.000	.000
(WY)	1956	1965	1957	1965	1965	1961	1961	1961	1961	1960	1957	1956

## SUMMARY STATISTICS

## WATER YEARS 1956 - 1971

ANNUAL MEAN	57.2
HIGHEST ANNUAL MEAN	294 1969
LOWEST ANNUAL MEAN	5.66 1961
HIGHEST DAILY MEAN	15600 Feb 25 1969
LOWEST DAILY MEAN	.00 Oct 1 1955
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1 1955
MAXIMUM PEAK FLOW	31200 Feb 25 1969
MAXIMUM PEAK STAGE	18.6 Feb 25 1969
ANNUAL RUNOFF (AC-FT)	41470
10 PERCENT EXCEEDS	84
50 PERCENT EXCEEDS	8.2
90 PERCENT EXCEEDS	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

	1972	1973	1978	1984	1985	1988	1983	1983	1983	1978	2003	1998	1998
MEAN	16.2	19.4	36.2	104	246	196	82.0	51.0	31.0	22.4	19.0	17.4	
MAX	85.0	97.3	180	1154	2110	1126	289	204	93.7	47.9	40.0	56.4	
(WY)	1999	1999	1984	1995	1998	1983	1983	1983	1978	2003	1998	1998	
MIN	2.17	4.09	4.05	5.64	10.2	11.2	6.11	5.46	3.84	6.32	0.80	0.16	
(WY)	1973	1978	1990	1991	2002	1977	1977	1972	1976	1972	1972	1972	

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1972 - 2003

ANNUAL TOTAL	7507.4	12603.2	
ANNUAL MEAN	20.6	34.5	69.1
HIGHEST ANNUAL MEAN			240 1998
LOWEST ANNUAL MEAN			9.52 1990
HIGHEST DAILY MEAN	63 Dec 20	260 Apr 15	15000 Feb 23 1998
LOWEST DAILY MEAN	6.2 Nov 16	3.9 Sep 27	0.07 Jun 9 1972
ANNUAL SEVEN-DAY MINIMUM	6.3 Nov 14	4.0 Sep 23	0.09 Sep 3 1972
MAXIMUM PEAK FLOW		641 Feb 12	38000 Feb 23 1998
MAXIMUM PEAK STAGE		4.31 Feb 12	18.60 Feb 25 1969
ANNUAL RUNOFF (AC-FT)	14890	25000	50060
10 PERCENT EXCEEDS	33	53	113
50 PERCENT EXCEEDS	24	28	23
90 PERCENT EXCEEDS	8.7	6.9	6.4



## 11109700 LAKE PIRU NEAR PIRU, CA

LOCATION.—Lat 34° 27' 41", long 118° 45' 02", in Temescal Grant, [Ventura County](#), Hydrologic Unit 18070102, near center of Santa Felicia Dam on Piru Creek, 0.5 mi downstream from Santa Felicia Canyon, 4.2 mi northeast of Piru, and 20 mi downstream from Pyramid Dam.

DRAINAGE AREA.—425 mi<sup>2</sup>.

PERIOD OF RECORD.—May 1955 to current year. Prior to October 1985, monthend elevation and contents only.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929 (levels by United Water Conservation District). Prior to Jan. 27, 1956, reference point at intake tower at same datum. Jan. 27, 1956, to Dec. 1, 1980, nonrecording gage at same site and datum.

REMARKS.—Lake is formed by earthfill dam. Storage began May 20, 1955. Capacity below spillway level at elevation 1,055.0 ft, 88,340 acre-ft. Water is released from outlet to Piru Creek for ground-water recharge, domestic use, and irrigation on the Oxnard Plain. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of [Santa Clara River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum contents observed, 109,400 acre-ft, Feb. 25, 1969, elevation, 1,061.45 ft; lake dry Oct. 25 to Nov. 20, 1961.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 47,400 acre-ft, Aug. 27, elevation, 1,017.51 ft; minimum contents, 26,000 acre-ft, Oct. 2; elevation, 990.46 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on survey by United Water Conservation District in 1996)

970	14,300	1,000	32,800	1,030	59,400	1,050	81,200
980	19,500	1,010	40,800	1,040	69,900	1,060	93,400
990	25,700	1,020	47,700				

RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26000	27100	27600	28400	28500	30600	32900	36100	41600	44000	46200	47300
2	26000	27100	27600	28400	28500	30700	33000	36200	41700	44100	46300	47300
3	26000	27100	27600	28400	28500	30700	33000	36700	41800	44100	46300	47200
4	26100	27100	27600	28400	28500	30700	33100	37100	41900	44200	46300	47100
5	26100	27100	27600	28400	28500	30700	33100	37400	42000	44200	46400	46800
6	26200	27100	27600	28400	28500	30800	33200	37700	42100	44300	46500	46300
7	26300	27200	27600	28400	28500	30800	33200	37900	42200	44400	46500	45700
8	26300	27400	27600	28400	28500	30800	33400	38100	42300	44400	46600	44900
9	26400	27500	27600	28400	28600	30800	33400	38300	42300	44500	46600	44200
10	26400	27500	27600	28400	28600	30800	33400	38500	42400	44600	46700	43400
11	26500	27500	27700	28400	28600	30800	33500	38700	42400	44700	46700	42500
12	26500	27500	27700	28400	29600	30800	33500	38900	42500	44700	46800	41500
13	26500	27500	27700	28400	29900	30900	33700	39100	42600	44800	46800	40500
14	26500	27500	27700	28500	30000	30900	34100	39400	42700	44900	46900	39600
15	26600	27500	27700	28500	30100	31600	34600	39600	42800	45000	46900	38700
16	26700	27500	27800	28500	30100	31900	34900	39800	42800	45100	46900	37900
17	26700	27500	27900	28500	30100	32000	35100	40000	42900	45200	46900	37200
18	26700	27500	27900	28500	30200	32100	35200	40200	43000	45200	46900	36400
19	26800	27500	27900	28500	30200	32100	35300	40400	43100	45300	47000	35700
20	26800	27500	28100	28500	30200	32100	35400	40500	43300	45400	47000	34900
21	26800	27500	28200	28500	30200	32200	35500	40600	43400	45500	47100	34100
22	26900	27500	28200	28500	30200	32300	35600	40700	43500	45600	47100	33400
23	26900	27600	28200	28500	30300	32400	35600	40900	43500	45700	47100	32500
24	26900	27500	28300	28500	30300	32500	35700	40900	43600	45700	47200	31700
25	27000	27600	28300	28600	30500	32600	35800	41000	43700	45800	47300	31000
26	27000	27500	28300	28500	30500	32600	35800	41200	43700	45800	47300	30200
27	27000	27500	28300	28500	30600	32800	35900	41300	43800	45900	47400	29400
28	27000	27500	28300	28500	30600	32800	35900	41300	43800	45900	47300	28600
29	27000	27600	28300	28500	---	32800	36000	41400	43900	46000	47300	27900
30	27100	27600	28300	28500	---	32900	36000	41500	44000	46100	47300	27100
31	27100	---	28400	28500	---	32900	---	41600	---	46100	47300	---
MAX	27100	27600	28400	28600	30600	32900	36000	41600	44000	46100	47400	47300
MIN	26000	27100	27600	28400	28500	30600	32900	36100	41600	44000	46200	27100
a	992.07	992.79	993.91	994.16	997.02	1000.13	1004.19	1010.94	1013.72	1016.16	1017.45	992.11
b	+600	+500	+700	+200	+2100	+2300	+3100	+5600	+2400	+2100	+1200	-20200

CAL YR 2002 b -13700

WTR YR 2003 b -600

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.

## 11109800 PIRU CREEK BELOW SANTA FELICIA DAM, CA

LOCATION.—Lat 34° 27' 37", long 118° 45' 04", in Temescal Grant, [Ventura County](#), Hydrologic Unit 18070102, on right bank, 750 ft downstream from Santa Felicia Dam, 1 mi upstream from Lime Canyon, 4 mi northeast of Piru, and 20 mi downstream from Pyramid Dam.

DRAINAGE AREA.—425 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1955 to September 1968, October 1973 to current year.

CHEMICAL DATA: Water years 1969, 1974–80.

WATER TEMPERATURE: Water year 1969.

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 858.8 ft above NGVD of 1929 (levels by United Water Conservation District).

REMARKS.—Records good. Since May 1955, flow regulated by Lake Piru (station 11109700), and since 1971, by Pyramid Lake (station 11109520). Imported water from the California Water Project stored by Pyramid Lake. Spill from Lake Piru bypasses gage. See schematic diagram of [Santa Clara River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 920 ft<sup>3</sup>/s, Sept. 6, 2000, gage height, 4.47 ft; no flow at times in some years.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	212	4.5	4.1	4.5	5.2	5.5	5.7	5.7	5.2	5.6	6.0	14
2	24	4.5	4.1	4.5	5.2	5.5	5.5	5.7	5.2	5.7	6.0	19
3	8.0	4.5	4.1	4.5	5.2	5.5	5.5	5.7	5.2	5.7	6.0	33
4	8.1	4.5	4.1	4.5	5.2	5.5	5.5	5.6	5.4	5.7	6.0	71
5	7.9	4.5	4.1	4.5	5.2	5.5	5.5	5.7	5.5	5.7	6.0	138
6	8.0	4.4	4.1	4.4	5.2	5.5	5.5	5.7	5.5	5.5	6.0	235
7	8.1	4.3	4.1	4.3	5.2	5.5	5.5	5.7	5.5	5.5	6.1	331
8	8.1	4.6	4.1	4.3	5.2	5.7	5.5	5.7	5.2	5.6	6.3	394
9	5.8	4.3	4.1	4.9	5.2	5.7	5.5	5.7	5.2	5.7	6.3	393
10	4.5	4.3	4.1	6.0	5.2	5.7	5.5	5.7	5.2	5.7	6.3	451
11	4.5	4.3	4.3	6.0	5.3	5.5	5.6	5.5	5.5	5.7	6.3	481
12	4.5	4.3	4.3	6.0	5.8	5.5	5.7	5.5	5.5	5.7	6.2	481
13	4.5	4.3	4.3	6.0	5.2	5.5	5.7	5.5	5.5	5.7	6.0	481
14	4.5	4.3	4.3	6.0	5.2	5.5	5.7	5.5	5.5	5.8	6.0	480
15	4.5	4.3	4.3	6.0	5.2	5.8	5.7	5.6	5.2	5.8	6.0	481
16	4.5	4.3	4.5	6.0	5.2	5.5	5.7	4.8	5.2	5.9	6.0	424
17	4.6	4.3	4.3	6.0	5.2	5.5	5.6	5.2	5.3	6.0	6.0	394
18	4.8	4.3	4.3	6.0	5.2	5.5	5.5	5.2	5.4	6.0	6.0	393
19	4.8	4.3	4.3	6.0	5.2	5.7	5.5	5.2	5.5	6.0	6.0	390
20	4.8	4.3	4.4	6.0	5.2	5.5	5.5	5.2	5.5	6.0	3.5	390
21	4.8	4.3	4.3	6.0	5.2	5.5	5.4	5.3	5.5	6.0	2.9	389
22	4.7	4.3	4.3	6.0	5.2	5.5	5.5	5.4	5.2	5.8	2.9	397
23	4.7	4.3	4.3	6.0	5.2	5.5	5.5	5.2	5.2	4.3	3.0	402
24	4.8	4.1	4.3	6.2	5.3	5.5	5.5	5.2	5.2	6.0	3.1	401
25	4.5	4.1	4.3	6.0	5.5	5.5	5.5	5.3	5.3	6.0	3.1	402
26	4.5	4.1	4.3	6.1	5.5	5.5	5.5	5.5	5.7	6.0	3.1	405
27	4.5	4.1	4.3	6.2	5.5	5.6	5.5	5.3	5.8	6.0	3.1	404
28	4.5	4.1	4.3	4.4	5.5	5.7	5.5	5.2	5.7	6.0	3.1	404
29	4.5	4.1	4.3	6.0	---	5.7	5.7	5.2	5.5	6.0	3.1	404
30	4.5	4.1	4.3	5.5	---	5.7	5.7	5.2	5.5	6.0	4.3	402
31	4.5	---	4.3	5.2	---	5.7	---	5.2	---	6.0	7.6	---
TOTAL	391.0	129.0	131.6	170.0	147.6	172.5	166.7	168.1	161.8	179.1	158.3	10484
MEAN	12.6	4.30	4.25	5.48	5.27	5.56	5.56	5.42	5.39	5.78	5.11	349
MAX	212	4.6	4.5	6.2	5.8	5.8	5.7	5.7	5.8	6.0	7.6	481
MIN	4.5	4.1	4.1	4.3	5.2	5.5	5.4	4.8	5.2	4.3	2.9	14
AC-FT	776	256	261	337	293	342	331	333	321	355	314	20800



## 1111500 SESPE CREEK NEAR WHEELER SPRINGS, CA

LOCATION.—Lat 34° 34' 40", long 119° 15' 25", in NW 1/4 SW 1/4 sec.30, T.6 N., R.22 W., [Ventura County](#), Hydrologic Unit 18070102, on right bank at Sespe Gorge, 1.6 mi upstream from Tule Creek, and 5 mi northeast of Wheeler Springs.

DRAINAGE AREA.—49.5 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1947 to September 1997, October 2002 to September 2003.

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 3,498.65 ft NGVD of 1929 (levels by Ventura County Flood Control District). Prior to Oct. 1, 2002, at datum 2 ft higher at same site.

REMARKS.—Records poor. No regulation or diversion upstream from station. See schematic diagram of [Santa Clara River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,600 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 15.02 ft, from rating curve extended above 3,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow for many days in some years.

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

Date	Discharge Time	Gage height (ft <sup>3</sup> /s)	(ft)	Date	Discharge Time	Gage height (ft <sup>3</sup> /s)	(ft)
Dec. 16	2015	410	3.74	Mar. 15	1130	1,070	5.31
Feb. 12	0515	1,280	5.70	Apr. 14	0615	382	3.58
Feb. 24	2300	154	3.00	May 3	0645	473	3.85

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.29	0.47	0.70	1.5	1.1	2.1	11	e7.1	3.1	1.4	0.77	0.35
2	0.29	0.47	0.68	1.4	1.1	2.1	11	e29	2.6	1.4	0.77	0.33
3	0.30	0.48	0.69	1.3	1.2	1.9	11	e178	3.6	1.3	0.66	0.32
4	0.31	0.48	0.71	1.2	1.2	2.3	11	40	3.5	1.2	0.64	0.31
5	0.31	0.48	0.70	1.2	1.1	2.0	11	19	3.7	1.2	0.63	0.31
6	0.32	0.50	0.70	1.1	0.99	1.8	12	14	3.6	1.1	0.62	0.29
7	0.31	0.58	0.71	1.2	0.89	2.0	12	11	3.2	1.1	0.61	0.29
8	0.31	3.6	0.70	1.3	0.84	2.2	11	9.6	2.8	1.1	0.58	0.28
9	0.33	1.4	0.70	1.3	0.78	2.3	10	8.1	2.7	1.0	0.56	0.27
10	0.33	0.84	0.70	1.3	0.72	2.6	8.6	7.8	2.6	0.98	0.52	0.26
11	0.34	0.70	0.69	1.2	1.3	2.4	7.6	7.9	2.6	0.88	0.51	0.25
12	0.35	0.68	0.71	1.2	529	5.1	6.8	7.3	2.4	0.80	0.50	0.23
13	0.35	0.65	0.72	1.2	169	4.3	e52	7.0	2.2	0.76	0.49	0.23
14	0.35	0.63	0.72	1.2	9.0	2.8	e190	6.0	2.1	0.73	0.48	0.23
15	0.37	0.62	0.73	1.1	2.6	442	e74	5.3	2.0	0.69	0.47	0.23
16	0.38	0.64	43	1.1	1.3	78	e53	5.0	2.0	0.66	0.46	0.22
17	0.38	0.63	5.1	1.1	1.0	30	e43	5.2	1.9	0.84	0.44	0.22
18	0.40	0.63	3.6	1.1	0.94	20	e33	5.3	1.8	0.90	0.44	0.22
19	0.40	0.62	3.3	1.1	0.81	15	e28	5.5	1.7	0.91	0.43	0.23
20	0.40	0.62	24	1.1	0.75	13	e29	5.5	1.8	0.89	0.43	0.23
21	0.40	0.62	3.5	1.1	0.66	12	e26	5.3	1.7	0.84	0.43	0.22
22	0.40	0.62	2.6	1.1	0.61	11	e22	5.7	1.7	0.85	0.43	0.22
23	0.41	0.62	2.1	1.1	0.60	11	e19	6.9	1.7	0.82	0.42	0.22
24	0.42	0.62	1.8	1.1	14	11	e16	5.3	1.7	0.80	0.41	0.23
25	0.43	0.62	1.6	1.2	26	11	e15	5.9	1.6	0.81	0.39	0.23
26	0.43	0.67	1.5	1.2	5.9	12	e14	6.8	1.6	0.82	0.40	0.23
27	0.44	0.67	1.6	1.2	4.8	12	e12	4.5	1.6	0.82	0.38	0.22
28	0.45	0.67	1.7	1.2	2.3	11	e11	4.7	1.6	0.83	0.38	0.22
29	0.44	0.68	2.0	1.1	---	11	e9.5	4.4	1.5	0.82	0.37	0.22
30	0.45	0.69	1.6	1.1	---	12	e8.1	4.5	1.5	0.79	0.36	0.23
31	0.46	---	1.5	1.1	---	11	---	4.4	---	0.77	0.35	---
TOTAL	11.55	22.20	111.06	36.7	780.49	758.9	777.6	442.0	68.1	28.81	15.33	7.54
MEAN	0.37	0.74	3.58	1.18	27.9	24.5	25.9	14.3	2.27	0.93	0.49	0.25
MAX	0.46	3.6	43	1.5	529	442	190	178	3.7	1.4	0.77	0.35
MIN	0.29	0.47	0.68	1.1	0.60	1.8	6.8	4.4	1.5	0.66	0.35	0.22
AC-FT	23	44	220	73	1550	1510	1540	877	135	57	30	15

e Estimated.

## 11111500 SESPE CREEK NEAR WHEELER SPRINGS, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.80	4.77	8.23	32.7	61.5	52.6	23.3	8.15	2.93	1.33	0.67	0.81
MAX	10.3	131	85.5	456	561	553	233	59.5	18.6	8.08	5.11	10.7
(WY)	1984	1966	1966	1995	1993	1983	1958	1983	1983	1983	1983	1976
MIN	0.019	0.077	0.063	0.16	0.67	0.95	0.68	0.43	0.15	0.023	0.000	0.000
(WY)	1962	1951	1991	1991	1951	1951	1951	1961	1951	1951	1951	1951

## SUMMARY STATISTICS

## FOR 2003 WATER YEAR

## WATER YEARS 1948 - 2003

ANNUAL TOTAL	3060.28		
ANNUAL MEAN	8.38	16.2	
HIGHEST ANNUAL MEAN		101	1993
LOWEST ANNUAL MEAN		0.33	1951
HIGHEST DAILY MEAN	529	Feb 12	6430
LOWEST DAILY MEAN	0.22	Sep 16	0.00
ANNUAL SEVEN-DAY MINIMUM	0.22	Sep 16	0.00
MAXIMUM PEAK FLOW	1280	Feb 12	11600
MAXIMUM PEAK STAGE	5.70	Feb 12	15.02
ANNUAL RUNOFF (AC-FT)	6070		11750
10 PERCENT EXCEEDS	12		18
50 PERCENT EXCEEDS	1.1		1.5
90 PERCENT EXCEEDS	0.33		0.10

## 11113000 SESPE CREEK NEAR FILLMORE, CA

LOCATION.—Lat 34° 26' 30", long 118° 55' 35", in SE 1/4 NW 1/4 SE 1/4 sec.12, T.4 N., R.20 W., [Ventura County](#), Hydrologic Unit 18070102, on right bank, 0.7 mi downstream from Little Sespe Creek, 2.4 mi north on Grand Avenue, from Telegraph Road, and 2.7 mi north of Fillmore.

DRAINAGE AREA.—252 mi<sup>2</sup>.

PERIOD OF RECORD.—September 1911 to September 1913, October 1927 to September 1985, October 1990 to January 1993, October 1993 to current year; combined records of creek and canal, October 1927 to September 1939 monthly only, October 1939 to September 1985, October 1990 to January 1993. Prior to 1935, published as "at Sespe."

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 565 ft above NGVD of 1929, from topographic map. See WSP 1315-B for history of changes prior to Jan. 17, 1946. Oct. 1, 1990, to Jan. 15, 1993, at site 0.5 mi upstream at same elevation. Gage on diversion canal discontinued Jan. 15, 1993.

REMARKS.—Records fair except for estimated daily discharges, which are poor. No regulation upstream from station. Fillmore Irrigation Co. has diverted water 1 mi upstream since September 1911. See schematic diagram of [Santa Clara River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 73,000 ft<sup>3</sup>/s, Feb. 10, 1978, gage height, 22.40 ft, from rating curve extended above 17,000 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 22.40 ft, maximum gage height, 24.95 ft, Feb. 25, 1969, from debris wave; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 1,300 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)
Feb. 12	1430	7,630	10.43	Apr. 14	1115	2,520	8.02
Mar. 15	1530	6,710	10.10	May 3	1300	5,160	9.47

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	e3.7	7.3	22	13	68	50	66	41	17	6.0	4.1
2	3.4	e3.8	7.2	20	13	61	50	75	40	16	6.0	4.1
3	3.4	e3.8	7.0	20	13	56	48	2700	39	15	5.8	3.9
4	3.2	e3.8	6.9	19	13	53	46	1120	38	14	5.7	3.9
5	3.2	e3.8	6.9	19	13	51	46	483	37	13	5.4	3.7
6	3.0	e3.8	6.6	20	13	47	44	309	36	13	5.4	3.6
7	3.0	4.6	6.8	19	13	45	42	237	35	12	5.5	3.7
8	3.0	111	6.8	18	13	43	40	195	33	12	5.5	3.9
9	2.9	68	6.5	19	13	41	39	161	31	11	5.3	4.2
10	2.9	28	6.8	18	13	39	39	139	31	11	5.1	4.6
11	3.1	14	6.9	19	18	38	38	124	31	10	5.0	4.9
12	3.1	18	6.9	17	2430	37	38	112	30	9.9	5.0	5.0
13	3.2	15	6.9	17	1290	36	153	103	30	9.4	4.9	5.0
14	3.2	13	7.2	17	290	37	1490	96	30	9.3	4.9	5.2
15	3.3	11	7.6	16	143	2530	564	93	28	9.0	4.8	5.3
16	3.4	10	88	16	97	959	283	87	26	8.6	4.5	5.2
17	3.5	9.3	60	15	76	365	194	82	25	8.1	4.6	5.4
18	3.6	8.8	46	15	64	228	156	78	25	8.2	4.6	5.5
19	3.6	8.1	25	15	56	168	126	73	24	8.5	4.7	5.3
20	3.6	7.8	446	15	50	137	108	70	24	8.2	4.6	5.2
21	3.5	7.8	125	15	46	115	98	67	24	7.9	4.6	5.0
22	3.5	7.5	61	15	42	102	92	64	25	7.6	4.8	5.2
23	e3.5	7.6	38	14	39	91	85	62	25	7.6	4.9	5.1
24	e3.5	7.6	29	14	40	83	80	61	25	7.3	4.5	5.4
25	e3.6	7.3	25	14	264	76	76	59	24	7.2	4.5	6.0
26	e3.6	7.1	23	14	153	69	73	58	22	7.0	4.5	5.7
27	e3.6	6.9	22	14	97	64	71	54	20	6.7	4.3	5.6
28	e3.6	6.6	21	14	78	59	70	50	19	6.5	4.1	5.6
29	e3.7	6.8	22	14	---	57	69	47	18	6.5	4.1	5.4
30	e3.7	7.0	22	14	---	53	68	45	18	6.4	4.0	5.5
31	e3.7	---	25	14	---	51	---	43	---	6.1	4.0	---
TOTAL	104.2	421.5	1182.3	512	5403	5859	4376	7013	854	300.0	151.6	146.2
MEAN	3.36	14.1	38.1	16.5	193	189	146	226	28.5	9.68	4.89	4.87
MAX	3.7	111	446	22	2430	2530	1490	2700	41	17	6.0	6.0
MIN	2.9	3.7	6.5	14	13	36	38	43	18	6.1	4.0	3.6
AC-FT	207	836	2350	1020	10720	11620	8680	13910	1690	595	301	290

e Estimated.

## 11113000 SESPE CREEK NEAR FILLMORE, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.27	39.0	95.3	234	487	368	164	56.7	19.9	8.01	4.17	3.92
MAX	55.4	1285	698	3378	4333	2301	1632	426	203	90.9	49.3	45.6
(WY)	1984	1966	1966	1969	1998	1978	1958	1998	1998	1998	1998	1939
MIN	0.000	0.000	0.000	1.35	4.74	2.82	0.67	0.25	0.000	0.000	0.000	0.000
(WY)	1913	1930	1930	1948	1951	1961	1961	1961	1928	1928	1912	1912

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1911 - 2003	
ANNUAL TOTAL	4337.2		26322.8			
ANNUAL MEAN	11.9		72.1		122	
HIGHEST ANNUAL MEAN					641 1969	
LOWEST ANNUAL MEAN					1.78 1951	
HIGHEST DAILY MEAN	446	Dec 20	2700	May 3	29100	Jan 25 1969
LOWEST DAILY MEAN	2.2	Jul 26	2.9	Oct 9	0.00	Jul 11 1912
ANNUAL SEVEN-DAY MINIMUM	2.3	Aug 7	3.0	Oct 6	0.00	Jul 11 1912
MAXIMUM PEAK FLOW			7630	Feb 12	73000	Feb 10 1978
MAXIMUM PEAK STAGE			10.43	Feb 12	24.95	Feb 25 1969
ANNUAL RUNOFF (AC-FT)	8600		52210		88190	
10 PERCENT EXCEEDS	21		100		175	
50 PERCENT EXCEEDS	6.8		15		10	
90 PERCENT EXCEEDS	2.5		3.8		0.20	

## 11113500 SANTA PAULA CREEK NEAR SANTA PAULA, CA

LOCATION.—Lat 34° 24'45", long 119° 04'58", in NW 1/4 SE 1/4 sec.21, T.4 N., R.21 W., Mission San Buenaventura Grant, [Ventura County](#), Hydrologic Unit 18070102, on right bank, 1.3 mi downstream from Sisar Creek, and 4.8 mi north of Santa Paula.

DRAINAGE AREA.—38.4 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1927 to current year. Since October 1995, operated by Ventura County Watershed Protection District. March 1912 to September 1913, at site 1.2 mi upstream; records not equivalent.

CHEMICAL DATA: Water years 1969–80.

WATER TEMPERATURE: Water years 1969–71, 1974–75.

REVISED RECORDS.—WSP 1635: 1933(M), 1934, 1936(M), 1941(M). WDR CA-95-1: 1994. WSP 1715: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 785 ft above NGVD of 1929, from topographic map. See WDR CA-79-1 for history of changes prior to Oct. 22, 1980. Oct. 22, 1980 to Feb. 12, 1992, at site 190 ft upstream at datum 5.0 ft higher. Feb. 13, 1992 to June 24, 1998, same datum. High-flow data for 1996 recorded by sonic-sensor gage set to NGVD of 1929.

REMARKS.—Records poor. Natural flow affected by pumping and return flow from irrigated areas. See schematic diagram of [Santa Clara River Basin](#).

COOPERATION.—Records of discharge collected and provided by Ventura County Watershed Protection District.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 21,000 ft<sup>3</sup>/s, Feb. 25, 1969, gage height, 15.18 ft, from floodmark, site and datum then in use, from rating curve extended above 2,300 ft<sup>3</sup>/s, on basis of critical-depth measurement at gage height 12.2 ft, maximum gage height, 772.21 ft, Mar. 5, 2001, at present datum; no flow at times in 1927, 1949, 1951–52, 1965.

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)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 15	1235	782	770.39	May 3	1550	782	770.39
Apr. 14	0440	358	769.70				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.9	2.7	6.3	3.2	10	9.6	11	11	9.3	4.3	3.2
2	0.93	2.1	3.3	6.4	2.9	10	8.6	14	10	8.7	4.1	3.3
3	1.1	3.2	3.0	5.9	3.7	8.9	9.3	330	11	8.8	4.3	3.1
4	1.2	1.9	3.2	6.2	3.4	9.0	9.2	166	11	9.1	4.2	3.3
5	1.2	1.6	3.4	6.8	3.6	9.6	9.3	84	12	13	4	3.2
6	1.2	1.9	2.7	8.1	3.3	9.4	9.2	64	12	13	3.7	3
7	1.1	2.3	2.6	5.8	4.5	9.2	9.6	53	10	12	3.9	3
8	1.1	18	2.7	5.1	3.2	9.1	8.8	41	9.8	12	3.9	3.1
9	1.1	12	2.6	5.5	3.2	9.3	8.7	36	12	11	3.8	3.3
10	0.98	7.7	2.8	5.4	3.2	9.1	7.8	32	14	11	3.7	3.5
11	1.2	7.3	3.0	5.9	3.7	8.4	8.1	30	13	9.8	3.6	3.5
12	1.1	5.6	3.9	5.9	60	8.1	7.5	27	12	9.9	3.3	3.2
13	1.3	5.9	3.1	6.2	65	8.3	44	24	11	9.4	3.3	3.2
14	1.1	5.4	2.7	5.9	26	7.8	189	23	13	9.7	3.0	3.2
15	1.4	5.3	2.7	6.1	16	224	76	21	12	8.9	3.1	3.1
16	1.6	5.1	20	5.6	11	85	44	21	11	8.7	3.1	3.1
17	1.3	4.0	6.2	5.5	8.6	42	37	19	10	7.4	3.1	3
18	1.3	4.5	5.2	5.2	7.9	31	29	18	10	7.4	3.4	3.1
19	1.4	4.3	7.1	5.0	7.5	25	25	18	12	7.8	3.4	3
20	1.3	4.0	49	4.7	7.3	21	22	18	12	7.0	3.6	2.8
21	1.7	3.4	14	4.3	7.5	19	19	17	12	6.0	3.4	3.1
22	1.6	3.0	12	4.2	6.7	17	16	15	12	5.8	3.8	3.1
23	1.5	3.1	10	4.2	6.0	15	17	13	11	5.5	4.1	3
24	1.5	3.3	9.3	4.2	7.5	14	16	15	11	5.2	3.7	2.9
25	1.7	4.2	8.8	4.4	19	15	14	15	11	5.0	3.2	3.1
26	1.7	6.1	7.5	4.0	12	15	14	14	11	4.9	3.2	2.9
27	1.7	7.0	7.5	3.9	12	12	13	15	9.5	5	3.4	3.2
28	2.0	4.5	7.2	3.7	11	13	12	13	8.8	5	3.3	3
29	1.9	2.9	6.7	3.9	---	12	12	12	8.9	4.8	3.3	3
30	2.0	2.5	6.5	4.0	---	9.9	12	11	9.8	5	3.3	3
31	2.1	---	5.6	3.9	---	9.4	---	11	---	4.4	3.0	---
TOTAL	43.31	144.0	227.0	162.2	328.9	705.5	716.7	1201	333.8	250.5	110.5	93.5
MEAN	1.40	4.80	7.32	5.23	11.7	22.8	23.9	38.7	11.1	8.08	3.56	3.12
MAX	2.1	18	49	8.1	65	224	189	330	14	13	4.3	3.5
MIN	0.93	1.6	2.6	3.7	2.9	7.8	7.5	11	8.8	4.4	3.0	2.8
AC-FT	86	286	450	322	652	1400	1420	2380	662	497	219	185



## 11113500 SANTA PAULA CREEK NEAR SANTA PAULA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.10	7.93	15.3	44.0	82.7	69.1	33.9	14.3	8.08	4.98	3.21	3.08
MAX	18.8	183	128	718	841	454	375	78.7	46.4	26.9	16.5	24.5
(WY)	1984	1966	1967	1969	1969	1978	1958	1983	1983	1983	1983	1983
MIN	0.000	0.000	0.000	0.76	0.97	1.69	0.000	0.081	0.000	0.000	0.000	0.000
(WY)	1929	1930	1930	1928	1930	1961	1928	1928	1928	1928	1928	1928

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1928 - 2003
ANNUAL TOTAL	1172.31	4316.91	
ANNUAL MEAN	3.21	11.8	23.8
HIGHEST ANNUAL MEAN			156 1969
LOWEST ANNUAL MEAN			1.37 1951
HIGHEST DAILY MEAN	49 Dec 20	330 May 3	8900 Feb 25 1969
LOWEST DAILY MEAN	0.79 Aug 10	0.93 Oct 2	0.00 Oct 1 1927
ANNUAL SEVEN-DAY MINIMUM	0.84 Jul 17	1.1 Oct 1	0.00 Oct 1 1927
MAXIMUM PEAK FLOW		782 Mar 15	21000 Feb 25 1969
MAXIMUM PEAK STAGE		770.39 Mar 15	772.21 Mar 5 2001
ANNUAL RUNOFF (AC-FT)	2330	8560	17260
10 PERCENT EXCEEDS	6.0	19	35
50 PERCENT EXCEEDS	2.4	6.2	4.9
90 PERCENT EXCEEDS	0.93	2.2	0.90

## 1114000 SANTA CLARA RIVER AT MONTALVO, CA

LOCATION.—Lat 34° 16'44", long 119° 08'28" in Santa Clara Del Norte Grant, [Ventura County](#), Hydrologic Unit 18070102, on right bank, downstream side of State Highway 118 bridge, and 0.8 mi southeast of Saticoy.

DRAINAGE AREA.—1,577 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1927 to September 1932, October 1949 to September 1988, October 1989 to September 1993, October 1995 to current year. Discharge measurements only October 1993 to September 1994 at site 3.9 mi downstream, October 1994 to November 1998 at present site. November 1998 to June 1999 at site upstream of Freeman Diversion. At present site since June 1999. Monthly discharge only for 1950–65, published in WSP 2128 (daily discharge available in the files of the U.S. Geological Survey).

WATER TEMPERATURE: Water years 1969–85, 1989–1993.

SEDIMENT DATA: Water years 1969–85, 1989–93.

REVISED RECORDS.—WSP 2128: Drainage area. WDR CA-00-1: 1999.

GAGE.—Water-stage recorder. Datum of gage is 120 ft above NGVD of 1929, from topographic map. Oct. 1, 1927, to Sept. 30, 1932, Oct. 1, 1949, to Sept. 30, 1967, and Feb. 3, 1970, to Sept. 30, 1993, at site 3.9 mi downstream at different datums. Oct. 1, 1967, to Feb. 2, 1970, at present site at different datum. Feb. 9, 1984, to Jan. 27, 1993, supplementary gage 3.2 mi downstream at different datum. Oct. 1, 1995, to Nov. 23, 1998, at present site. Nov. 23, 1998, to June 25, 1999, at site 1.8 mi upstream at different datum. At present site since June 25, 1999.

REMARKS.—Records fair. Flow partly regulated by Lake Piru (station 11109700), capacity, 88,340 acre-ft, 33 mi upstream since May 1955; by Pyramid Lake (station 11109520), capacity, 171,200 acre-ft, 42 mi upstream since 1971; by Castaic Lake (station 11108133), capacity, 323,700 acre-ft, 43 mi upstream since 1972. Natural flow affected by ground-water withdrawals, diversions, municipal use, and ground-water replenishment. Imported water from the California Water Project released to the basin at Castaic Dam and Pyramid Dam. Diversion to spreading grounds and for irrigation in Pleasant Valley, at site 6.0 mi upstream. Discharge represents flow to the ocean regardless of upstream development. See schematic diagram of [Santa Clara River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 165,000 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 17.41 ft, at datum 5.0 ft higher; no flow for long periods in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 2, 1938, reached a discharge of 120,000 ft<sup>3</sup>/s, estimated by Ventura County Flood Control District.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	4.3	0.00	0.00	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	3.4	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1280	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	860	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	250	0.32	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	140	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.34	0.00	87	0.00	0.00	0.00	0.00
8	0.00	e387	0.00	0.00	0.00	0.00	7.7	92	0.00	0.00	0.00	0.00
9	0.00	211	0.00	0.00	0.00	0.00	0.00	70	0.00	0.00	0.00	0.00
10	0.00	47	0.00	0.00	0.00	0.00	0.00	39	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	23	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	3550	0.00	0.00	12	0.06	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	2700	0.00	80	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	422	0.00	1460	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	112	2830	984	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	88	0.00	86	1790	364	0.00	0.00	0.00	0.00	0.00
17	0.00	0.22	212	0.00	12	729	140	0.00	0.00	0.00	0.00	0.00
18	0.00	0.53	0.36	0.00	17	351	196	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	5.2	0.00	2.4	285	208	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	769	0.00	0.00	263	165	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	95	0.00	0.00	235	125	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.76	0.00	0.00	227	84	0.00	0.00	0.00	0.00	0.00
23	0.00	0.10	0.18	0.00	0.00	195	45	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.83	115	34	0.00	4.6	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	94	71	28	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	124	37	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	24	16	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	4.9	4.8	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	23	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	668.85	1174.80	0.00	7149.13	7149.14	3920.70	2856.40	4.98	0.00	0.00	0.00
MEAN	0.000	22.3	37.9	0.000	255	231	131	92.1	0.17	0.000	0.000	0.000
MAX	0.00	387	769	0.00	3550	2830	1460	1280	4.6	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	1330	2330	0.00	14180	14180	7780	5670	9.9	0.00	0.00	0.00

e Estimated.

## 11114000 SANTA CLARA RIVER AT MONTALVO, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.35	49.8	98.0	299	852	540	197	45.0	10.2	3.97	0.62	1.35
MAX	72.0	1603	917	5477	7314	5985	2668	1102	268	97.4	23.9	31.7
(WY)	1997	1966	1966	1969	1969	1983	1958	1998	1998	1998	1998	1983
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1928	1928	1930	1951	1951	1931	1950	1932	1928	1928	1928	1928

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL	1896.85		22924.00			
ANNUAL MEAN	5.20		62.8		171	
HIGHEST ANNUAL MEAN					1229	
LOWEST ANNUAL MEAN					0.000	
HIGHEST DAILY MEAN	769	Dec 20	3550	Feb 12	92300	Feb 25 1969
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1927
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 5	0.00	Oct 1	0.00	Oct 1 1927
MAXIMUM PEAK FLOW			13600	Feb 12	165000	Jan 25 1969
MAXIMUM PEAK STAGE			8.47	Feb 12	17.41	Jan 25 1969
ANNUAL RUNOFF (AC-FT)	3760		45470		124000	
10 PERCENT EXCEEDS	0.00		86		92	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 11114495 MATILIIJA CREEK NEAR RESERVOIR, NEAR MATILIIJA HOT SPRINGS, CA

LOCATION.—Lat 34° 30' 10", long 119° 21' 23", SE 1/4 NE 1/4, sec.23, T.5 N., R.24 W, Ventura County, Hydrologic Unit 18070101, on left bank, 1.9 mi upstream from Matilija Reservoir, 1.4 mi upstream of discontinued station (11114500), and 7.2 mi northwest of Ojai.

DRAINAGE AREA.—47.8 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—February 2002 to current year (seasonal records only).

GAGE.—Water-stage recorder. Elevation of gage is 1380 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from gage.

COOPERATION.—Station constructed, maintained, and operated in cooperation with the Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,070 ft<sup>3</sup>/s, Mar. 15, 2003, gage height, 7.98 ft; minimum daily discharge, 1.1 ft<sup>3</sup>/s, Nov. 1–6, 2002.

EXTREMES FOR CURRENT YEAR.—Maximum discharge, 1,070 ft<sup>3</sup>/s, Mar. 15, gage height, 7.98 ft; minimum daily discharge, 1.1 ft<sup>3</sup>/s, Nov. 1–6.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	e1.1	2.9	6.9	4.6	18	16	---	---	---	---	---
2	---	e1.1	2.8	6.9	4.8	18	16	---	---	---	---	---
3	---	e1.1	2.8	6.8	4.9	17	16	---	---	---	---	---
4	---	e1.1	2.8	6.9	4.9	17	15	---	---	---	---	---
5	---	e1.1	2.8	e6.8	5.1	16	15	---	---	---	---	---
6	---	1.1	2.8	e6.7	5.1	16	14	---	---	---	---	---
7	---	1.3	2.8	e6.6	5.1	15	14	---	---	---	---	---
8	---	2.5	2.7	e6.5	5.0	15	13	---	---	---	---	---
9	---	1.8	2.7	e6.4	4.9	14	13	---	---	---	---	---
10	---	1.6	2.6	e6.3	4.8	14	12	---	---	---	---	---
11	---	1.5	2.7	e6.2	5.0	13	12	---	---	---	---	---
12	---	1.6	2.7	e6.1	132	13	12	---	---	---	---	---
13	---	1.7	2.6	e6.0	139	13	24	---	---	---	---	---
14	---	1.8	2.7	e5.9	39	13	83	---	---	---	---	---
15	---	1.9	2.7	e5.8	27	336	41	---	---	---	---	---
16	---	2.0	3.3	e5.7	23	118	31	---	---	---	---	---
17	---	2.1	2.9	e5.6	21	61	28	---	---	---	---	---
18	---	2.1	2.8	e5.5	19	46	26	---	---	---	---	---
19	---	2.2	3.2	e5.4	18	37	23	---	---	---	---	---
20	---	2.3	4.7	e5.3	18	32	22	---	---	---	---	---
21	---	2.4	4.3	e5.2	17	29	21	---	---	---	---	---
22	---	2.5	4.5	e5.1	16	26	20	---	---	---	---	---
23	---	2.5	4.7	e5.0	15	25	19	---	---	---	---	---
24	---	2.6	5.1	e4.9	16	23	19	---	---	---	---	---
25	---	2.7	5.5	e4.8	27	21	18	---	---	---	---	---
26	---	2.8	5.8	e4.8	22	20	17	---	---	---	---	---
27	---	2.8	5.9	e4.7	20	20	17	---	---	---	---	---
28	---	2.8	6.2	e4.7	19	19	17	---	---	---	---	---
29	---	2.9	6.5	e4.6	---	18	16	---	---	---	---	---
30	---	2.9	6.6	e4.6	---	17	15	---	---	---	---	---
31	---	---	6.7	e4.5	---	17	---	---	---	---	---	---
TOTAL	---	59.9	119.8	177.2	642.2	1077	625	---	---	---	---	---
MEAN	---	2.00	3.86	5.72	22.9	34.7	20.8	---	---	---	---	---
MAX	---	2.9	6.7	6.9	139	336	83	---	---	---	---	---
MIN	---	1.1	2.6	4.5	4.6	13	12	---	---	---	---	---
AC-FT	---	119	238	351	1270	2140	1240	---	---	---	---	---

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

MEAN	---	2.00	3.86	5.72	22.9	19.9	20.8	---	---	---	---	---
MAX	---	2.00	3.86	5.72	22.9	34.7	20.8	---	---	---	---	---
(WY)	---	2003	2003	2003	2003	2003	2003	---	---	---	---	---
MIN	---	2.00	3.86	5.72	22.9	5.15	20.8	---	---	---	---	---
(WY)	---	2003	2003	2003	2003	2002	2003	---	---	---	---	---

## SUMMARY STATISTICS

## WATER YEARS 2002 - 2003

HIGHEST DAILY MEAN	336	Mar 15 2003
LOWEST DAILY MEAN	1.1	Nov 1 2002
ANNUAL SEVEN-DAY MINIMUM	1.1	Nov 1 2002
MAXIMUM PEAK FLOW	1070	Mar 15 2003
MAXIMUM PEAK STAGE	7.98	Mar 15 2003

e Estimated.

11114495 MATILIJIA CREEK NEAR RESERVOIR, NEAR MATILIJIA HOT SPRINGS, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—December 2001 to current year.

WATER TEMPERATURE: December 2001 to current year.

SEDIMENT DATA: December 2001 to current year.

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

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 load, tons/d (80155)
DEC						
12...	0945	2.6	13.0	--	14	.10
JAN						
31...	1435	4.7	17.5	--	1	.01
FEB						
05...	1650	5.0	13.0	--	7	.09
12...	1550	220	14.0	98	1580	939
25...	0920	31	9.0	68	6	.50
MAR						
12...	1340	13	18.0	--	3	.11
16...	1125	111	14.0	--	35	10
20...	1440	31	17.5	--	8	.67
APR						
07...	1520	13	18.5	--	6	.21
14...	1500	74	13.0	--	154	31
MAY						
03...	1450	154	13.0	--	282	117

## 11118500 VENTURA RIVER NEAR VENTURA, CA

LOCATION.—Lat 34° 21'08", long 119° 18'27", in southeast corner of Santa Ana Grant, Ventura County, Hydrologic Unit 18070101, on right bank, 50 ft downstream from bridge on Casitas Pass Road, at Foster Memorial Park, 0.2 mi downstream from Coyote Creek, and 5 mi north of Ventura.

DRAINAGE AREA.—188 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—September 1911 to January 1914, October 1929 to current year; combined records of river and diversion, October 1932 to current year.

REVISED RECORDS.—WSP 1565: 1957. WSP 1928: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage on river; water-stage recorder and Parshall flume on diversion. Elevation of gage is 205.23 ft above NGVD of 1929, Ventura County Flood Control datum. See WSP 1315-B for history of changes prior to Nov. 2, 1949. Nov. 2, 1949, to June 12, 1969, at site 80 ft downstream, at datum 9.00 ft lower. June 13, 1969, to Dec. 22, 1986, at site 370 ft upstream, at datum 5.00 ft lower.

REMARKS.—Records fair. Flow partly regulated since March 1948 by Matilija Reservoir (station 11115000), usable capacity, 1,480 acre-ft, and since October 1959 by Lake Casitas (station 11108133), capacity, 323,700 acre-ft. Water diverted to Lake Casitas on Coyote Creek since January 1959. Diversion by city of Ventura for municipal supply began prior to 1911. For records of combined discharge of river and Ventura City Diversion (station 11118400), see station 11118501.

EXTREMES FOR PERIOD OF RECORD.—River only: Maximum discharge, 63,600 ft<sup>3</sup>/s, Feb. 10, 1978, gage height, 24.14 ft, from rating curve extended above 34,000 ft<sup>3</sup>/s, maximum gage height, 29.3 ft, Jan. 25, 1969, present datum, from floodmarks; no flow at times in many years. Combined river and diversion: Maximum discharge, 63,600 ft<sup>3</sup>/s, Feb. 10, 1978; no flow Nov. 28, 29, 1977, Oct. 23–26, 1989, July 9–11, 1990, and many days during 1994.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.22	0.04	0.76	2.7	0.84	3.5	17	24	20	9.1	7.7	4.9
2	0.20	0.04	0.60	2.5	0.84	3.1	16	27	19	9.4	7.7	5.1
3	0.16	0.03	0.41	2.3	0.84	3.1	16	172	17	9.2	7.7	4.8
4	0.11	0.03	0.31	2.2	0.83	2.9	16	110	17	9.4	7.3	4.6
5	0.09	0.02	0.21	2.0	0.86	2.8	16	68	17	9.4	7.1	4.6
6	0.08	0.02	0.14	1.9	0.93	2.7	16	62	19	9.5	6.8	4.5
7	0.06	0.04	0.14	2.3	0.92	2.9	15	63	17	9.7	6.5	4.5
8	0.06	51	0.10	2.2	0.91	2.9	15	61	16	9.8	6.4	4.5
9	0.05	15	0.08	2.1	0.91	3.0	15	59	16	9.8	6.3	4.4
10	0.04	5.9	0.07	2.0	0.93	3.1	15	41	16	9.9	6.0	4.4
11	0.04	5.1	0.06	1.9	1.0	3.2	15	30	15	9.5	6.0	4.4
12	0.04	4.7	0.06	1.8	48	3.2	15	28	16	9.6	6.0	4.4
13	0.04	4.2	0.06	1.8	25	3.2	18	29	16	9.3	6.0	4.3
14	0.04	3.2	0.06	1.7	7.7	3.4	70	31	16	8.9	5.8	4.1
15	0.03	2.5	0.06	1.6	4.5	1260	45	31	15	8.6	5.8	4.4
16	0.04	2.0	4.9	1.5	3.3	131	43	31	14	8.4	5.4	4.7
17	0.04	1.8	0.77	1.5	2.8	76	35	31	13	8.8	5.5	4.7
18	0.05	1.4	0.35	1.5	2.5	63	31	31	13	8.8	5.5	4.4
19	0.05	1.3	0.56	1.4	2.3	71	28	31	12	8.8	5.5	4.5
20	0.05	1.1	107	1.4	2.2	38	25	31	11	8.6	5.5	4.4
21	0.05	1.1	13	1.4	2.1	27	25	31	10	8.5	5.4	4.6
22	0.05	1.1	9.7	1.4	1.9	22	25	31	10	8.5	5.3	5.0
23	0.05	1.1	6.3	1.4	1.9	23	55	31	9.9	8.4	5.3	4.9
24	0.06	1.1	5.0	1.2	2.0	28	59	29	9.8	8.2	5.3	5.1
25	0.06	1.1	4.2	1.0	7.0	27	32	28	9.6	8.2	5.2	4.9
26	0.06	1.0	3.8	0.93	9.0	22	27	29	9.5	8.1	5.2	4.7
27	0.06	0.93	3.4	0.90	5.2	21	25	28	9.4	7.9	5.2	4.6
28	0.05	0.87	3.3	0.88	3.9	19	24	27	9.6	7.8	5.2	4.5
29	0.05	0.79	3.1	0.86	---	18	24	25	9.3	7.8	5.1	4.3
30	0.05	0.87	3.0	0.88	---	17	23	24	9.4	7.6	5.1	4.3
31	0.04	---	2.9	0.84	---	17	---	23	---	7.6	4.9	---
TOTAL	2.07	109.38	174.40	49.99	141.11	1923.0	801	1297	411.5	273.1	183.7	137.5
MEAN	0.067	3.65	5.63	1.61	5.04	62.0	26.7	41.8	13.7	8.81	5.93	4.58
MAX	0.22	51	107	2.7	48	1260	70	172	20	9.9	7.7	5.1
MIN	0.03	0.02	0.06	0.84	0.83	2.7	15	23	9.3	7.6	4.9	4.1
AC-FT	4.1	217	346	99	280	3810	1590	2570	816	542	364	273

11118500 VENTURA RIVER NEAR VENTURA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1957, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.29	5.15	36.5	121	192	237	78.0	26.1	12.1	6.15	3.59	2.51
MAX	21.4	38.8	174	1103	1058	1951	874	226	103	56.1	35.8	21.2
(WY)	1942	1947	1932	1952	1941	1938	1941	1941	1941	1941	1941	1941
MIN	.000	.000	.000	.000	.000	.003	.000	.000	.000	.000	.000	.000
(WY)	1930	1930	1930	1931	1930	1951	1949	1934	1934	1931	1930	1930

SUMMARY STATISTICS WATER YEARS 1930 - 1957

ANNUAL MEAN	59.7
HIGHEST ANNUAL MEAN	354 1941
LOWEST ANNUAL MEAN	.000 1951
HIGHEST DAILY MEAN	17900 Mar 2 1938
LOWEST DAILY MEAN	.00 Oct 1 1929
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1 1929
MAXIMUM PEAK FLOW	39200 Mar 2 1938
MAXIMUM PEAK STAGE	19.20 Mar 2 1938
ANNUAL RUNOFF (AC-FT)	43230
10 PERCENT EXCEEDS	71
50 PERCENT EXCEEDS	1.9
90 PERCENT EXCEEDS	.00

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

MEAN	2.90	13.5	23.6	132	306	212	72.2	35.7	15.9	8.24	4.36	3.50
MAX	40.9	278	234	1880	2919	1797	758	408	158	63.7	32.2	29.0
(WY)	1984	1966	1966	1969	1998	1983	1983	1998	1998	1998	1998	1998
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1962	1965	1969	1976	1961	1990	1961	1961	1961	1961	1961	1961

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1960 - 2003

ANNUAL TOTAL	1165.27	5503.75	
ANNUAL MEAN	3.19	15.1	67.9
HIGHEST ANNUAL MEAN			383 1995
LOWEST ANNUAL MEAN			0.29 1961
HIGHEST DAILY MEAN	107 Dec 20	1260 Mar 15	22000 Feb 9 1978
LOWEST DAILY MEAN	0.00 Sep 1	0.02 Nov 5	0.00 Sep 12 1960
ANNUAL SEVEN-DAY MINIMUM	0.00 Sep 1	0.03 Oct 31	0.00 Dec 15 1960
MAXIMUM PEAK FLOW		5100 Mar 15	63600 Feb 10 1978
MAXIMUM PEAK STAGE		7.05 Mar 15	29.30 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	2310	10920	49200
10 PERCENT EXCEEDS	5.7	29	52
50 PERCENT EXCEEDS	2.5	5.1	3.7
90 PERCENT EXCEEDS	0.04	0.06	0.00

## VENTURA RIVER BASIN

11118501 VENTURA RIVER NEAR VENTURA, CA—Continued

VENTURA RIVER AND VENTURA CITY DIVERSION NEAR VENTURA, CA

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	3.7	6.6	8.9	7.6	11	25	24	28	17	14	12
2	4.6	2.8	6.2	8.7	7.6	10	24	33	27	17	14	12
3	3.8	2.8	5.8	8.5	7.6	10	24	180	25	17	14	12
4	3.1	2.7	5.2	8.4	7.5	10	23	118	25	17	15	12
5	3.0	2.6	4.7	8.2	7.5	10	24	76	25	17	14	12
6	2.9	2.6	4.6	8.1	7.7	9.5	24	70	27	17	14	12
7	3.0	2.6	4.6	8.5	7.7	9.2	23	71	25	17	14	12
8	3.0	54	4.5	8.4	7.7	9.4	23	69	24	17	14	12
9	3.0	18	4.5	8.3	7.7	9.5	23	67	24	17	14	12
10	2.8	8.4	3.3	8.2	7.7	9.6	23	49	24	18	13	12
11	2.8	7.5	2.8	8.1	7.8	9.7	23	38	23	17	13	12
12	2.8	7.1	4.8	7.9	55	9.7	23	36	24	17	13	12
13	2.8	7.7	4.6	7.9	33	9.7	26	37	24	17	13	12
14	2.8	7.3	4.6	7.8	15	9.9	78	39	24	16	13	11
15	2.8	6.5	4.5	7.7	12	1270	53	39	23	16	13	12
16	2.8	5.9	9.5	7.6	11	138	51	39	22	16	13	12
17	2.9	5.7	6.3	7.6	10	83	43	39	21	16	13	12
18	3.0	5.2	6.0	7.6	9.9	70	39	39	21	16	13	12
19	3.0	5.1	6.1	7.5	9.6	78	36	39	20	16	13	12
20	3.0	4.9	114	7.5	9.5	45	33	39	19	16	13	12
21	2.9	4.8	20	7.5	9.4	34	33	39	18	16	13	12
22	2.4	4.8	16	7.5	9.2	29	33	39	18	16	13	12
23	2.5	4.8	13	7.9	9.2	30	62	39	18	16	13	12
24	3.0	4.8	12	8.1	9.2	35	62	37	18	16	12	12
25	3.0	4.8	11	7.9	14	35	32	36	17	16	12	12
26	3.0	4.7	10	7.8	16	30	27	37	17	16	12	12
27	3.0	6.1	9.9	7.7	13	29	25	36	17	15	12	12
28	3.0	7.3	9.7	7.7	11	27	24	35	17	15	12	12
29	3.0	7.0	9.4	7.6	---	26	24	33	17	15	12	11
30	3.9	6.9	9.3	7.7	---	25	23	32	17	15	12	11
31	4.6	---	9.2	7.6	---	25	---	31	---	15	12	---
TOTAL	96.3	219.1	342.7	246.4	340.1	2146.2	986	1535	649	505	405	357
MEAN	3.11	7.30	11.1	7.95	12.1	69.2	32.9	49.5	21.6	16.3	13.1	11.9
MAX	4.6	54	114	8.9	55	1270	78	180	28	18	15	12
MIN	2.4	2.6	2.8	7.5	7.5	9.2	23	24	17	15	12	11
AC-FT	191	435	680	489	675	4260	1960	3040	1290	1000	803	708



11118501 VENTURA RIVER NEAR VENTURA, CA—Continued

VENTURA RIVER AND VENTURA CITY DIVERSION NEAR VENTURA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1957, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.12	9.68	33.2	138	191	266	91.0	35.4	20.8	13.2	9.67	8.33
MAX	27.8	45.3	115	1106	1061	1953	877	232	110	65.0	43.2	28.7
(WY)	1942	1947	1937	1952	1941	1938	1941	1941	1941	1941	1941	1941
MIN	.39	.29	.14	2.16	1.72	2.71	2.54	1.34	1.64	.92	.37	.23
(WY)	1936	1937	1933	1949	1949	1951	1951	1933	1936	1936	1935	1935

SUMMARY STATISTICS WATER YEARS 1933 - 1957

ANNUAL TOTAL	
ANNUAL MEAN	72.9
HIGHEST ANNUAL MEAN	359 1941
LOWEST ANNUAL MEAN	2.31 1951
HIGHEST DAILY MEAN	17900 Mar 2 1938
LOWEST DAILY MEAN	.00 Apr 27 1934
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1 1934
MAXIMUM PEAK FLOW	63600 Feb 10 1978
MAXIMUM PEAK STAGE	29.30 Feb 25 1969
ANNUAL RUNOFF (AC-FT)	52800
10 PERCENT EXCEEDS	84
50 PERCENT EXCEEDS	11
90 PERCENT EXCEEDS	2.2

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

MEAN	8.41	18.6	28.4	138	312	219	79.6	43.9	24.0	16.1	11.5	9.83
MAX	50.3	282	240	1883	2919	1804	766	409	160	65.8	33.0	29.0
(WY)	1984	1966	1966	1969	1998	1983	1983	1998	1998	1998	1998	1998
MIN	0.000	0.000	0.11	0.51	2.04	3.17	3.19	2.89	2.07	1.48	0.63	0.005
(WY)	1995	1995	1995	2000	1961	1961	1961	1961	1961	1961	1994	1994

SUMMARY STATISTICS FOR 2002 CALENDAR YEAR FOR 2003 WATER YEAR WATER YEARS 1960 - 2003

ANNUAL TOTAL	3229.2	7827.8	
ANNUAL MEAN	8.85	21.4	74.4
HIGHEST ANNUAL MEAN			384 1995
LOWEST ANNUAL MEAN			2.22 1961
HIGHEST DAILY MEAN	114 Dec 20	1270 Mar 15	22000 Feb 9 1978
LOWEST DAILY MEAN	2.4 Oct 22	2.4 Oct 22	0.00 Nov 28 1977
ANNUAL SEVEN-DAY MINIMUM	2.8 Oct 10	2.8 Oct 10	0.00 Sep 7 1994
MAXIMUM PEAK FLOW			63600 Feb 10 1978
MAXIMUM PEAK STAGE			29.30 Feb 25 1969
ANNUAL RUNOFF (AC-FT)	6410	15530	53900
10 PERCENT EXCEEDS	12	37	59
50 PERCENT EXCEEDS	8.9	12	12
90 PERCENT EXCEEDS	3.0	3.9	3.0

## 11118500 VENTURA RIVER NEAR VENTURA, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—December 1907 to December 1908, water years 1967 to current year.

CHEMICAL DATA: December 1907 to December 1908, water years 1967–79.

WATER TEMPERATURE: Water years 1969, 1971–73, 1975–81, 1986.

SEDIMENT DATA: Water years 1969–73, 1975 to current year.

PERIOD OF DAILY RECORD.—

WATER TEMPERATURE: October 1968 to September 1969, October 1970 to September 1973, October 1974 to September 1981, and October 1985 to September 1986.

SUSPENDED-SEDIMENT DISCHARGE: October 1968 to September 1973, October 1974 to September 1981, and October 1985 to September 1986.

## PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sedi-ment, sieve diameter, percent <.063mm (70331)	Suspended sedi-ment concentration mg/L (80154)	Suspended sedi-ment load, tons/d (80155)
NOV						
09...	1020	11	12.0	--	4	.12
DEC						
12...	0810	.06	7.5	--	14	<.01
20...	0810	108	--	99	267	78
20...	0825	104	--	99	252	71
20...	0900	99	--	98	190	51
JAN						
16...	1445	1.5	13.0	--	4	.02
FEB						
07...	0900	.95	9.5	--	2	.01
12...	1800	113	12.5	98	224	68
21...	1600	2.1	16.0	--	14	.08
MAR						
14...	0945	3.4	15.5	--	5	.05
15...	1450	2710	14.5	83	1670	12200
15...	1520	2640	14.5	89	1210	8610
20...	1150	35	18.0	--	6	.57
APR						
09...	1100	15	17.0	--	6	.24
14...	1705	72	--	78	30	5.8
29...	1340	23	19.0	48	3	.19

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

11119500 CARPINTERIA CREEK NEAR CARPINTERIA, CA

LOCATION.—Lat 34° 24'05", long 119° 29'08", in El Rincon Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank, 100 ft upstream from bridge on State Highway 192, 165 ft downstream from Gobernador Creek, and 1.8 mi northeast of Carpinteria.

DRAINAGE AREA.—13.1 mi<sup>2</sup>.

PERIOD OF RECORD.—January 1941 to September 1977, October 1978 to current year.

REVISED RECORDS.—WSP 1061: 1943. WSP 1928: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 130 ft above NGVD of 1929, from topographic map. Prior to July 1, 1958, at site 100 ft downstream, at datum 6.00 ft higher. July 2, 1958, to Aug. 27, 1970, at site 65 ft downstream at datum 4.00 ft higher. Aug. 28, 1970, to Sept. 30, 1977, at site 100 ft downstream at same datum.

REMARKS.—Records fair. No regulation upstream from station. Gobernador Land and Water Co. diverts from Gobernador Creek 1.8 mi upstream from station. Small lake 0.8 mi southeast of station and outside the drainage area stores storm runoff and surplus water diverted from Gobernador Creek by Gobernador Land and Water Co. At times this lake is drained by pumping water back into Gobernador Creek 1,000 ft upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,880 ft<sup>3</sup>/s, Dec. 27, 1971, gage height, 14.10 ft, from floodmark, from rating curve extended above 130 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow; no flow at times each year.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 125 ft<sup>3</sup>/s, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 15	1000	1,270	6.42

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.94	0.00	0.00	0.00	0.00
3	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	13	0.00	0.00	0.00	0.00
4	0.00	e0.00	0.00	0.00	0.00	0.07	0.00	11	0.00	0.00	0.00	0.00
5	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	5.0	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.0	0.00	0.00	0.00	0.00
7	0.00	0.03	0.00	0.00	0.00	0.00	0.00	5.8	0.00	0.00	0.00	0.00
8	0.00	19	0.00	0.00	0.00	0.00	0.00	4.1	0.00	0.00	0.00	0.00
9	0.00	7.6	0.00	0.00	0.00	0.00	0.00	5.5	0.00	0.00	0.00	0.00
10	0.00	0.53	0.00	0.00	0.00	0.00	0.00	4.4	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	3.8	0.06	0.00	2.1	0.00	0.00	0.00	0.00
13	0.00	0.00	0.43	0.00	3.8	0.01	3.2	1.6	0.00	0.00	0.00	0.00
14	0.00	0.00	0.89	0.00	0.45	0.00	22	0.01	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.02	267	5.6	0.02	0.00	0.00	0.00	0.00
16	0.00	0.00	6.2	0.00	0.00	24	2.2	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	1.3	0.00	0.00	8.0	1.4	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	4.3	0.97	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.53	0.00	e0.00	2.8	0.38	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	11	0.00	e0.00	1.8	0.10	0.00	0.01	0.00	0.00	0.00
21	0.00	0.00	2.4	0.00	e0.00	1.1	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	1.9	0.00	0.00	0.57	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.51	0.00	0.00	0.48	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.13	0.00	e0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.11	0.00	---	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	27.16	25.40	0.00	8.07	310.55	36.32	58.01	0.01	0.00	0.00	0.00
MEAN	0.000	0.91	0.82	0.000	0.29	10.0	1.21	1.87	0.000	0.000	0.000	0.000
MAX	0.00	19	11	0.00	3.8	267	22	13	0.01	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	54	50	0.00	16	616	72	115	0.02	0.00	0.00	0.00

e Estimated.

## CARPINTERIA CREEK BASIN

## 11119500 CARPINTERIA CREEK NEAR CARPINTERIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.12	0.78	2.41	12.5	17.3	10.4	4.15	1.09	0.44	0.22	0.11	0.11
MAX	3.59	16.7	38.9	242	274	83.8	67.8	13.7	6.24	4.35	3.07	3.32
(WY)	1984	1966	1967	1995	1998	1995	1958	1998	1998	1998	1998	1998
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1946	1944	1948	1945	1948	1947	1947	1945	1942	1942	1942	1942

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1941 - 2003
ANNUAL TOTAL	53.09	465.52	
ANNUAL MEAN	0.15	1.28	3.91
HIGHEST ANNUAL MEAN			33.5 1969
LOWEST ANNUAL MEAN			0.000 1951
HIGHEST DAILY MEAN	19 Nov 8	267 Mar 15	4000 Jan 10 1995
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Jan 4 1941
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Nov 18 1941
MAXIMUM PEAK FLOW		1270 Mar 15	8880 Dec 27 1971
MAXIMUM PEAK STAGE		6.42 Mar 15	14.10 Dec 27 1971
ANNUAL RUNOFF (AC-FT)	105	923	2830
10 PERCENT EXCEEDS	0.00	0.53	3.2
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

## 11119745 MISSION CREEK AT ROCKY NOOK PARK, AT SANTA BARBARA, CA

LOCATION.—Lat 34° 26' 26", long 119° 42' 39", in Santa Barbara County, Hydrologic Unit 18060013, on right bank, 50 ft southeast of entrance to Rocky Nook Park, 75 ft upstream from bridge on Los Olivos Street, in Santa Barbara.

DRAINAGE AREA.—6.60 mi<sup>2</sup>.

PERIOD OF RECORD.—Water years 1984–86. October 1997 to current year.

WATER TEMPERATURE: Water years 1984–86.

SEDIMENT DATA: Water years 1984–86.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 335 ft above NGVD of 1929, from topographic map.

REMARKS.—Records poor. At times water is released to creek for ground-water recharge from Gibraltar Reservoir through Mission Tunnel several miles upstream.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,010 ft<sup>3</sup>/s, Feb. 3, 1998, gage height, 9.52 ft, from rating curve extended above 838 ft<sup>3</sup>/s; no flow at times in most years.

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. 16	1230	214	6.15	Mar. 15	1115	609	7.96
Dec. 20	0115	300	6.62				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.08	0.17	0.13	0.51	0.21	0.33	1.5	0.51	0.42	0.20	e0.08	0.12
2	0.11	0.14	0.15	0.47	0.20	0.31	1.4	1.8	0.42	0.18	e0.08	0.14
3	0.10	0.14	0.14	0.39	0.19	0.30	1.2	23	0.42	0.16	e0.08	0.13
4	0.10	0.13	0.14	0.37	0.19	0.31	1.3	9.7	0.43	0.15	e0.08	0.15
5	0.10	0.13	0.14	0.33	0.19	0.30	0.88	4.6	0.42	0.13	e0.08	0.12
6	0.09	0.13	0.15	0.33	0.19	0.27	0.62	3.1	0.41	0.12	e0.08	0.12
7	0.09	0.97	0.15	0.32	0.19	0.26	0.50	2.4	0.40	0.11	e0.08	0.12
8	0.09	32	0.16	0.32	0.18	0.25	0.44	1.9	0.38	0.13	e0.08	0.12
9	0.11	7.1	0.16	0.32	0.19	0.24	0.38	1.6	0.38	0.14	e0.08	0.13
10	0.12	1.0	0.16	0.32	0.19	0.23	0.40	1.4	0.45	0.14	e0.08	0.14
11	0.12	0.38	0.16	0.31	0.47	0.22	0.32	1.2	0.41	0.12	e0.08	0.12
12	0.12	0.25	0.15	0.30	14	0.21	0.31	1.3	0.34	0.11	e0.08	0.12
13	0.13	0.21	0.14	0.29	15	0.22	3.2	1.1	0.33	0.11	e0.08	0.13
14	0.13	0.17	0.16	0.29	2.6	0.22	12	0.97	0.31	e0.11	0.08	0.14
15	0.13	0.14	0.28	0.29	1.2	184	3.6	0.89	0.29	e0.10	0.08	0.14
16	0.14	0.16	27	0.27	0.85	37	2.4	0.83	0.28	e0.10	0.08	0.14
17	0.14	0.15	3.1	0.27	0.66	9.5	2.1	0.79	0.29	e0.10	0.08	0.14
18	0.13	0.15	0.97	0.26	0.56	7.0	1.9	0.75	0.31	e0.10	0.08	0.15
19	0.14	0.20	12	0.25	0.50	6.6	1.4	0.71	0.32	e0.09	0.08	0.15
20	0.14	0.14	58	0.25	0.50	6.2	1.1	0.65	0.30	e0.09	0.09	0.15
21	0.16	0.12	11	0.26	0.47	5.6	0.82	0.61	0.29	e0.09	0.11	0.15
22	0.16	0.12	8.0	0.26	0.46	5.3	0.59	0.60	0.29	e0.09	0.11	0.14
23	0.16	0.13	2.6	0.24	0.45	5.3	0.52	0.60	0.28	e0.09	0.10	0.12
24	0.17	0.16	1.5	0.23	0.52	5.1	0.64	0.62	0.27	e0.08	0.09	0.11
25	0.18	0.16	1.0	0.22	0.61	4.8	0.61	0.62	0.25	e0.08	0.09	0.09
26	0.17	0.16	0.76	0.22	0.42	4.3	0.44	0.58	0.24	e0.08	0.10	0.09
27	0.16	0.15	0.65	0.22	0.41	3.7	0.36	0.54	0.24	0.08	0.10	0.09
28	0.17	0.14	1.6	0.22	0.37	3.0	0.37	0.49	0.24	0.10	0.11	0.10
29	0.17	0.15	1.2	0.21	---	2.2	0.34	0.45	0.24	0.10	0.11	0.11
30	0.17	0.13	0.60	0.21	---	2.0	0.30	0.44	0.23	0.08	0.11	0.12
31	0.18	---	0.57	0.21	---	1.8	---	0.44	---	e0.08	0.11	---
TOTAL	4.16	45.28	132.92	8.96	41.97	297.07	41.94	65.19	9.88	3.44	2.75	3.79
MEAN	0.13	1.51	4.29	0.29	1.50	9.58	1.40	2.10	0.33	0.11	0.089	0.13
MAX	0.18	32	58	0.51	15	184	12	23	0.45	0.20	0.11	0.15
MIN	0.08	0.12	0.13	0.21	0.18	0.21	0.30	0.44	0.23	0.08	0.08	0.09
AC-FT	8.3	90	264	18	83	589	83	129	20	6.8	5.5	7.5

e Estimated.

## MISSION CREEK BASIN

## 11119745 MISSION CREEK AT ROCKY NOOK PARK, AT SANTA BARBARA, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.28	0.61	2.64	1.64	20.0	7.86	2.02	1.50	0.61	0.34	0.24	0.18
MAX	1.26	1.52	9.47	5.79	138	33.5	6.20	8.39	3.18	2.27	1.60	0.79
(WY)	2001	1984	1998	1998	1998	2001	1998	1998	1998	1998	1998	1998
MIN	0.000	0.000	0.10	0.20	0.25	0.15	0.11	0.039	0.029	0.010	0.007	0.008
(WY)	1998	1998	2000	1986	2002	2002	2002	1985	1984	1984	1984	1984

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1984 - 2003	
ANNUAL TOTAL	223.60		657.35			
ANNUAL MEAN	0.61		1.80		3.32	
HIGHEST ANNUAL MEAN					14.4	1998
LOWEST ANNUAL MEAN					0.25	2002
HIGHEST DAILY MEAN	58	Dec 20	184	Mar 15	524	Feb 3 1998
LOWEST DAILY MEAN	0.03	May 13	0.08	Oct 1	0.00	Aug 15 1984
ANNUAL SEVEN-DAY MINIMUM	0.03	May 12	0.08	Jul 30	0.00	Aug 15 1984
MAXIMUM PEAK FLOW			609	Mar 15	1010	Feb 3 1998
MAXIMUM PEAK STAGE			7.96	Mar 15	9.52	Feb 3 1998
INSTANTANEOUS LOW FLOW					0.00	Aug 15 1984
ANNUAL RUNOFF (AC-FT)	444		1300		2400	
10 PERCENT EXCEEDS	0.36		2.1		3.4	
50 PERCENT EXCEEDS	0.12		0.23		0.28	
90 PERCENT EXCEEDS	0.05		0.09		0.02	

## 11119750 MISSION CREEK NEAR MISSION STREET, AT SANTA BARBARA, CA

LOCATION.—Lat 34° 25' 35", long 119° 43' 20", in Pueblo Lands of Santa Barbara, [Santa Barbara County](#), Hydrologic Unit 18060013, on left bank, 200 ft downstream from Los Olivos Street, in Santa Barbara.

DRAINAGE AREA.—8.38 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1970 to current year.

GAGE.—Water-stage recorder, low-flow concrete control and crest-stage gage. Concrete-lined channel. Elevation of gage is 105 ft above NGVD of 1929, from topographic map.

REMARKS.—Records good for low flow, poor for medium flow, and fair for high flow. At times water is released to creek for ground-water recharge from Gibraltar Reservoir through Mission Tunnel several miles upstream. Control installed Dec. 9, 1999.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,090 ft<sup>3</sup>/s, Feb. 23, 1998, gage height, 5.67 ft, from rating curve extended above 41 ft<sup>3</sup>/s, on basis of computation of flow in concrete-lined channel, maximum gage height, 6.60 ft, Jan. 10, 1995; no flow most of each year.

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)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Dec. 16	Unknown	384	2.81	Mar. 15	1030	704	3.36
Dec. 20	0000	405	2.85				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	e0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	6.6	0.00	0.00	0.00	0.00
3	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	25	0.00	0.00	0.00	0.00
4	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	9.0	0.00	0.00	0.00	0.00
5	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	4.1	0.00	0.00	0.00	0.00
6	0.00	0.00	e0.00	0.00	0.00	0.00	0.00	1.6	0.00	0.00	0.00	0.00
7	0.00	8.8	e0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00
8	0.00	74	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	9.1	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.92	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.22	e0.00	0.00	2.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.03	e0.00	0.00	31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	e0.00	0.00	15	0.00	5.6	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	e0.00	0.00	2.9	0.00	16	0.00	0.00	0.00	0.00	0.00
15	0.00	e0.00	e0.00	0.00	0.31	179	2.6	0.00	0.00	0.00	0.00	0.00
16	0.00	e0.00	e28	0.00	0.00	19	0.80	0.00	0.00	0.00	0.00	0.00
17	0.00	e0.00	2.2	0.00	0.00	6.7	0.32	0.00	0.00	0.00	0.00	0.00
18	0.00	e0.00	0.00	0.00	0.00	3.5	1.2	0.00	0.00	0.00	0.00	0.00
19	0.00	e0.00	23	0.00	0.00	1.4	0.02	0.00	0.00	0.00	0.00	0.00
20	0.00	e0.00	55	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	e0.00	19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	e0.00	8.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	e0.00	2.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	e0.00	0.68	0.00	1.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	e0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	e0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	e0.00	3.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	e0.00	1.1	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	e0.00	0.03	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.54	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	0.00	93.07	144.65	0.05	53.04	209.82	26.54	46.46	0.00	0.00	0.00	0.00
MEAN	0.000	3.10	4.67	0.002	1.89	6.77	0.88	1.50	0.000	0.000	0.000	0.000
MAX	0.00	74	55	0.05	31	179	16	25	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	185	287	0.1	105	416	53	92	0.00	0.00	0.00	0.00

e Estimated.

## MISSION CREEK BASIN

## 11119750 MISSION CREEK NEAR MISSION STREET, AT SANTA BARBARA, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.20	1.08	2.45	8.05	14.7	9.59	2.15	1.02	0.16	0.019	0.033	0.12
MAX	2.10	14.0	13.9	79.9	176	62.3	17.2	11.3	1.97	0.49	1.08	1.37
(WY)	2001	1973	1972	1995	1998	1978	1983	1998	1998	1983	1983	1983
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1971	1975	1973	1976	1972	1972	1972	1972	1971	1971	1971	1971

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1971 - 2003	
ANNUAL TOTAL	244.91		573.63			
ANNUAL MEAN	0.67		1.57		3.24	
HIGHEST ANNUAL MEAN					18.4	
LOWEST ANNUAL MEAN					0.12	
HIGHEST DAILY MEAN	74	Nov 8	179	Mar 15	1390	Jan 10 1995
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1970
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Oct 1 1970
MAXIMUM PEAK FLOW			704	Mar 15	3090	Feb 23 1998
MAXIMUM PEAK STAGE			3.36	Mar 15	6.60	Jan 10 1995
ANNUAL RUNOFF (AC-FT)	486		1140		2350	
10 PERCENT EXCEEDS	0.00		0.31		3.5	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	



11119940 MARIA YGNACIO CREEK AT UNIVERSITY DRIVE, NEAR GOLETA, CA

LOCATION.—Lat 34° 26' 42", long 119° 48' 10", in Goleta Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank, at University Drive, 0.2 mi east of Patterson Avenue, and 1.5 mi northeast of Goleta.

DRAINAGE AREA.—6.35 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1970 to current year.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 60 ft above NGVD of 1929, from topographic map. Sept. 7, 2000, to June 12, 2001, at site 400 ft downstream at datum 10.00 ft lower.

REMARKS.—Records fair. No regulation upstream from station. Some pumping for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,600 ft<sup>3</sup>/s, Mar. 10, 1995, gage height, 10.16 ft, from rating curve extended above 3,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow, maximum gage height, 11.16 ft, Mar. 5, 2001, at site and datum then in use; no flow most of each year.

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)
Nov. 8	0815	87	2.13	Dec. 20	0030	232	2.93
Dec. 16	1215	286	2.91	Mar. 15	1100	448	3.37

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.53	0.00	0.13	0.09	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.46	0.00	0.12	0.09	4.4	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.40	0.00	0.11	0.00	33	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.31	0.00	0.30	0.00	8.1	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.27	0.00	0.10	0.04	2.3	0.03	0.00	0.00	0.00
6	0.00	0.00	0.00	0.20	0.00	0.04	0.01	1.3	0.13	0.00	0.00	0.00
7	0.00	4.4	0.00	0.18	0.00	0.05	0.04	1.2	0.03	0.00	0.00	0.00
8	0.00	46	0.00	0.11	0.00	0.02	0.00	0.96	0.01	0.00	0.00	0.00
9	0.00	4.4	0.00	0.10	0.00	0.00	0.00	0.74	0.16	0.00	0.00	0.00
10	0.00	0.49	0.00	0.16	0.00	0.03	0.00	0.53	0.38	0.00	0.00	0.00
11	0.00	0.05	0.00	0.09	2.0	0.00	0.00	0.59	0.23	0.00	0.00	0.00
12	0.00	0.00	0.00	0.08	14	0.00	0.00	0.48	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.09	5.6	0.00	6.1	0.22	0.00	0.00	0.00	0.00
14	0.00	0.00	0.21	0.16	1.3	0.00	21	0.29	0.00	0.00	0.00	0.00
15	0.00	0.00	0.48	0.20	0.76	128	5.0	0.18	0.00	0.00	0.00	0.00
16	0.00	0.00	32	0.01	0.54	13	1.3	0.14	0.00	0.00	0.00	0.00
17	0.00	0.00	2.3	0.06	0.43	3.1	0.99	0.04	0.00	0.00	0.00	0.00
18	0.00	0.00	0.76	0.01	0.39	1.8	0.83	0.03	0.00	0.00	0.00	0.00
19	0.00	0.00	19	0.02	0.31	1.3	0.64	0.10	0.00	0.00	0.00	0.00
20	0.00	0.00	50	0.05	0.46	1.1	0.59	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	19	0.05	0.25	0.98	0.42	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	8.8	0.00	0.26	0.89	0.08	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	1.9	0.00	0.35	0.77	0.09	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	1.1	0.00	1.4	0.81	0.05	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.83	0.00	1.0	0.61	0.06	0.04	0.00	0.00	0.00	0.00
26	0.00	0.00	0.80	0.00	0.27	0.38	0.01	0.24	0.00	0.00	0.00	0.00
27	0.00	0.00	0.78	0.00	0.29	0.19	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	2.9	0.00	0.13	0.18	0.19	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	1.2	0.00	---	0.09	0.03	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.64	0.00	---	0.12	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.83	0.00	---	0.28	---	0.00	---	0.00	0.00	---
TOTAL	0.00	55.34	143.53	3.54	29.74	154.50	37.65	54.88	0.97	0.00	0.00	0.00
MEAN	0.000	1.84	4.63	0.11	1.06	4.98	1.25	1.77	0.032	0.000	0.000	0.000
MAX	0.00	46	50	0.53	14	128	21	33	0.38	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	110	285	7.0	59	306	75	109	1.9	0.00	0.00	0.00

## 11119940 MARIA YGNACIO CREEK AT UNIVERSITY DRIVE, NEAR GOLETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.13	0.30	1.35	5.31	8.84	8.02	1.48	0.75	0.33	0.26	0.10	0.073
MAX	2.05	2.35	8.18	61.2	70.4	39.5	15.9	14.4	8.10	7.47	2.66	1.36
(WY)	1984	1983	1984	1995	1998	2001	1998	1998	1998	1998	1998	1998
MIN	0.000	0.000	0.000	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1971	1975	1990	1989	1977	1972	1972	1972	1971	1971	1971	1971

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1971 - 2003	
ANNUAL TOTAL	206.71		480.15			
ANNUAL MEAN	0.57		1.32		2.21	
HIGHEST ANNUAL MEAN					11.4 1998	
LOWEST ANNUAL MEAN					0.039 1990	
HIGHEST DAILY MEAN	50	Dec 20	128	Mar 15	629	Jan 10 1995
LOWEST DAILY MEAN	0.00	Jan 10	0.00	Oct 1	0.00	Oct 1 1970
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 17	0.00	Oct 1	0.00	Oct 1 1970
MAXIMUM PEAK FLOW			448	Mar 15	4600	Mar 10 1995
MAXIMUM PEAK STAGE			3.37	Mar 15	11.16	Mar 5 2001
INSTANTANEOUS LOW FLOW					0.00	Oct 1 1970
ANNUAL RUNOFF (AC-FT)	410		952		1600	
10 PERCENT EXCEEDS	0.13		0.98		1.9	
50 PERCENT EXCEEDS	0.00		0.00		0.00	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

11120000 ATASCADERO CREEK NEAR GOLETA, CA

LOCATION.—Lat 34° 25'29", long 119° 48'39", in La Goleta Grant, Santa Barbara County, Hydrologic Unit 18060013, on downstream side of center pier of county road bridge, 100 ft downstream from Maria Ygnacio Creek, 1.3 mi upstream from mouth, and 1.3 mi southeast of Goleta.

DRAINAGE AREA.—18.9 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1941 to current year. Prior to October 1947, published as "Alascadero Creek near Goleta."

SEDIMENT CONCENTRATION: Water year 1982.

SUSPENDED-SEDIMENT DISCHARGE: Water year 1982.

WATER TEMPERATURE: Water year 1982.

REVISED RECORDS.—WSP 1635: 1943–45(M), 1947(M). WSP 1928: Drainage area.

GAGE.—Water-stage recorder and broad-crested weir. Datum of gage is 8.59 ft above NGVD of 1929, Santa Barbara County benchmark. Prior to Dec. 14, 1967, at site 275 ft downstream, datum 4.00 ft higher. Dec. 14, 1967, to Sept. 30, 1976, at datum 4.00 ft higher; Oct. 1, 1976, to Sept. 30, 1978, at datum 2.00 ft higher, both at present site.

REMARKS.—Records fair except for estimated daily discharges, which are poor. No regulation upstream from station. Small diversions for irrigation upstream from station. Some low-flow results from return irrigation wastewater.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,200 ft<sup>3</sup>/s, Mar. 10, 1995, gage height, 12.45 ft, present datum, from rating curve extended above 6,900 ft<sup>3</sup>/s, maximum gage height, 17.3 ft, from floodmark, Dec. 3, 1974, present datum; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 260 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)
Nov. 8	0830	832	3.66	Feb. 12	1930	263	2.94
Dec. 16	1230	3,580	5.37	Mar. 15	1045	3,380	5.24
Dec. 20	0000	1,950	4.39				

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

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.10	0.10	0.21	0.95	0.28	0.28	0.37	0.46	0.18	0.10	0.31	0.07
2	0.12	0.12	0.19	0.93	0.28	0.28	0.38	21	0.19	0.09	0.34	0.16
3	0.09	0.10	e0.21	1.3	0.27	0.28	0.36	76	0.23	0.11	0.27	0.20
4	0.02	0.10	e0.21	1.1	0.66	0.59	0.37	11	0.24	0.05	0.19	0.07
5	0.00	0.12	e0.21	0.86	0.28	0.36	0.57	3.5	0.26	0.04	0.15	0.04
6	0.00	0.19	0.23	0.94	0.25	0.37	0.56	2.8	0.40	0.03	0.15	0.02
7	0.11	31	0.23	0.75	0.18	0.29	0.43	2.1	0.25	0.05	0.16	0.00
8	0.11	326	0.23	0.73	0.15	0.28	1.3	1.5	0.22	0.58	0.15	0.00
9	0.46	23	0.19	0.63	0.16	0.28	1.6	1.1	0.28	0.42	0.19	0.39
10	0.72	2.7	0.19	0.62	0.21	0.28	0.95	1.0	1.0	0.09	0.16	0.28
11	0.46	1.1	0.19	0.54	15	0.28	0.63	0.95	0.60	0.04	0.17	0.06
12	0.13	0.85	0.19	0.53	85	0.31	0.63	1.9	0.17	0.01	1.7	0.02
13	0.07	0.76	0.19	0.45	30	0.33	26	1.2	0.15	0.01	1.5	0.03
14	0.07	0.55	1.9	0.48	3.8	0.38	41	0.37	0.37	0.01	0.67	0.04
15	0.04	0.46	6.2	0.34	1.2	899	7.4	0.30	0.46	0.01	0.34	0.07
16	0.04	0.39	325	0.36	0.72	30	2.5	0.32	0.56	0.01	0.20	0.07
17	0.01	0.39	7.3	0.97	0.80	7.9	1.5	0.32	0.26	0.01	0.14	0.07
18	0.01	0.32	2.0	0.38	0.51	4.1	1.3	0.32	0.19	0.01	0.21	0.07
19	0.01	0.24	113	0.28	0.50	2.7	1.1	0.33	0.18	0.08	0.20	0.07
20	0.01	0.23	250	0.28	0.48	2.1	1.1	0.33	0.16	0.03	0.17	0.08
21	0.02	0.78	99	0.28	0.33	1.4	0.84	0.34	0.16	0.05	0.19	0.10
22	0.02	0.85	30	0.28	0.33	1.2	0.62	0.33	0.18	0.06	0.22	0.10
23	0.49	0.36	5.4	0.31	0.33	1.1	0.53	0.31	0.16	0.07	0.30	0.07
24	0.47	0.21	3.1	0.33	5.3	1.2	0.65	0.36	0.16	0.09	0.22	0.07
25	0.10	0.19	2.2	0.30	3.2	1.6	0.59	0.30	0.13	0.11	0.24	0.07
26	0.11	0.19	1.7	0.33	0.35	0.98	0.50	0.28	0.12	0.14	0.22	0.12
27	0.10	0.19	1.4	0.31	1.2	0.75	0.40	0.25	0.10	0.13	0.20	0.07
28	0.07	0.19	14	0.35	0.32	0.46	0.56	0.20	0.12	0.16	0.16	0.04
29	0.08	0.21	4.5	0.28	---	0.31	0.85	0.22	0.11	0.21	0.12	0.05
30	0.04	0.46	1.6	0.30	---	0.28	0.39	0.17	0.11	0.28	0.11	0.07
31	0.08	---	3.0	0.30	---	0.31	---	0.18	---	0.29	0.07	---
TOTAL	4.16	392.35	873.97	16.79	152.09	959.98	95.98	129.74	7.70	3.37	9.42	2.57
MEAN	0.13	13.1	28.2	0.54	5.43	31.0	3.20	4.19	0.26	0.11	0.30	0.086
MAX	0.72	326	325	1.3	85	899	41	76	1.0	0.58	1.7	0.39
MIN	0.00	0.10	0.19	0.28	0.15	0.28	0.36	0.17	0.10	0.01	0.07	0.00
AC-FT	8.3	778	1730	33	302	1900	190	257	15	6.7	19	5.1

e Estimated.

## ATASCADERO CREEK BASIN

## 11120000 ATASCADERO CREEK NEAR GOLETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.37	3.38	5.60	17.1	22.8	18.8	4.24	1.04	0.24	0.11	0.095	0.25
MAX	8.08	49.8	41.5	230	266	158	63.5	24.5	4.50	3.42	1.84	4.68
(WY)	1984	1966	1967	1969	1998	1998	1958	1998	1998	1998	1998	1976
MIN	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1942	1942	1943	1951	1948	1990	1950	1942	1942	1942	1942	1942

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1942 - 2003	
ANNUAL TOTAL	1383.06		2648.12			
ANNUAL MEAN	3.79		7.26		6.09	
HIGHEST ANNUAL MEAN					40.7 1998	
LOWEST ANNUAL MEAN					0.018 1951	
HIGHEST DAILY MEAN	326	Nov 8	899	Mar 15	2410	Jan 25 1969
LOWEST DAILY MEAN	0.00	Jun 15	0.00	Oct 5	0.00	Oct 1 1941
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 7	0.01	Jul 12	0.00	Oct 1 1941
MAXIMUM PEAK FLOW			3580		10200	
MAXIMUM PEAK STAGE			5.37		17.30	
INSTANTANEOUS LOW FLOW					0.00	
ANNUAL RUNOFF (AC-FT)	2740		5250		4410	
10 PERCENT EXCEEDS	0.86		2.3		3.4	
50 PERCENT EXCEEDS	0.18		0.28		0.04	
90 PERCENT EXCEEDS	0.01		0.06		0.00	

## 11120500 SAN JOSE CREEK NEAR GOLETA, CA

LOCATION.—Lat 34° 27' 33", long 119° 48' 29", in La Goleta Grant, Santa Barbara County, Hydrologic Unit 18060013, on right bank, 1.1 mi downstream from unnamed tributary, and 1.7 mi northeast of Goleta.

DRAINAGE AREA.—5.51 mi<sup>2</sup>.

PERIOD OF RECORD.—January 1941 to January 1995, October 1995 to current year.

CHEMICAL DATA: Water years 1978–91.

REVISED RECORDS.—WSP 1928: Drainage area.

GAGE.—Water-stage recorder, crest-stage gage, and concrete low-water control. Elevation of gage is 95.61 ft above NGVD of 1929, Santa Barbara County Road Department datum. Prior to Dec. 24, 1955, at datum 5.50 ft higher. Dec. 24, 1955, to Jan. 10, 1960, at datum 1.5 ft higher. Prior to Oct. 1, 1971, at site 75 ft downstream.

REMARKS.—Records are poor. No regulation upstream from station. Many small diversions upstream from station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,520 ft<sup>3</sup>/s, Mar. 4, 2001, gage height, 9.04 ft, from rating curve extended above 400 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 9.32 ft, maximum gage height, 12.74 ft, present datum, Jan. 21, 1943; no flow at times in most 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)
Dec. 16	1315	413	5.01	Mar. 15	1045	717	5.86
Dec. 20	0015	646	5.68				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.05	0.40	0.56	1.1	0.56	0.62	0.82	0.72	0.71	0.18	0.37	0.22
2	0.05	0.21	0.50	1.0	0.56	0.61	0.78	1.5	0.63	0.16	0.37	0.17
3	0.05	0.26	0.35	0.84	0.52	0.59	0.79	34	0.54	0.16	0.53	0.14
4	0.03	0.29	0.35	0.76	0.50	0.62	0.82	12	0.77	0.12	0.55	0.18
5	0.03	0.16	0.32	0.74	0.48	0.60	e0.85	4.6	0.79	0.13	0.44	0.14
6	0.03	0.25	0.40	0.73	0.48	0.60	e0.84	3.0	0.74	0.14	0.34	0.13
7	0.03	1.4	0.52	0.69	0.43	0.60	e0.84	2.4	0.71	0.14	0.42	0.13
8	0.03	45	0.56	0.65	0.44	0.59	e0.74	1.9	0.71	0.13	0.40	0.13
9	0.04	11	0.56	0.66	0.54	0.60	e0.82	1.4	0.67	0.20	0.41	0.11
10	0.04	2.2	0.53	0.65	0.53	0.60	e0.84	1.2	0.79	0.21	0.62	0.10
11	0.04	1.1	0.37	0.65	0.95	0.62	e0.74	1.1	0.82	0.16	0.75	0.08
12	0.04	0.80	0.33	0.65	3.3	0.64	e0.84	0.98	0.73	0.16	0.57	0.10
13	0.05	0.65	0.39	0.64	15	0.69	e2.6	0.86	0.67	0.19	0.48	0.13
14	0.09	0.60	0.60	0.63	3.8	0.74	e15	0.75	0.56	0.17	0.57	0.19
15	0.13	0.54	0.87	0.62	1.9	177	e7.7	0.71	0.68	0.18	0.60	0.14
16	0.18	0.53	61	0.59	1.5	24	e4.0	0.67	0.58	0.22	0.60	0.14
17	0.15	0.51	6.8	0.61	1.2	8.1	e2.9	0.62	0.43	0.24	0.54	0.15
18	0.12	0.49	1.8	0.60	0.94	4.5	e2.4	0.47	0.57	0.26	0.50	0.13
19	0.08	0.49	17	0.59	0.82	3.2	e1.8	0.44	0.62	0.30	0.44	0.13
20	0.11	0.45	88	0.61	0.77	2.6	e1.6	0.41	0.47	0.26	0.45	0.19
21	0.24	0.46	22	0.59	0.73	2.0	e1.4	0.41	0.42	0.26	0.52	0.14
22	0.22	0.41	17	0.60	0.72	1.5	e1.3	0.37	0.46	0.24	0.41	0.16
23	0.27	0.32	5.2	0.55	0.70	1.4	e1.1	0.36	0.38	0.27	0.46	0.13
24	0.25	0.39	2.9	0.56	0.72	1.3	e0.97	0.40	0.41	0.33	0.34	0.14
25	0.19	0.48	2.1	0.56	0.96	e1.1	0.95	0.73	0.33	0.44	0.37	0.11
26	0.30	0.35	1.7	0.57	0.74	e1.0	0.86	0.63	0.25	0.31	0.34	0.12
27	0.34	0.32	1.4	0.58	0.71	e0.97	0.81	0.43	0.24	0.33	0.31	0.19
28	0.17	0.45	1.8	0.60	0.64	e0.84	0.88	e0.50	0.25	0.46	0.29	0.15
29	0.14	0.49	2.4	0.58	---	e0.84	0.82	e0.60	0.24	0.32	0.20	0.19
30	0.15	0.55	1.5	0.56	---	e0.84	0.74	e0.60	0.21	0.30	0.19	0.17
31	0.27	---	1.3	0.56	---	e0.85	---	0.57	---	0.33	0.21	---
TOTAL	3.91	71.55	241.11	20.32	41.14	240.76	57.55	75.33	16.38	7.30	13.59	4.33
MEAN	0.13	2.38	7.78	0.66	1.47	7.77	1.92	2.43	0.55	0.24	0.44	0.14
MAX	0.34	45	88	1.1	15	177	15	34	0.82	0.46	0.75	0.22
MIN	0.03	0.16	0.32	0.55	0.43	0.59	0.74	0.36	0.21	0.12	0.19	0.08
AC-FT	7.8	142	478	40	82	478	114	149	32	14	27	8.6

e Estimated.

## SAN JOSE CREEK BASIN

## 11120500 SAN JOSE CREEK NEAR GOLETA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.26	1.09	2.42	5.49	12.1	7.62	2.85	0.96	0.37	0.22	0.16	0.15
MAX	6.40	21.2	23.5	35.6	308	98.8	29.0	13.9	4.26	3.58	1.45	1.40
(WY)	1984	1966	1967	1952	1998	1998	1958	1998	1998	1998	1998	1954
MIN	0.000	0.000	0.000	0.000	0.021	0.10	0.021	0.000	0.000	0.000	0.000	0.000
(WY)	1947	1948	1948	1948	1948	1990	1990	1948	1946	1946	1946	1946

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1941 - 2003	
ANNUAL TOTAL	398.74		793.27			
ANNUAL MEAN	1.09		2.17		2.64	
HIGHEST ANNUAL MEAN					37.4 1998	
LOWEST ANNUAL MEAN					0.042 1948	
HIGHEST DAILY MEAN	88	Dec 20	177	Mar 15	1000	Feb 3 1998
LOWEST DAILY MEAN	0.00	Sep 10	0.03	Oct 4	0.00	Jan 2 1941
ANNUAL SEVEN-DAY MINIMUM	0.00	Sep 10	0.03	Oct 4	0.00	Aug 18 1942
MAXIMUM PEAK FLOW			717	Dec 20	2520	Mar 4 2001
MAXIMUM PEAK STAGE			5.86	Dec 20	12.74	Jan 21 1943
ANNUAL RUNOFF (AC-FT)	791		1570		1910	
10 PERCENT EXCEEDS	0.77		1.8		2.2	
50 PERCENT EXCEEDS	0.29		0.56		0.27	
90 PERCENT EXCEEDS	0.02		0.14		0.00	

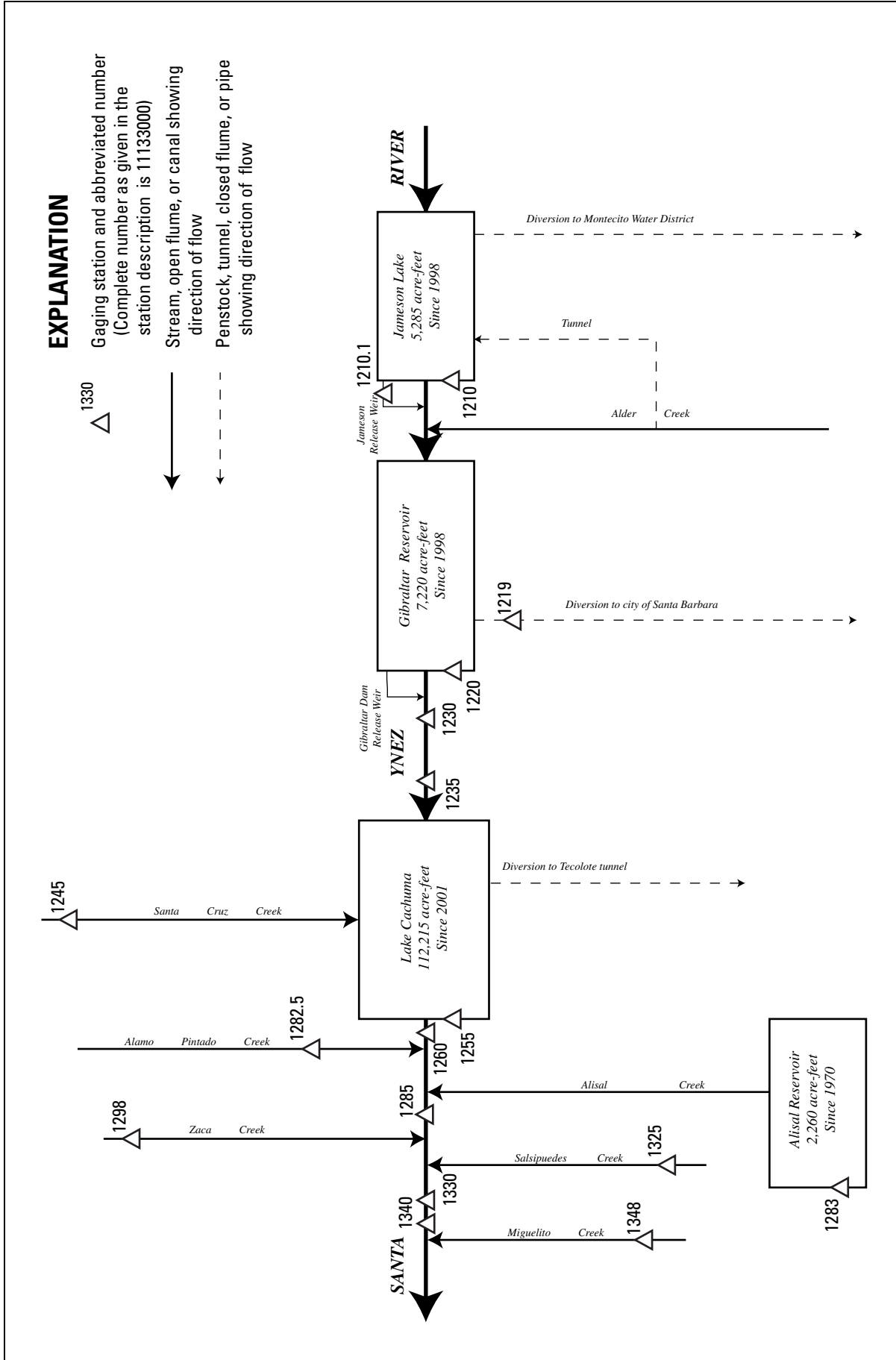


Figure 20. Diversions and storage in Santa Ynez River Basin.

## 11121000 SANTA YNEZ RIVER AT JAMESON LAKE, NEAR MONTECITO, CA

LOCATION.—Lat 34° 29' 32", long 119° 30' 25", in NE 1/4 NW 1/4 sec.28, T.5 N., R.25 W., [Santa Barbara County](#), Hydrologic Unit 18060010, on upstream face of Juncal Dam, 6.5 mi north of Carpinteria, and 8 mi northeast of Montecito.

DRAINAGE AREA.—13.9 mi<sup>2</sup>, excludes area of Alder Creek.

PERIOD OF RECORD.—December 1930 to current year. Prior to October 1938, published as "at Juncal Reservoir, near Montecito."

GAGE.—Two water-stage recorders. Elevation of lake gage is 2,021.6 ft, U.S. Bureau of Reclamation Datum, or 2,000 ft above NGVD of 1929. Supplementary gage and sharp-crested weir on outlet conduit of lake release, at different datum.

REMARKS.—Records of total inflow represent all water reaching Jameson Lake, including precipitation on the lake. Total inflow computed on basis of records of storage, diversion (draft) to city of Montecito, spill and release (station 11121010) to river, evaporation, and seepage. Records of net inflow exclude precipitation on lake surface. Monthly evaporation from lake surface computed on basis of evaporation from U.S. Weather Bureau Class A land pan. Area and capacity tables are based on bathymetric survey made in 1998. Lake capacity at spillway level, elevation 2,223.82 ft, 5,285 acre-ft. There is no regulation or diversion upstream from station. At times flow of Alder Creek, which enters Santa Ynez River 2 mi downstream from Juncal Dam, is diverted at elevation 2,250 ft through a tunnel to Jameson Lake and is included in these records. See schematic diagram of [Santa Ynez River Basin](#).

COOPERATION.—Precipitation records provided by Montecito Water District.

AVERAGE DISCHARGE.—72 years (water years 1932–03), spill and release, 9.68 ft<sup>3</sup>/s, 7,010 acre-ft/yr.

## MONTHLY NET INFLOW, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (ft) <sup>a</sup>	Contents (acre-ft)	Change in contents (acre-ft)	Draft (acre-ft)	Spill and release (acre-ft)	Evaporation and seepage (acre-ft)	Total inflow (acre-ft)	Rain on reservoir (acre-ft)	Net inflow (acre-ft)
Sept. 30	2,201.75	2,920	—	—	—	—	—	—	—
Oct. 31	2,200.14	2,780	-140	119	0	21	0	0	0
Nov. 30	2,199.32	2,710	-70	99	0	11	40	35	5
Dec. 31	2,198.58	2,650	-60	102	0	2	44	8	36
CAL YR 2002	—	—	-1,620	1,658	0	397	435	70	365
Jan. 31	2,198.03	2,600	-50	71	0	7	28	0	28
Feb. 28	2,198.43	2,640	+40	49	0	7	126	28	98
Mar. 31	2,203.60	3,090	+450	68	0	11	529	38	491
Apr. 30	2,206.03	3,320	+230	80	0	26	336	36	300
May 31	2,208.02	3,510	+190	84	0	30	304	24	280
June 30	2,207.40	3,450	-60	87	0	39	66	0	66
July 31	2,205.58	3,280	-170	160	0	52	42	0	42
Aug. 31	2,203.45	3,080	-200	165	0	57	22	0	22
Sept. 30	2,201.57	2,910	-170	139	0	32	1	0	1
WTR YR 2003	—	—	-10	1,253	0	295	1,538	169	1,369

a Elevation at 0800.



## 11122000 SANTA YNEZ RIVER ABOVE GIBRALTAR DAM, NEAR SANTA BARBARA, CA

LOCATION.—Lat 34° 31' 34", long 119° 41' 08", in NW 1/4 SW 1/4 sec.11, T.5 N., R.27 W., [Santa Barbara County](#), Hydrologic Unit 18060010, on upstream face of Gibraltar Dam, and 7 mi north of Santa Barbara.

DRAINAGE AREA.—216 mi<sup>2</sup>.

PERIOD OF RECORD.—April 1920 to current year. November 1903 to November 1918 (fragmentary) at river station at damsite; records not equivalent because records since April 1920 are based on operation of Gibraltar Reservoir, and since December 1930, Jameson Lake. Prior to October 1945, published as "Santa Ynez River near Santa Barbara."

REVISED RECORDS.—WSP 706: 1921–22. WSP 1041: 1944. WSP 1395: DA. WSP 1635: 1914, 15 (M). WDR CA-86-1: 1934–43.

GAGE.—Water-stage recorder. Elevation of gage is NGVD of 1929. Supplementary gage and sharp-crested weir on diversion from reservoir at different datum. See WSP 1735 for history of changes on both gages prior to Oct. 1, 1955. Spill and release measured by station 11123000 downstream from dam.

REMARKS.—Records of total inflow represent all water reaching Gibraltar Reservoir, including precipitation on reservoir. Total inflow computed on basis of records of storage, diversion (draft—station 11121900) to city of Santa Barbara, spill and release (station 11123000) to river, evaporation, and seepage. Records of net inflow exclude precipitation on reservoir surface. Monthly evaporation from reservoir surface computed on basis of evaporation from U.S. Weather Bureau Class A land pan. Area and capacity tables are based on bathymetric survey made in September 2001. Preceding area and capacity tables were based on bathymetric survey made in September 1998 and were used up through Sept. 30, 2001. Changing of area and capacity tables at the beginning of the 2002 water year results in negative total and net inflows for October 2001. Reservoir capacity at spillway level, elevation 1,399.82 ft, 7,060 acre-ft. Lowest outlet at elevation 1,333.86 ft. Flow regulated by Jameson Lake (station 11121000) since December 1930. See schematic diagram of [Santa Ynez River Basin](#).

COOPERATION.—Precipitation and evaporation data provided by the City of Santa Barbara.

## MONTHLY NET INFLOW, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Elevation (ft) <sup>a</sup>	Contents (acre-ft)	Change in contents (acre-ft)	Draft (acre-ft)	Spill and release (acre-ft)	Evaporation and seepage (acre-ft)	Total inflow (acre-ft)	Rain on reservoir (acre-ft)	Net inflow (acre-ft)
Sept. 30.....	1,367.09	1,250	—	—	—	—	—	—	---
Oct. 31.....	1,363.01	820	-430	399	0	41	10	0	10
Nov. 30.....	1,363.36	855	-85	5	0	23	63	39	24
Dec. 31.....	1,364.95	1,020	+65	0	0	12	177	56	121
CAL YR 2002	—	—	-1,130	2,036	0	837	1,743	125	1,618
Jan. 31.....	1,366.36	1,170	+50	0	0	21	171	1	170
Feb. 28.....	1,376.33	2,490	+1,380	0	0	25	1,345	55	1,290
Mar. 31.....	1,395.34	6,040	+8,550	0	32	76	3,658	65	3,593
Apr. 30.....	1,399.73	7,040	+1,000	377	992	88	2,457	73	2,384
May 31.....	1,399.77	7,040	0	558	2,190	133	2,881	54	2,827
June 30.....	1,398.18	6,680	-360	591	36	145	412	0	412
July 31.....	1,393.12	5,560	-1,120	577	524	196	177	1	176
Aug. 31.....	1,389.37	4,800	-760	590	70	159	59	0	59
Sept. 30.....	1,385.87	4,130	-670	582	0	126	38	0	38
WTR YR 2003	—	—	+2,880	3,679	3,844	1,045	11,448	344	11,104

<sup>a</sup> Elevation at 0800.

NOTE.—For months when inflow to the lake was small and other quantities were large, preliminary computations may indicate negative net inflow. This arises primarily from the difficulty of computing net inflow as the residual of several large quantities, which are not conducive to precise measurement. When this occurs, evaporation and seepage is adjusted to produce non-negative inflows.

## 11123000 SANTA YNEZ RIVER BELOW GIBRALTAR DAM, NEAR SANTA BARBARA, CA

LOCATION.—Lat 34° 31' 28", long 119° 41' 11", in SW 1/4 SW 1/4 sec.11, T.5 N., R.27 W., [Santa Barbara County](#), Hydrologic Unit 18060010, on left bank, 700 ft downstream from Gibraltar Dam, and 7 mi north of Santa Barbara.

DRAINAGE AREA.—216 mi<sup>2</sup>.

PERIOD OF RECORD.—April 1920 to current year. Monthly discharge only prior to October 1933. Daily records for water years 1934–43 in files of U.S. Geological Survey.

REVISED RECORDS.—WDR CA-86-1: 1934–43.

GAGE.—Two water-stage recorders. Datum of gage on main channel is 1,227 ft above NGVD of 1929. Supplementary gage and sharp-crested weir on the release channel from Gibraltar Dam to river at different datum (station 11122010). See WSP 1735 for history of changes on both gages prior to May 20, 1958.

REMARKS.—Records good. Flow regulated by Jameson Lake (station 11121000) and Gibraltar Reservoir (station 11122000). City of Santa Barbara diverted 3,130 acre-ft during current year from Gibraltar Reservoir; Montecito Water District diverted 1,730 acre-ft during current year from Jameson Lake. See schematic diagram of [Santa Ynez River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 54,200 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 25.8 ft, from rating curve extended above 2,100 ft<sup>3</sup>/s, on basis of computations of flow from gate openings and flow over dam at gage heights 17.5 and 25.8 ft; no flow at times in most years.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.83	21	0.82	0.32	10	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.84	28	0.82	0.29	10	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.87	280	0.78	0.27	10	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.90	275	0.80	0.24	5.2	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.90	112	0.80	0.19	0.22	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	1.00	47	0.79	0.18	0.07	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.96	39	0.79	0.15	0.01	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.85	37	0.76	0.12	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.37	39	0.69	6.5	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.34	29	0.69	11	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.96	26	0.74	12	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	1.0	26	0.70	12	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	1.7	18	0.66	12	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	7.0	12	0.63	12	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	2.0	126	14	0.60	12	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.96	84	15	0.58	12	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.65	42	14	0.57	12	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.47	51	11	0.53	12	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.56	40	8.8	0.52	12	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.66	24	8.7	0.54	12	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.69	12	8.9	0.55	12	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.81	8.8	11	0.51	12	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.89	12	9.9	0.49	12	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.89	14	6.1	0.47	12	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.97	14	2.9	0.43	12	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	1.0	14	1.6	0.42	12	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	1.1	9.0	1.2	0.40	12	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	1.1	8.1	1.0	0.39	11	0.00	0.00
29	0.00	0.00	0.00	0.00	---	1.1	9.9	0.86	0.37	10	0.00	0.00
30	0.00	0.00	0.00	0.00	---	1.4	13	0.84	0.35	10	0.00	0.00
31	0.00	---	0.00	0.00	---	1.0	---	0.84	---	10	0.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	16.25	500.32	1105.64	18.19	264.26	35.50	0.00
MEAN	0.000	0.000	0.000	0.000	0.000	0.52	16.7	35.7	0.61	8.52	1.15	0.000
MAX	0.00	0.00	0.00	0.00	0.00	2.0	126	280	0.82	12	10	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.84	0.35	0.12	0.00	0.00
AC-FT	0.00	0.00	0.00	0.00	0.00	32	992	2190	36	524	70	0.00

## 11123000 SANTA YNEZ RIVER BELOW GIBRALTAR DAM, NEAR SANTA BARBARA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.82	5.94	24.9	122	248	245	101	30.5	8.07	3.60	1.70	0.61
MAX	32.6	336	607	2077	3090	1712	1168	441	126	43.6	24.1	13.5
(WY)	1984	1966	1967	1969	1998	1983	1958	1998	1998	1983	1995	1998
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1960	1959	1944	1938	1949	1948	1948	1940	1960	1960	1960	1960

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1934 - 2003	
ANNUAL TOTAL	0.00		1940.16			
ANNUAL MEAN	0.000		5.32		65.0	
HIGHEST ANNUAL MEAN					437 1969	
LOWEST ANNUAL MEAN					0.000 1961	
HIGHEST DAILY MEAN	0.00	Jan 1	280	May 3	26600	Jan 25 1969
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	0.00	Dec 16 1933
ANNUAL SEVEN-DAY MINIMUM	0.00	Jan 1	0.00	Oct 1	0.00	Dec 16 1933
MAXIMUM PEAK FLOW			697	May 3	54200	Jan 25 1969
MAXIMUM PEAK STAGE			10.40	May 3	25.80	Jan 25 1969
INSTANTANEOUS LOW FLOW			0.00	Oct 1	0.00	Dec 16 1933
ANNUAL RUNOFF (AC-FT)	0.00		3850		47130	
10 PERCENT EXCEEDS	0.00		12		77	
50 PERCENT EXCEEDS	0.00		0.00		0.09	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

## 11123500 SANTA YNEZ RIVER BELOW LOS LAURELES CANYON, NEAR SANTA YNEZ, CA

LOCATION.—Lat 34° 32' 37", long 119° 51' 50", in San Marcos Grant, [Santa Barbara County](#), Hydrologic Unit 18060010, on left bank, 0.3 mi downstream from Los Laureles Canyon Creek, 10 mi downstream from Gibraltar Reservoir, and 13.3 mi east of Santa Ynez.

DRAINAGE AREA.—277 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—April 1947 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.—Water-stage recorder. Datum of gage is 787.8 ft above NGVD of 1929.

REMARKS.—Records fair except for estimated daily discharges, which are poor. Flow regulated by Jameson Lake and Gibraltar Reservoir (stations 11121000 and 11122000). Water diverted out of basin from these reservoirs to cities of Montecito and Santa Barbara for municipal supply. Low flow affected by intermittent pumping for irrigation from infiltration gallery in riverbed at station. Satellite telemeter at station. See schematic diagram of [Santa Ynez River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 67,500 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 18.88 ft, from rating curve extended above 11,600 ft<sup>3</sup>/s, on basis of peak flow for station below Gibraltar Dam plus tributary inflow; no flow for many days in most years.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	3.4	1.4	7.3	6.3	18	4.6	0.92	6.3	0.00
2	0.00	0.00	0.00	3.2	1.3	6.8	6.2	32	4.4	0.72	5.9	0.00
3	0.00	0.00	0.00	3.1	1.2	6.4	5.9	263	4.1	0.37	5.7	0.00
4	0.00	0.00	0.00	3.0	1.2	6.4	5.7	495	e4.1	0.58	6.0	0.00
5	0.00	0.00	0.00	3.0	1.3	6.1	5.8	218	e4.2	0.87	5.9	0.00
6	0.00	0.00	0.00	2.9	1.5	5.5	5.5	112	5.6	0.89	4.5	0.00
7	0.00	0.00	0.00	2.8	1.6	5.2	5.1	67	6.2	0.86	2.7	0.00
8	0.00	0.00	0.00	2.5	1.3	5.2	4.7	56	6.0	0.53	1.9	0.00
9	0.00	0.00	0.00	2.5	1.2	4.6	4.8	56	4.9	0.07	1.5	0.00
10	0.00	0.00	0.00	2.8	1.2	4.5	4.8	52	4.7	e0.00	1.5	0.00
11	0.00	0.00	0.00	2.5	2.0	4.5	4.2	39	5.3	e0.00	1.4	0.00
12	0.00	0.00	0.00	2.4	11	4.0	4.0	38	5.5	e0.00	1.3	0.00
13	0.00	0.00	0.00	e2.2	45	3.7	20	37	5.4	e0.00	1.1	0.00
14	0.00	0.00	0.00	e2.0	25	3.7	74	27	4.9	e0.00	1.0	0.00
15	0.00	0.00	0.00	2.0	16	319	100	e21	4.6	e0.00	0.86	0.00
16	0.00	0.00	6.9	2.0	13	117	137	e25	5.0	e0.00	0.63	0.00
17	0.00	0.00	0.98	1.7	11	47	78	24	4.0	1.8	0.28	0.00
18	0.00	0.00	0.48	1.5	10	31	60	23	3.9	7.4	0.32	0.00
19	0.00	0.00	19	1.8	9.3	25	62	20	3.9	8.6	1.1	0.00
20	0.00	0.00	85	2.0	8.6	20	47	16	3.9	9.7	0.40	0.00
21	0.00	0.00	14	2.0	7.7	16	34	15	3.6	9.3	0.00	0.00
22	0.00	0.00	16	2.0	7.3	14	23	15	3.5	9.3	0.00	0.00
23	0.00	0.00	8.1	2.0	7.1	13	17	e15	3.6	9.3	0.00	0.00
24	0.00	0.00	5.9	1.8	8.1	12	19	e12	4.3	9.1	0.23	0.00
25	0.00	0.00	4.8	1.8	11	11	21	e11	4.1	9.3	0.59	0.00
26	0.00	0.00	4.1	1.9	9.7	9.6	21	e9.5	2.4	9.2	0.00	0.00
27	0.00	0.00	3.7	1.6	8.5	8.7	21	e8.7	1.6	9.1	0.00	0.00
28	0.00	0.00	4.0	1.6	8.2	7.9	18	7.6	1.3	8.9	0.00	0.00
29	0.00	0.00	4.8	1.7	---	7.4	14	6.5	1.1	8.7	0.00	0.00
30	0.00	0.00	3.9	1.7	---	7.2	15	5.8	1.1	7.6	0.48	0.00
31	0.00	---	3.7	1.7	---	6.4	---	5.0	---	6.7	0.46	---
TOTAL	0.00	0.00	185.36	69.1	231.7	746.1	844.0	1750.1	121.8	129.81	52.05	0.00
MEAN	0.000	0.000	5.98	2.23	8.28	24.1	28.1	56.5	4.06	4.19	1.68	0.000
MAX	0.00	0.00	85	3.4	45	319	137	495	6.2	9.7	6.3	0.00
MIN	0.00	0.00	0.00	1.5	1.2	3.7	4.0	5.0	1.1	0.00	0.00	0.00
AC-FT	0.00	0.00	368	137	460	1480	1670	3470	242	257	103	0.00

e Estimated.

## 11123500 SANTA YNEZ RIVER BELOW LOS LAURELES CANYON, NEAR SANTA YNEZ, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.67	7.53	35.6	178	351	311	125	42.3	11.9	3.90	1.18	0.51
MAX	18.8	315	608	2755	4250	2525	1480	542	201	79.3	15.8	7.57
(WY)	1984	1966	1967	1969	1998	1995	1958	1998	1998	1998	1998	1998
MIN	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1948	1948	1948	1948	1948	1990	1951	1951	1948	1948	1947	1947

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1947 - 2003
ANNUAL TOTAL	582.58	4130.02	
ANNUAL MEAN	1.60	11.3	87.7
HIGHEST ANNUAL MEAN			595 1998
LOWEST ANNUAL MEAN			0.013 1961
HIGHEST DAILY MEAN	85 Dec 20	495 May 4	33700 Jan 25 1969
LOWEST DAILY MEAN	0.00 May 24	0.00 Oct 1	0.00 Jun 24 1947
ANNUAL SEVEN-DAY MINIMUM	0.00 May 24	0.00 Oct 1	0.00 Jul 5 1947
MAXIMUM PEAK FLOW		853 May 3	67500 Jan 25 1969
MAXIMUM PEAK STAGE		3.61 May 3	18.88 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	1160	8190	63520
10 PERCENT EXCEEDS	4.5	21	93
50 PERCENT EXCEEDS	0.00	2.2	0.20
90 PERCENT EXCEEDS	0.00	0.00	0.00



## 11123500 SANTA YNEZ RIVER BELOW LOS LAURELES CANYON, NEAR SANTA YNEZ, CA—Continued

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

Date	Residue	Nitrite		Ortho-	Boron,	Iron,	Mangan-
	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)			
JAN 22...	902	--	--	--	--	--	--
FEB 04...	940	--	--	--	--	--	--
MAR 07...	956	--	--	--	--	--	--
APR 12...	883	<.04	<.06	<.008	<.02	340	e7 4.8
MAY 01...	846	--	--	--	--	--	--
JUN 03...	815	--	--	--	--	--	--
JUL 01...	799	--	--	--	--	--	--
AUG 06...	927	--	--	--	--	--	--

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

Date	Time	Depth	Baro-	Dis-	Dis-	pH,	Specif.	Temper-	Locatn
		at sample loca- tion, feet (81903)	metric pres- sure, mm Hg (00025)	solved oxygen, mg/L (00300)	solved percent of sat- uration (00301)	water, unfltrd field, std units (00400)	conduc- tance, wat unf uS/cm 25 degC (00095)		ature, deg C (00010)
APR									
12...*	1506	.26	727	9.3	98	7.9	1190	18.0	.50
12...*	1507	.30	727	9.2	98	7.8	1200	18.0	1.50
12...*	1508	.32	727	9.2	97	7.8	1190	18.0	2.50
12...*	1509	.36	727	9.2	97	7.8	1200	18.0	3.50
12...*	1510	.46	727	9.2	97	7.8	1200	18.0	4.50
12...*	1511	.38	727	9.2	97	7.8	1200	18.0	5.50
12...*	1512	.19	727	9.2	97	7.8	1200	18.0	6.50
12...*	1513	.33	727	9.2	97	7.8	1200	18.0	7.50
12...*	1514	.36	727	9.2	97	7.8	1200	18.0	8.50
12...*	1515	.28	727	9.1	97	7.8	1200	18.0	9.50
12...*	1516	.25	727	9.1	97	7.8	1200	18.0	10.5
12...*	1517	.19	727	9.1	96	7.8	1200	18.0	11.5

< Actual value is know to be less than value shown.

e Estimated.

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 12, 4.2 ft<sup>3</sup>/s.

## 11124500 SANTA CRUZ CREEK NEAR SANTA YNEZ, CA

LOCATION.—Lat 34° 35' 48", long 119° 54' 28", in San Marcos Grant, [Santa Barbara County](#), Hydrologic Unit 18060010, on right bank, 0.6 mi downstream from Pine Canyon, and 9.9 mi east of Santa Ynez.

DRAINAGE AREA.—74.0 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1941 to current year. Monthly discharge only for some periods, published in WSP 1315-B.

GAGE.—Water-stage recorder. Datum of gage is 783.38 ft above NGVD of 1929. See WSP 1735 for history of changes prior to Sept. 27, 1952. Sept. 27, 1952, to June 24, 1969, at datum 3.25 ft higher.

REMARKS.—Records fair except for estimated daily discharges which, are poor. No regulation or diversion upstream from station. See schematic diagram of [Santa Ynez River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,050 ft<sup>3</sup>/s, Feb. 24, 1969, gage height, 14.45 ft, from floodmark, present datum, from rating curve extended above 2,500 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 14.16 ft; no flow at times since 1953.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 100 ft<sup>3</sup>/s, from rating curve extended above 5,000 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 12.10 ft, or maximum:

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 8	1130	410	8.91	Mar. 15	1330	868	9.79
Dec. 20	0045	253	8.54	May 3	1700	282	8.41
Feb. 12	1830	123	8.13				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.38	9.7	4.1	10	10	8.8	7.9	1.2	0.00	0.00
2	0.00	0.00	0.46	8.5	4.1	10	10	9.9	7.2	1.1	0.00	0.00
3	0.00	0.00	0.54	7.4	4.0	9.7	10	107	7.2	1.1	0.00	0.00
4	0.00	0.00	0.60	6.9	4.2	9.5	10	70	8.0	1.0	0.00	0.00
5	0.00	0.00	0.69	6.9	4.2	10	10	32	7.8	0.97	0.00	0.00
6	0.00	0.00	0.84	6.9	4.1	9.8	10	23	7.8	0.96	0.00	0.00
7	0.00	e0.00	0.89	6.6	4.0	9.5	9.7	20	7.6	0.94	0.00	0.00
8	0.00	e121	0.89	6.1	4.0	9.1	8.5	17	7.0	0.82	0.00	0.00
9	0.00	e40	0.89	6.1	3.7	8.8	7.5	15	6.3	0.69	0.00	0.00
10	0.00	e3.9	0.89	6.1	3.7	8.8	7.2	15	6.1	0.58	0.00	0.00
11	0.00	e2.2	0.92	6.1	6.5	8.7	6.9	15	6.5	0.50	0.00	0.00
12	0.00	e1.5	0.99	6.1	47	7.8	7.3	15	6.3	0.47	0.00	0.00
13	0.00	e1.2	1.1	6.1	90	7.8	12	14	5.9	0.41	0.00	0.00
14	0.00	e0.50	e1.1	6.1	42	7.8	58	14	5.3	0.38	0.00	0.00
15	0.00	0.02	e1.1	5.6	23	199	28	14	4.4	0.34	0.00	0.00
16	0.00	0.00	e7.5	4.7	17	67	19	13	4.0	0.31	0.00	0.00
17	0.00	0.00	14	4.6	15	34	17	13	3.6	0.27	0.00	0.00
18	0.00	0.00	3.6	4.2	13	27	16	13	3.3	0.23	0.00	0.00
19	0.00	0.00	3.2	4.0	12	23	14	12	3.3	0.24	0.00	0.00
20	0.00	0.00	91	4.2	12	21	13	12	3.3	0.17	0.00	0.00
21	0.00	0.00	30	4.2	10	19	13	11	3.3	0.13	0.00	0.00
22	0.00	0.00	22	4.2	10	17	12	10	3.3	0.11	0.00	0.00
23	0.00	0.00	15	4.2	10	16	12	10	3.0	0.08	0.00	0.00
24	0.00	0.00	12	4.2	10	15	11	10	2.9	0.05	0.00	0.00
25	0.00	0.00	10	4.1	14	14	11	10	2.7	0.04	0.00	0.00
26	0.00	0.00	8.5	4.1	11	14	11	9.8	2.2	0.02	0.00	0.00
27	0.00	0.00	7.1	4.2	11	13	11	9.2	1.9	0.01	0.00	0.00
28	0.00	0.05	8.2	4.4	10	13	11	8.8	1.7	0.00	0.00	0.00
29	0.00	0.13	14	4.4	---	12	9.9	8.5	1.5	0.00	0.00	0.00
30	0.00	0.23	11	4.3	---	12	9.3	8.2	1.4	0.00	0.00	0.00
31	0.00	---	10	3.9	---	11	---	8.3	---	0.00	0.00	---
TOTAL	0.00	170.73	279.38	169.1	403.6	654.3	395.3	556.5	142.7	13.12	0.00	0.00
MEAN	0.000	5.69	9.01	5.45	14.4	21.1	13.2	18.0	4.76	0.42	0.000	0.000
MAX	0.00	121	91	9.7	90	199	58	107	8.0	1.2	0.00	0.00
MIN	0.00	0.00	0.38	3.9	3.7	7.8	6.9	8.2	1.4	0.00	0.00	0.00
AC-FT	0.00	339	554	335	801	1300	784	1100	283	26	0.00	0.00

e Estimated.



## 11124500 SANTA CRUZ CREEK NEAR SANTA YNEZ, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.62	3.05	11.6	35.9	70.5	62.3	35.9	15.0	6.14	2.21	0.91	0.52
MAX	12.4	50.4	205	510	743	355	378	141	63.0	27.9	13.7	8.68
(WY)	1984	1966	1967	1969	1969	1995	1958	1998	1998	1998	1998	1998
MIN	0.000	0.000	0.000	0.000	0.10	0.23	0.11	0.000	0.000	0.000	0.000	0.000
(WY)	1954	1954	1954	1963	1951	1948	1961	1961	1961	1959	1953	1953

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1942 - 2003	
ANNUAL TOTAL	886.26		2784.73			
ANNUAL MEAN	2.43		7.63		20.1	
HIGHEST ANNUAL MEAN					134 1969	
LOWEST ANNUAL MEAN					0.066 1990	
HIGHEST DAILY MEAN	121	Nov 8	199	Mar 15	5000	Feb 24 1969
LOWEST DAILY MEAN	0.00	May 31	0.00	Oct 1	0.00	Jul 6 1953
ANNUAL SEVEN-DAY MINIMUM	0.00	May 31	0.00	Oct 1	0.00	Jul 6 1953
MAXIMUM PEAK FLOW			868	Mar 15	7050	Feb 24 1969
MAXIMUM PEAK STAGE			9.79	Mar 15	14.45	Feb 24 1969
ANNUAL RUNOFF (AC-FT)	1760		5520		14570	
10 PERCENT EXCEEDS	4.7		15		33	
50 PERCENT EXCEEDS	0.10		3.7		1.3	
90 PERCENT EXCEEDS	0.00		0.00		0.00	



## 11124500 SANTA CRUZ CREEK NEAR SANTA YNEZ, CA—Continued

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

Date	Residue	Nitrite		Ortho-	Boron,	Iron,	Mangan-	
	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)				phos- phate, water, fltrd, mg/L as P (00671)
DEC 12...	940	--	--	--	--	--	--	--
JAN 22...	851	--	--	--	--	--	--	--
FEB 04...	852	--	--	--	--	--	--	--
MAR 21...	639	--	--	--	--	--	--	--
APR 12...	714	<.04	<.06	<.008	<.02	270	<10	2.5
MAY 01...	629	--	--	--	--	--	--	--
JUN 03...	637	--	--	--	--	--	--	--
JUL 17...	722	--	--	--	--	--	--	--

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

Date	Time	Depth	Baro-	Dis-	Dis-	pH,	Specif.	Temper-	Locatn
		at sample loca- tion, feet (81903)	metric pres- sure, mm Hg (00025)	solved oxygen, mg/L (00300)	oxygen, percent of sat- uration (00301)	water, unfltrd field, std units (00400)	conduc- tance, wat unf 25 degC (00095)		ature, water, deg C (00010)
APR									
12...*	1139	.16	727	9.3	100	8.2	932	19.5	.50
12...*	1140	.29	727	9.3	100	8.3	973	19.0	1.50
12...*	1141	.34	727	9.2	100	8.3	966	19.0	2.50
12...*	1142	.37	727	9.2	100	8.3	972	19.0	3.50
12...*	1143	.39	727	9.2	99	8.3	975	19.0	4.50
12...*	1144	.83	727	9.2	99	8.3	975	19.0	5.50
12...*	1145	.65	727	9.2	99	8.3	978	19.0	6.50
12...*	1146	.67	727	9.1	99	8.3	978	19.0	7.50
12...*	1147	.67	727	9.1	98	8.3	980	19.5	8.50
12...*	1148	.70	727	9.0	98	8.3	981	19.5	9.50
12...*	1149	.84	727	9.1	98	8.3	980	19.5	10.5
12...*	1150	.85	727	9.0	98	8.2	982	19.5	11.5
12...*	1151	.65	727	9.0	98	8.2	983	19.5	12.5
12...*	1152	.65	727	8.9	98	8.2	986	19.5	13.5
12...*	1153	.62	727	8.9	97	8.2	982	19.5	14.5

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

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 12, 7.8 ft<sup>3</sup>/s.

## 11125500 LAKE CACHUMA NEAR SANTA YNEZ, CA

LOCATION.—Lat 34° 34' 57", long 119° 58' 47", in Lomas de la Purification Grant, Santa Barbara County, Hydrologic Unit 18060010, at Bradbury Dam on Santa Ynez River, on upstream face near left end of dam, and 6.1 mi east of Santa Ynez.

DRAINAGE AREA.—417 mi<sup>2</sup>.

PERIOD OF RECORD.—November 1952 to current year. Prior to October 1985, only monthend elevations, contents, and total diversions published. November 1952 to October 1960, published as "Cachuma Reservoir near Santa Ynez."

CHEMICAL DATA: Water Year 1998.

GAGE.—Water-stage recorder. Elevation of gage is NGVD of 1929 (U.S. Bureau of Reclamation benchmark). Prior to Oct. 1, 1965, nonrecording gage.

REMARKS.—Reservoir is formed by earthfill dam. Storage began November 1952. Dead storage below outlet gage to river, elevation, 600 ft, 97 acre-ft, included in contents. Capacity below sill of inlet to Tecolote Tunnel, elevation, 660 ft, 26,109 acre-ft; below spillway level, elevation, 720 ft, 112,215 acre-ft; and below top of four radial gates, elevation, 750 ft, 188,030 acre-ft. Water is released from outlet to Santa Ynez River to satisfy downstream water rights. Water diverted to Tecolote Tunnel for use by City of Santa Barbara, Goleta Water District, Carpinteria Valley Water District, and Montecito Water District. Records, including extremes, represent total contents at 0800 hours. See schematic diagram of Santa Ynez River Basin.

COOPERATION.—Reservoir elevation, contents, and diversion figures provided by U.S. Bureau of Reclamation. Contents not rounded to U.S. Geological Survey standards.

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 221,100 acre-ft, Feb. 24, 1969, elevation, 755.11 ft; minimum since initial filling in April 1958, 27,681 acre-ft, Feb. 27, 1991, elevation, 661.06 ft.

EXTREMES (AT 0800) FOR CURRENT YEAR.—Maximum contents, 130,784 acre-ft, May 27, elevation, 728.39 ft; minimum, 115,449 acre-ft, Sept. 30, elevation, 721.52 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)  
(Based on surveys by U.S. Bureau of Reclamation)

680	46,647	710	92,452	730	134,559	750	188,030
690	59,806	720	112,215	740	159,637	760	220,052
700	75,020						

## RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

## DAILY OBSERVATION AT 0800 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129208	124965	124023	124853	123058	122947	125122	126779	130505	128426	124090	119349
2	129093	124853	124000	124808	122925	122925	125100	126802	130458	128311	123956	119240
3	128932	124763	123956	124786	122836	122836	125100	127256	130388	128150	123799	119108
4	128794	124651	123933	124763	122770	122814	125010	128426	130342	127988	123641	118955
5	128656	124517	123866	124719	122725	122792	124965	129301	130318	127850	123529	118801
6	128541	124404	123843	124719	122659	122747	124921	129646	130295	127597	123372	118648
7	128426	124292	123821	124651	122570	122659	124876	129830	130272	127438	123215	118496
8	128242	124517	123799	124584	122459	122592	124853	130016	130248	127301	123058	118344
9	127988	124651	123754	124561	122348	122548	124831	130132	130202	127165	122903	118214
10	127781	124808	123709	124517	122282	122504	124763	130295	130155	127006	122747	118062
11	127574	124786	123619	124494	122304	122415	124696	130411	130132	126847	122570	117932
12	127392	124741	123552	124472	122393	122326	124629	130528	130086	126733	122415	117780
13	127256	124696	123462	124472	122637	122237	124741	130574	130039	126597	122260	117650
14	127097	124696	123439	124427	122836	122171	125145	130621	130016	126461	122104	117498
15	126938	124674	123395	124382	122925	122637	125370	130668	129969	126324	121949	117390
16	126802	124651	123417	124315	123014	124292	125711	130691	129923	126165	121794	117238
17	126642	124584	123619	124225	123014	124584	125984	130714	129853	126029	121616	117130
18	126483	124561	123597	124158	123036	124831	126120	130714	129761	125893	121461	117000
19	126370	124517	123552	124068	122991	124988	126256	130737	129692	125779	121328	116869
20	126256	124472	124404	123956	122947	125122	126438	130737	129600	125643	121151	116739
21	126120	124404	124629	123911	122947	125190	126552	130761	129531	125506	120995	116631
22	126006	124382	124808	123888	122947	125212	126620	130761	129439	125347	120840	116501
23	125893	124382	124898	123799	122947	125235	126642	130761	129370	125212	120687	116372
24	125779	124315	124921	123731	122947	125325	126642	130761	129277	125100	120533	116243
25	125666	124292	124876	123664	123036	125302	126642	130761	129162	124988	120358	116093
26	125575	124247	124853	123597	123014	125325	126665	130761	129047	124853	120226	115943
27	125484	124225	124853	123462	122991	125257	126665	130784	128909	124763	120117	115814
28	125393	124135	124831	123395	122969	125302	126711	130761	128794	124606	119985	115685
29	125280	124090	124898	123327	---	125257	126756	130737	128679	124472	119832	115535
30	125167	124045	124921	123238	---	125190	126756	130644	128541	124382	119656	115449
31	125055	---	124921	123170	---	125167	---	130574	---	124247	119503	---
MAX	129208	124965	124921	124853	123058	125325	126756	130784	130505	128426	124090	119349
MIN	125055	124045	123395	123170	122282	122171	124629	126779	128541	124247	119503	115449
a	725.89	725.44	725.83	725.05	724.96	725.94	726.64	728.30	727.42	725.53	723.39	721.52
b	-4315	-1010	876	-1751	-201	2198	1589	3818	-2033	-4294	-4744	-4054
c	2467	2164	1715	2158	1838	2197	2087	2172	2319	3208	3486	2970

CAL YR 2002 b -44084  
WTR YR 2003 b -13921

- a Elevation, in feet, at end of month.  
b Change in contents, in acre-feet.  
c Diversion, in acre-feet, to Tecolote Tunnel.

## 11125600 HILTON CANYON CREEK NEAR SANTA YNEZ, CA

LOCATION.—Lat 34° 34' 56", long 119° 58' 54", unsurveyed, in Lomas de La Purificacion Land Grant, Santa Barbara County, Hydrologic Unit 18060010, on right bank, 0.2 mi downstream from Highway 154, 0.4 mi from Cachuma (Bradbury) Dam, 0.6 mi south from Cachuma Village, 6.0 mi south from Santa Ynez, and 19.4 mi northeast of Santa Barbara.

DRAINAGE AREA.—2.42 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—March 2002 to current year.

GAGE.—Water-stage recorder. Elevation of gage is 740 ft above NGVD of 1929, from topographic map.

REMARKS.—Records poor.

EXTREMES FOR PERIOD OF RECORD.— Maximum discharge, 36 ft<sup>3</sup>/s, Mar. 15, 2003, gage height, 2.94 ft; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.— Maximum discharge, 36 ft<sup>3</sup>/s, Mar. 15, gage height, 2.94 ft; minimum 0.68 ft<sup>3</sup>/s, Oct. 10, gage height, 0.85 ft.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.54	2.5	2.8	2.9	2.8	2.2	2.0	1.6	2.4	3.2	3.1	2.4
2	e0.56	2.5	2.8	2.9	2.7	2.2	2.0	1.7	2.3	3.1	3.0	2.3
3	e0.58	2.5	2.8	2.9	2.6	1.9	2.0	9.7	2.3	3.2	3.0	2.3
4	e0.58	2.5	2.9	2.9	2.5	1.7	2.0	4.8	2.4	3.2	3.0	2.3
5	e0.60	2.5	2.9	2.9	2.6	1.7	1.9	3.6	2.4	3.2	3.0	2.3
6	e0.62	2.5	2.9	2.9	2.6	1.7	1.9	3.2	2.4	3.2	3.0	2.2
7	e0.64	2.5	2.9	2.8	2.6	1.7	1.9	3.0	2.4	3.2	3.0	2.2
8	e0.66	2.6	2.9	2.8	2.6	1.7	1.9	2.9	2.3	3.2	3.1	2.3
9	e0.67	2.6	2.9	2.8	2.5	1.7	1.9	2.9	2.3	3.1	3.1	2.2
10	e0.68	2.6	2.9	2.8	2.5	1.7	1.9	2.8	2.3	3.2	3.1	2.2
11	e0.70	2.6	2.9	2.8	2.5	1.7	1.9	2.8	2.3	3.2	3.1	2.2
12	e0.72	2.6	2.9	2.8	2.6	1.6	1.9	2.7	2.3	3.2	3.0	2.2
13	e0.74	2.6	2.9	2.8	3.7	1.7	3.3	2.6	2.2	3.2	3.0	2.2
14	e0.76	2.6	3.0	2.8	2.6	1.8	5.0	2.6	2.3	3.2	3.0	2.2
15	0.77	2.6	3.0	2.7	2.5	10	2.5	2.6	2.3	3.2	3.0	2.2
16	0.78	2.7	3.0	2.7	2.5	3.7	2.1	2.6	2.3	3.1	3.0	2.2
17	0.77	2.7	3.0	2.7	2.5	2.2	1.9	2.6	2.7	3.1	3.0	2.2
18	0.77	2.7	3.0	2.7	2.5	1.9	1.8	2.5	2.9	3.1	2.9	2.1
19	0.79	2.7	3.4	2.7	2.5	1.7	1.7	2.5	3.0	3.1	2.9	2.1
20	0.81	2.7	5.5	2.7	2.5	1.7	1.7	2.5	3.0	3.2	2.9	2.1
21	0.81	2.7	4.2	2.7	2.5	1.7	1.7	2.4	3.0	3.2	2.8	2.1
22	0.81	2.7	3.5	2.7	2.4	1.7	1.7	2.4	3.0	3.1	2.8	2.0
23	0.82	2.7	3.0	2.7	2.4	1.8	1.7	2.4	3.1	3.1	2.8	2.1
24	0.83	2.8	2.9	2.7	2.5	1.8	1.7	2.4	3.1	3.1	2.8	2.0
25	0.84	2.8	2.9	2.7	2.4	1.8	1.7	2.4	3.2	3.1	2.7	2.0
26	0.87	2.8	2.9	2.7	2.4	1.9	1.7	2.5	3.2	3.1	2.7	2.0
27	0.89	2.8	2.9	2.7	2.4	1.9	1.7	2.4	3.2	3.1	2.7	2.0
28	0.89	2.8	2.9	2.8	2.3	1.9	1.7	2.4	3.2	3.1	2.6	2.0
29	0.88	2.8	3.0	2.7	---	1.9	1.7	2.4	3.2	3.1	2.4	2.0
30	1.8	2.8	3.0	2.7	---	2.0	1.6	2.4	3.2	3.0	2.5	2.0
31	2.4	---	3.0	2.7	---	2.0	---	2.4	---	3.0	2.4	---
TOTAL	25.58	79.5	95.5	85.8	71.7	66.6	60.1	88.7	80.2	97.4	89.4	64.6
MEAN	0.83	2.65	3.08	2.77	2.56	2.15	2.00	2.86	2.67	3.14	2.88	2.15
MAX	2.4	2.8	5.5	2.9	3.7	10	5.0	9.7	3.2	3.2	3.1	2.4
MIN	0.54	2.5	2.8	2.7	2.3	1.6	1.6	1.6	2.2	3.0	2.4	2.0
AC-FT	51	158	189	170	142	132	119	176	159	193	177	128

e Estimated.

## 11125600 HILTON CANYON CREEK NEAR SANTA YNEZ, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.83	2.65	3.08	2.77	2.56	2.15	1.00	3.10	1.61	1.80	1.67	1.37
MAX	0.83	2.65	3.08	2.77	2.56	2.15	2.00	3.34	2.67	3.14	2.88	2.15
(WY)	2003	2003	2003	2003	2003	2003	2003	2002	2003	2003	2003	2003
MIN	0.83	2.65	3.08	2.77	2.56	2.15	0.002	2.86	0.55	0.45	0.45	0.59
(WY)	2003	2003	2003	2003	2003	2003	2002	2003	2002	2002	2002	2002

## SUMMARY STATISTICS

## FOR 2003 WATER YEAR

## WATER YEARS 2002 - 2003

ANNUAL TOTAL	905.08		
ANNUAL MEAN	2.48	2.48	
HIGHEST ANNUAL MEAN		2.48	2003
LOWEST ANNUAL MEAN		2.48	2003
HIGHEST DAILY MEAN	10	Mar 15	10
LOWEST DAILY MEAN	0.54	Oct 1	0.00
ANNUAL SEVEN-DAY MINIMUM	0.59	Oct 1	0.00
MAXIMUM PEAK FLOW	36	Mar 15	36
MAXIMUM PEAK STAGE	2.94	Mar 15	2.94
ANNUAL RUNOFF (AC-FT)	1800		1800
10 PERCENT EXCEEDS	3.1		3.1
50 PERCENT EXCEEDS	2.6		2.6
90 PERCENT EXCEEDS	1.7		1.7

## 11125600 HILTON CANYON CREEK NEAR SANTA YNEZ, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—July 2002 to current year.

SPECIFIC CONDUCTANCE: July 2002 to current year.

WATER TEMPERATURE: July 2002 to current year.

PERIOD OF DAILY RECORD.—July 2002 to current year.

SPECIFIC CONDUCTANCE: July 2002 to current year.

WATER TEMPERATURE: July 2002 to current year.

INSTRUMENTATION.—Water quality monitor since July 2002.

REMARKS.—The water-temperature record is rated excellent except May 5–13, which is rated good. The specific-conductance record is rated excellent except Jan. 29 to Feb. 7, and Mar. 15 to Apr. 3, which is rated good. Interruption in record due to equipment malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: Maximum recorded, 891 microsiemens, Oct. 30, 2002; minimum recorded, 128 microsiemens, Mar. 15, 2002.

WATER TEMPERATURE: Maximum recorded, 23.0° C, Aug. 9, 2002; minimum recorded, 9.0° C, Dec. 20, 2002.

EXTREMES FOR CURRENT YEAR.—

SPECIFIC CONDUCTANCE: Maximum recorded, 891 microsiemens, Oct. 30; minimum recorded, 128 microsiemens, Mar. 15.

WATER TEMPERATURE: Maximum recorded, 19.0° C, Oct. 16–22; minimum recorded, 9.0° C, Dec. 20.

## SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

## WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	844	839	826	822	822	816	839	827	825	822
2	---	---	840	837	824	820	822	816	839	831	825	822
3	---	---	839	835	822	820	822	816	839	831	827	823
4	---	---	837	833	821	819	821	816	837	827	827	824
5	---	---	837	831	821	818	822	817	836	827	828	824
6	---	---	834	830	821	816	821	819	835	824	828	824
7	---	---	835	828	819	814	821	816	830	819	827	824
8	---	---	836	828	818	815	821	817	832	824	828	825
9	---	---	834	831	819	814	822	818	834	829	828	824
10	---	---	835	832	818	814	821	817	836	828	827	822
11	---	---	835	832	817	814	821	817	837	828	828	822
12	---	---	836	833	834	814	821	814	832	821	828	825
13	---	---	836	833	835	831	820	817	828	616	828	823
14	---	---	837	834	834	832	822	817	826	784	827	824
15	---	---	838	835	836	832	823	819	827	806	826	128
16	864	861	838	835	834	823	824	822	827	800	517	169
17	864	861	838	836	835	827	825	822	826	803	333	212
18	865	861	839	836	835	830	827	824	827	792	338	237
19	865	862	839	835	835	322	829	826	824	796	414	271
20	865	862	837	833	666	291	831	826	822	819	545	328
21	866	862	836	833	679	528	831	828	824	819	669	419
22	866	862	836	833	700	555	831	829	824	819	791	610
23	866	862	835	829	823	700	833	830	826	820	851	742
24	866	863	834	830	822	819	834	831	826	822	862	836
25	867	863	832	828	822	815	835	830	826	823	861	812
26	867	862	831	827	821	817	838	832	827	822	876	739
27	867	863	830	826	822	818	838	830	830	822	822	804
28	866	863	828	825	822	815	837	831	825	821	821	810
29	866	863	828	824	820	817	838	833	---	---	821	818
30	891	847	827	823	821	817	837	827	---	---	821	817
31	849	842	---	---	821	817	837	831	---	---	821	809
MONTH	---	---	844	823	836	291	838	814	839	616	876	128

## 11125600 HILTON CANYON CREEK NEAR SANTA YNEZ, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	822	814	814	806	820	813	829	820	832	826	838	834
2	822	816	839	787	821	816	828	817	833	825	837	834
3	822	818	787	315	820	816	831	819	832	825	838	833
4	822	806	696	544	822	816	830	825	831	826	838	834
5	823	819	738	696	820	812	830	822	833	827	838	834
6	822	815	760	735	819	816	830	820	832	826	838	834
7	820	766	779	752	821	814	829	824	833	825	838	833
8	821	806	789	770	820	815	829	824	831	827	838	834
9	821	818	797	778	819	813	829	825	833	826	839	834
10	822	812	802	779	819	812	830	813	831	826	838	834
11	821	812	807	785	816	813	829	825	831	826	838	835
12	820	817	809	791	827	811	830	822	833	827	839	834
13	843	570	810	793	825	814	830	825	834	827	838	834
14	723	492	802	796	825	817	829	826	835	828	839	834
15	787	723	806	794	827	817	830	826	833	828	838	834
16	805	787	809	797	827	820	829	826	834	828	838	833
17	811	803	807	797	827	820	830	826	833	828	839	833
18	816	806	814	801	828	814	830	791	834	827	838	834
19	816	806	816	802	828	816	830	826	834	827	838	835
20	818	812	815	805	828	819	830	826	833	827	838	835
21	819	813	817	807	828	817	---	---	834	827	838	834
22	819	810	818	810	827	817	---	---	833	827	839	835
23	816	800	819	810	828	816	---	---	833	828	838	834
24	817	800	818	812	827	818	---	---	833	828	838	835
25	817	809	819	812	829	819	---	---	833	827	838	826
26	817	801	819	812	828	821	831	826	833	826	838	835
27	816	805	818	814	828	817	831	826	833	828	838	835
28	815	807	821	816	828	815	831	826	838	828	839	835
29	820	810	822	816	828	814	831	824	838	832	839	835
30	820	805	821	812	828	816	830	826	837	833	838	836
31	---	---	819	812	---	---	831	826	838	834	---	---
MONTH	843	492	839	315	829	811	---	---	838	825	839	826



## 11125600 HILTON CANYON CREEK NEAR SANTA YNEZ, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	17.5	17.0	15.5	15.0	12.5	12.5	13.5	12.5	13.0	12.5
2	---	---	17.5	17.0	15.0	15.0	12.5	12.5	13.0	12.5	13.0	12.5
3	---	---	17.0	17.0	15.0	14.5	13.0	12.5	13.0	12.5	13.0	12.5
4	---	---	17.0	16.5	15.0	14.5	13.0	12.5	13.0	12.5	13.0	12.5
5	---	---	17.0	16.5	15.0	14.5	13.0	12.5	13.0	12.5	13.0	12.5
6	---	---	17.0	16.5	15.0	14.5	12.5	12.5	13.0	12.5	13.0	12.5
7	---	---	17.0	16.5	15.0	14.5	12.5	12.5	13.0	12.5	13.0	12.5
8	---	---	17.0	16.5	15.0	14.5	13.0	12.5	13.0	12.5	13.5	12.5
9	---	---	17.0	16.5	14.5	14.5	13.0	12.5	12.5	12.0	13.5	13.0
10	---	---	16.5	16.5	14.5	14.5	13.0	12.5	13.0	12.0	13.5	13.0
11	---	---	16.5	16.0	14.5	14.5	13.0	12.5	13.0	12.5	14.0	13.0
12	---	---	16.5	16.0	14.5	14.0	13.0	12.5	13.0	12.5	14.0	13.0
13	---	---	16.5	16.0	14.5	14.0	12.5	12.5	13.0	12.0	14.5	13.5
14	---	---	16.5	16.0	14.5	14.5	12.5	12.5	13.0	12.5	14.5	13.5
15	---	---	16.5	16.0	14.5	14.0	13.0	12.5	13.5	12.5	14.5	12.5
16	19.0	19.0	16.5	16.0	14.5	14.0	13.0	12.5	13.5	13.0	13.5	12.0
17	19.0	18.5	16.5	16.0	14.0	14.0	13.0	12.5	13.0	12.5	13.0	12.0
18	19.0	18.5	16.0	16.0	14.0	14.0	13.0	12.5	13.0	12.5	13.5	12.5
19	19.0	18.5	16.0	15.5	14.0	9.5	13.0	12.5	13.0	12.5	13.5	12.5
20	19.0	18.5	16.0	16.0	13.5	9.0	12.5	12.5	13.0	12.5	14.0	13.0
21	19.0	18.5	16.0	16.0	13.5	11.0	12.5	12.5	13.0	12.5	14.0	13.0
22	19.0	18.5	16.0	16.0	13.5	11.5	13.0	12.5	13.0	12.5	14.0	13.5
23	18.5	18.5	16.0	15.5	13.5	13.0	13.0	12.5	13.0	12.5	14.5	13.5
24	18.5	18.0	16.0	15.5	13.0	13.0	13.0	12.5	13.0	12.5	14.0	13.5
25	18.5	18.0	15.5	15.5	13.0	12.5	13.0	12.5	13.0	12.5	14.5	13.5
26	18.5	18.0	15.5	15.0	13.0	13.0	13.5	13.0	13.0	12.5	14.0	13.5
27	18.0	17.5	15.5	15.0	13.0	13.0	13.5	13.0	---	---	14.0	13.0
28	18.0	17.5	15.5	15.0	13.0	13.0	13.5	13.0	13.0	12.5	14.5	13.5
29	17.5	17.5	15.5	15.0	13.0	12.5	13.5	13.0	---	---	14.0	13.5
30	17.5	17.0	15.5	15.0	13.0	12.5	13.5	13.0	---	---	14.0	13.5
31	17.5	17.5	---	---	13.0	12.5	13.5	13.0	---	---	14.0	13.5
MONTH	---	---	17.5	15.0	15.5	9.0	13.5	12.5	---	---	14.5	12.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.0	13.5	14.5	14.5	16.0	15.5	16.0	15.5	16.5	16.0	16.5	16.0
2	14.0	13.5	16.0	14.5	16.0	15.5	16.0	15.5	16.0	16.0	16.5	16.0
3	14.0	13.5	14.5	12.0	16.0	15.5	16.0	15.5	16.5	16.0	16.5	16.0
4	14.0	13.5	14.5	13.0	16.0	15.5	16.0	16.0	16.0	16.0	16.5	16.0
5	14.0	13.5	15.0	13.5	16.0	15.5	16.0	16.0	16.5	16.0	16.5	16.0
6	14.0	13.5	15.0	14.0	16.0	15.5	16.0	15.5	16.5	16.0	16.5	16.0
7	14.5	13.5	15.0	14.0	16.0	15.5	16.0	16.0	16.5	16.0	16.5	16.0
8	14.0	14.0	15.0	14.0	16.0	15.5	16.0	16.0	16.5	16.0	16.5	16.0
9	14.5	14.0	15.0	14.5	16.0	15.5	16.0	15.5	16.5	16.0	16.5	16.0
10	14.0	13.5	15.5	14.5	15.5	15.5	16.0	16.0	16.5	16.0	16.5	16.0
11	14.0	13.5	16.0	14.5	16.0	15.5	16.0	16.0	16.5	16.0	16.5	16.0
12	14.0	14.0	16.0	15.0	16.0	15.5	16.0	16.0	16.0	16.0	16.5	16.0
13	14.0	13.5	15.5	15.0	16.0	15.5	16.5	16.0	16.5	16.0	16.5	16.0
14	13.5	12.0	15.5	15.0	16.0	15.5	16.0	16.0	16.5	16.0	16.5	16.0
15	14.0	13.0	15.5	15.0	16.0	15.5	16.0	16.0	16.5	16.0	16.5	16.0
16	14.0	13.5	15.5	15.0	16.0	15.5	16.0	16.0	16.5	16.0	16.5	16.0
17	14.0	13.5	15.5	15.0	16.0	15.5	16.5	16.0	16.5	16.0	16.5	16.0
18	14.0	13.5	15.5	15.0	16.0	15.5	16.0	16.0	16.5	16.0	16.5	16.0
19	14.5	14.0	16.0	15.0	16.0	15.5	16.0	16.0	16.5	16.0	16.5	16.0
20	14.0	14.0	16.0	15.0	16.0	15.5	16.0	16.0	16.5	16.0	16.5	16.0
21	14.0	14.0	16.0	15.0	16.0	15.5	---	---	16.5	16.0	16.5	16.0
22	14.0	14.0	16.0	15.5	16.0	15.5	---	---	16.5	16.0	16.5	16.0
23	14.5	14.0	16.0	15.0	16.0	15.5	---	---	16.5	16.0	16.5	16.0
24	15.0	14.0	16.0	15.5	16.0	15.5	---	---	16.5	16.0	16.0	16.0
25	14.5	14.0	16.0	15.5	16.0	15.5	---	---	16.5	16.0	16.5	16.0
26	14.5	14.0	16.0	15.5	16.0	15.5	16.0	16.0	16.5	16.0	16.5	16.0
27	14.5	14.0	16.0	15.0	16.0	16.0	16.0	16.0	16.5	16.0	16.5	16.0
28	14.5	14.0	16.0	15.5	16.0	16.0	16.0	16.0	16.5	16.0	16.0	16.0
29	14.5	14.0	16.0	15.5	16.0	15.5	16.5	16.0	16.5	16.0	16.5	16.0
30	15.0	14.5	16.0	15.5	16.0	15.5	16.5	16.0	16.0	16.0	16.5	16.0
31	---	---	16.0	15.5	---	---	16.5	16.0	16.5	16.0	---	---
MONTH	15.0	12.0	16.0	12.0	16.0	15.5	---	---	16.5	16.0	16.5	16.0

## 11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA

LOCATION.—Lat 34° 35' 21", long 119° 59' 16", in Canada de los Pinos Grant, [Santa Barbara County](#), Hydrologic Unit 18060010, on right bank, 0.7 mi downstream from Bradbury Dam, and 5.5 mi southeast of Santa Ynez.

DRAINAGE AREA.—422 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—December 1928 to September 1931, October 1932 to September 1976, May 1994 to September 2001, October 2002 to September 2003 (seasonal records only); October 2001 to September 2002.

GAGE.—Water-stage recorder. Elevation of gage is 545.66 ft above NGVD of 1929 (Bureau of Reclamation benchmark). Prior to Oct. 1, 1955, at site 2.5 mi downstream at different datum. Oct. 1, 1955, to Sept. 16, 1969, at site 0.4 mi downstream at datum 7.2 ft higher.

REMARKS.—Records poor due to beaver dam backwater condition from October 1 to September 30. No records computed above 250 ft<sup>3</sup>/s. Flow regulated by Jameson Lake since December 1930, Gibraltar Reservoir, and Lake Cachuma since November 1952 (stations 11121000, 11122000, and 11125500, respectively). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito and Santa Barbara, and to the Santa Ynez Valley for municipal supply. Some water pumped from wells along river banks for irrigation. See schematic diagram of [Santa Ynez River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 79,000 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 22.00 ft, from floodmark, present datum, on basis of computation of maximum flow over dam; no flow at times in some years.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	3.6	---	---	---	---	3.0	2.2	1.0	0.94	0.96	1.8
2	61	2.8	---	---	---	---	3.7	2.1	3.5	0.80	0.97	1.6
3	37	2.3	---	---	---	---	3.7	6.4	2.2	0.73	0.98	1.4
4	32	2.1	---	---	---	---	3.6	1.8	3.0	0.72	0.99	1.3
5	31	2.0	---	---	---	---	3.3	1.3	3.4	0.72	10	1.2
6	32	1.9	---	---	---	---	3.1	1.4	2.5	0.73	3.8	1.2
7	37	2.3	---	---	---	---	3.3	1.5	2.6	0.78	1.4	1.2
8	49	3.4	---	---	---	---	2.8	2.1	2.2	0.81	0.78	5.7
9	49	3.3	---	---	---	---	4.2	2.4	1.9	0.81	0.75	1.6
10	48	3.4	---	---	---	---	2.3	2.3	1.5	0.85	0.72	1.1
11	48	3.3	---	---	---	---	2.3	4.1	1.2	0.90	0.73	1.1
12	48	3.0	---	---	---	---	1.9	2.5	0.98	0.88	0.73	1.5
13	48	3.3	---	---	---	---	2.0	3.0	0.85	0.83	0.73	1.6
14	44	3.3	---	---	---	---	1.7	4.0	0.81	0.80	4.5	1.4
15	39	2.6	---	---	---	---	1.9	3.7	0.78	0.79	2.4	1.3
16	34	2.4	---	---	---	---	2.7	4.1	0.74	0.80	1.6	1.3
17	31	2.5	---	---	---	---	2.9	3.9	0.73	0.76	1.3	1.2
18	29	2.5	---	---	---	---	2.5	2.7	0.69	0.73	0.60	1.2
19	31	2.5	---	---	---	---	2.4	2.6	0.66	0.77	0.53	1.1
20	30	5.6	---	---	---	---	2.0	2.9	0.62	0.80	0.50	1.2
21	27	1.7	---	---	---	---	2.9	2.4	0.65	0.82	0.56	1.2
22	16	2.7	---	---	---	---	2.1	2.4	0.71	0.82	0.55	1.2
23	16	2.5	---	---	---	---	2.1	3.6	0.74	0.84	0.57	1.3
24	16	2.8	---	---	---	---	2.0	2.8	0.80	0.85	0.57	1.2
25	16	2.4	---	---	---	---	3.1	2.5	0.86	0.91	0.56	1.3
26	16	2.4	---	---	---	---	4.1	1.3	0.90	0.93	0.60	0.93
27	16	3.1	---	---	---	---	2.1	1.4	0.94	0.92	0.56	0.98
28	15	2.5	---	---	---	---	2.0	1.3	0.96	0.94	0.56	0.95
29	14	2.5	---	---	---	---	3.4	1.1	0.99	0.96	5.1	0.91
30	14	3.0	---	---	---	---	1.9	1.0	0.99	0.96	3.2	0.86
31	10	---	---	---	---	---	---	1.0	---	0.94	2.0	---
TOTAL	985	83.7	---	---	---	---	81.0	77.8	40.40	25.84	49.80	41.83
MEAN	31.8	2.79	---	---	---	---	2.70	2.51	1.35	0.83	1.61	1.39
MAX	61	5.6	---	---	---	---	4.2	6.4	3.5	0.96	10	5.7
MIN	10	1.7	---	---	---	---	1.7	1.0	0.62	0.72	0.50	0.86
AC-FT	1950	166	---	---	---	---	161	154	80	51	99	83

## 11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.— October 1991 to current year.

CHEMICAL DATA: October 1991 to current year.

SPECIFIC CONDUCTANCE: July 1994 to November 1994, October 1995 to current year.

WATER TEMPERATURE: July 1994 to current year.

PERIOD OF DAILY RECORD.—July 1994 to current year.

SPECIFIC CONDUCTANCE: July 1994 to November 1994, October 1995 to current year.

WATER TEMPERATURE: July 1994 to current year.

INSTRUMENTATION.—Water-quality monitor since July 1994.

REMARKS.—The water temperature record is rated excellent except Oct. 2 to Nov. 6, Apr. 1–3, Apr. 11 to May 3, May 17 to June 3, Aug. 24–28, Sept. 1, 5, 17 and 18, which is rated good; May 4–7, June 4–20, July 25 to Aug. 23 and Sept. 6–11, which is rated fair; June 21 to July 17, and Sept. 12–16, which is rated poor. The specific conductance record is rated excellent except Apr. 25 to May 3, which is rated good. Interruptions in record due to malfunction of recording equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: Maximum recorded, 1,020 microsiemens, Aug. 31, 1999, several days in September 1999, June 8, 9, 2000; minimum recorded, 194 microsiemens, Dec. 6, 1997.

WATER TEMPERATURE: Maximum recorded, 23.0°C, May 28, June 2, 3, 28, and July 12, 2003; minimum recorded, 9.0°C, Nov. 15, 1994, Jan. 6, 1998, Jan. 31, Feb. 1, 2002.

EXTREMES FOR CURRENT YEAR.—

SPECIFIC CONDUCTANCE: Maximum recorded, 902 microsiemens, Aug. 17; minimum recorded, 526 microsiemens, May 4.

WATER TEMPERATURE: Maximum recorded, 23.0°C, May 28, June 2, 3, 28, and July 12; minimum recorded, 12.5°C, Nov. 27, 28, and Apr. 5.

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

Date	Time	Instan- taneous dis- charge, cfs (00061)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl- trd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO <sub>3</sub> (00900)
OCT									
02...	1500	59	--	--	--	8.2	781	17.5	--
NOV									
08...	1452	3.6	--	--	--	7.8	816	16.0	--
DEC									
12...	1510	2.2	--	--	--	7.8	808	14.5	--
JAN									
14...	1446	e30	--	--	--	8.0	820	14.0	--
FEB									
27...	1315	1.9	--	--	--	8.4	816	14.5	--
MAR									
11...	1345	.83	--	--	--	8.3	860	16.0	--
APR									
11...	1230	2.5	758	13.2	144	8.8	752	19.5	300
MAY									
07...	1630	1.5	--	--	--	8.7	726	18.0	--
JUN									
12...	1117	1.0	--	--	--	8.0	745	20.0	--
JUL									
18...	1300	.76	--	--	--	7.7	857	21.5	--
AUG									
06...	1334	3.3	--	--	--	7.8	831	22.5	--
SEP									
05...	1120	1.2	--	--	--	8.0	826	20.0	--

e Estimated.



## 11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA—Continued

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

Date	Residue	Nitrite		Ortho-	Boron,	Iron,	Mangan-	
	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)				phos- phate, water, fltrd, mg/L as P (00671)
OCT								
02...	503	--	--	--	--	--	--	
NOV								
08...	568	--	--	--	--	--	--	
DEC								
12...	550	--	--	--	--	--	--	
JAN								
14...	553	--	--	--	--	--	--	
FEB								
27...	568	--	--	--	--	--	--	
MAR								
11...	606	--	--	--	--	--	--	
APR								
11...	511	<.04	.06	<.008	<.02	250	12	26.6
MAY								
07...	498	--	--	--	--	--	--	
JUN								
12...	507	--	--	--	--	--	--	
JUL								
18...	592	--	--	--	--	--	--	
AUG								
06...	571	--	--	--	--	--	--	
SEP								
05...	592	--	--	--	--	--	--	

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

## 11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	778	767	818	803	---	---	---	---	---	---	---	---
2	---	---	833	818	---	---	---	---	---	---	---	---
3	788	771	834	819	---	---	---	---	---	---	---	---
4	783	766	840	825	---	---	---	---	---	---	---	---
5	778	764	840	812	---	---	---	---	---	---	---	---
6	777	761	846	827	---	---	---	---	---	---	---	---
7	773	757	835	828	---	---	---	---	---	---	---	---
8	771	762	831	806	---	---	---	---	---	---	---	---
9	775	766	828	811	---	---	---	---	---	---	---	---
10	778	769	836	824	---	---	---	---	---	---	---	---
11	778	768	838	815	---	---	---	---	---	---	---	---
12	775	764	816	794	---	---	---	---	---	---	---	---
13	772	760	808	795	---	---	---	---	---	---	---	---
14	767	755	803	797	---	---	---	---	---	---	---	---
15	766	755	814	798	---	---	---	---	---	---	---	---
16	767	761	815	809	---	---	---	---	---	---	---	---
17	770	762	819	813	---	---	---	---	---	---	---	---
18	777	763	820	811	---	---	---	---	---	---	---	---
19	774	759	814	805	---	---	---	---	---	---	---	---
20	771	755	824	804	---	---	---	---	---	---	---	---
21	771	754	824	816	---	---	---	---	---	---	---	---
22	776	762	823	811	---	---	---	---	---	---	---	---
23	775	763	812	803	---	---	---	---	---	---	---	---
24	771	760	813	803	---	---	---	---	---	---	---	---
25	773	762	809	800	---	---	---	---	---	---	---	---
26	769	762	807	795	---	---	---	---	---	---	---	---
27	773	762	809	784	---	---	---	---	---	---	---	---
28	783	767	805	800	---	---	---	---	---	---	---	---
29	790	781	802	797	---	---	---	---	---	---	---	---
30	797	788	---	---	---	---	---	---	---	---	---	---
31	804	793	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	727	715	778	761	855	833	819	808	865	850
2	749	737	729	706	804	773	855	804	833	816	859	847
3	750	721	718	640	806	777	859	825	840	828	856	845
4	740	724	640	526	844	779	859	842	847	836	857	843
5	740	723	668	589	843	787	858	842	849	833	853	845
6	734	716	709	668	823	715	858	851	880	821	853	846
7	728	715	720	708	812	771	859	851	896	808	854	840
8	723	694	733	712	820	761	858	837	869	809	869	851
9	733	680	735	716	819	765	857	850	830	817	860	847
10	741	730	735	724	813	777	860	850	841	827	859	847
11	744	727	737	714	810	758	860	841	846	837	859	844
12	742	715	742	734	815	746	859	849	847	841	855	843
13	735	706	743	724	805	741	860	849	850	839	855	841
14	730	676	744	733	787	724	860	852	859	843	855	842
15	708	646	745	732	779	730	860	853	856	845	859	840
16	689	662	741	711	772	711	859	852	859	853	862	842
17	705	685	750	725	771	713	---	---	902	852	861	840
18	706	681	749	737	772	730	---	---	884	847	860	843
19	697	684	747	737	777	739	---	---	879	848	858	843
20	699	693	749	741	775	767	---	---	861	847	857	839
21	705	691	750	742	781	762	---	---	859	845	859	836
22	715	699	753	743	783	776	---	---	858	847	851	840
23	717	698	752	742	785	775	---	---	867	844	851	838
24	708	697	759	744	793	763	---	---	862	848	856	837
25	706	681	764	755	814	778	---	---	863	846	860	836
26	700	694	767	753	835	788	830	810	862	846	859	840
27	702	692	763	758	845	833	822	808	865	846	859	833
28	703	691	765	724	848	836	818	806	859	846	847	835
29	728	631	---	---	853	818	818	806	884	855	848	833
30	725	668	772	764	855	844	819	802	863	844	854	835
31	---	---	774	765	---	---	816	805	860	847	---	---
MONTH	---	---	---	---	855	711	---	---	902	808	869	833

## 11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.5	17.5	16.0	14.5	---	---	---	---	---	---	---	---
2	---	---	15.5	14.0	---	---	---	---	---	---	---	---
3	18.5	16.0	15.5	14.0	---	---	---	---	---	---	---	---
4	18.5	16.0	15.5	14.0	---	---	---	---	---	---	---	---
5	19.0	16.0	15.5	14.0	---	---	---	---	---	---	---	---
6	19.0	16.5	15.5	14.0	---	---	---	---	---	---	---	---
7	19.0	17.0	14.5	14.0	---	---	---	---	---	---	---	---
8	18.5	16.5	15.5	14.5	---	---	---	---	---	---	---	---
9	18.5	16.5	16.0	15.5	---	---	---	---	---	---	---	---
10	17.5	16.5	16.5	15.0	---	---	---	---	---	---	---	---
11	17.5	16.5	17.0	14.5	---	---	---	---	---	---	---	---
12	17.5	16.0	16.5	15.0	---	---	---	---	---	---	---	---
13	18.0	16.5	17.0	15.0	---	---	---	---	---	---	---	---
14	18.5	17.0	17.0	15.5	---	---	---	---	---	---	---	---
15	18.0	17.0	17.0	15.0	---	---	---	---	---	---	---	---
16	17.5	17.0	16.5	14.5	---	---	---	---	---	---	---	---
17	18.0	16.5	16.0	14.5	---	---	---	---	---	---	---	---
18	18.0	16.5	15.5	13.5	---	---	---	---	---	---	---	---
19	18.0	16.5	15.5	13.5	---	---	---	---	---	---	---	---
20	18.0	16.5	16.5	14.0	---	---	---	---	---	---	---	---
21	18.0	17.0	17.5	14.0	---	---	---	---	---	---	---	---
22	18.0	17.0	16.0	14.5	---	---	---	---	---	---	---	---
23	17.5	16.5	16.5	15.0	---	---	---	---	---	---	---	---
24	17.5	16.5	16.5	14.5	---	---	---	---	---	---	---	---
25	16.5	15.5	16.0	14.0	---	---	---	---	---	---	---	---
26	17.5	16.0	15.0	13.0	---	---	---	---	---	---	---	---
27	17.5	16.0	15.0	12.5	---	---	---	---	---	---	---	---
28	16.5	15.5	15.0	12.5	---	---	---	---	---	---	---	---
29	16.0	15.0	15.0	14.0	---	---	---	---	---	---	---	---
30	16.0	14.5	---	---	---	---	---	---	---	---	---	---
31	16.0	15.0	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	18.0	15.5	22.5	19.5	22.0	19.5	22.0	20.0	21.0	18.5
2	16.5	14.0	16.0	14.5	23.0	19.5	22.0	19.5	21.5	19.5	21.0	19.0
3	17.0	13.0	14.5	14.0	23.0	19.5	22.0	19.5	21.0	19.5	21.0	19.0
4	15.0	13.0	17.5	14.0	21.0	20.0	22.0	20.0	21.0	19.5	20.5	19.0
5	16.0	12.5	18.0	15.0	20.0	19.0	22.0	19.5	21.5	18.5	20.5	18.5
6	16.5	13.0	18.0	16.0	19.5	18.0	21.5	19.5	21.5	19.0	20.5	18.5
7	17.5	13.5	17.5	15.5	20.5	18.0	21.5	19.5	21.5	19.5	20.0	18.5
8	19.0	14.5	18.0	15.0	21.5	18.5	21.5	19.0	21.5	19.0	20.5	18.5
9	19.5	15.0	18.0	14.5	22.0	19.5	21.5	19.0	21.0	19.0	20.0	18.0
10	19.5	15.5	18.5	15.0	21.0	19.5	22.0	19.5	21.0	19.0	21.0	18.5
11	19.0	16.0	19.0	15.5	20.5	19.0	22.0	19.5	21.0	19.0	21.0	18.5
12	19.0	16.0	19.5	16.0	21.0	18.5	23.0	20.0	20.5	19.0	21.0	19.0
13	17.0	16.0	20.0	16.5	21.5	19.0	22.5	20.0	21.0	19.0	20.5	19.0
14	16.0	14.0	18.0	16.5	22.0	19.5	22.5	20.0	21.5	19.0	21.0	19.0
15	17.0	13.0	19.0	16.0	22.0	19.5	22.0	20.0	22.5	18.5	20.5	19.0
16	18.0	14.0	19.5	16.5	22.5	20.0	22.5	20.0	22.0	18.5	20.0	18.5
17	16.5	15.0	19.0	17.0	22.5	20.0	---	---	21.5	19.0	19.5	17.5
18	18.0	14.0	20.0	16.0	21.5	20.0	---	---	21.5	19.0	19.0	17.0
19	18.5	14.5	20.5	16.5	21.0	19.0	---	---	22.0	19.5	19.0	17.0
20	17.5	15.5	21.0	17.5	21.5	19.0	---	---	21.5	19.5	19.0	17.5
21	17.0	15.0	21.5	18.0	21.5	19.5	---	---	21.0	19.5	19.5	17.5
22	17.0	14.0	21.5	18.5	21.0	19.5	---	---	21.5	19.0	19.5	17.5
23	18.0	14.5	22.0	19.0	21.0	19.0	---	---	21.5	19.0	19.0	18.0
24	18.0	14.5	21.0	18.5	21.5	18.5	---	---	21.5	19.5	18.5	18.0
25	19.0	16.0	20.0	18.0	22.0	19.0	---	---	21.5	20.0	18.5	17.5
26	19.5	15.5	21.5	18.5	22.0	19.5	21.0	19.0	21.5	20.0	18.5	17.5
27	19.0	16.0	22.5	18.5	22.5	20.0	21.5	19.5	21.5	20.0	18.5	17.5
28	18.5	16.0	23.0	20.0	23.0	20.0	21.5	19.5	20.5	19.5	19.0	17.5
29	19.0	15.0	22.5	20.0	22.5	20.5	21.0	19.5	21.5	19.0	19.0	17.5
30	19.5	15.0	22.0	19.5	22.0	20.0	21.0	19.5	21.0	18.0	19.0	17.5
31	---	---	22.0	19.5	---	---	22.0	19.5	21.0	18.5	---	---
MONTH	---	---	23.0	14.0	23.0	18.0	---	---	22.5	18.0	21.0	17.0

## 11126000 SANTA YNEZ RIVER NEAR SANTA YNEZ, CA—Continued

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

Date	Time	Depth at sample location, feet (81903)	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 unf 25 degC uS/cm (00095)	Temperature, water, deg C (00010)	Locatn in X-sect. looking downstrm ft from 1 bank (00009)
APR									
11...*	1211	.70	758	12.5	137	8.8	752	19.5	.20
11...*	1212	.68	758	12.7	138	8.8	752	19.5	.50
11...*	1213	.65	758	12.8	140	8.8	752	19.5	.80
11...*	1214	.72	758	13.0	142	8.8	752	19.5	1.10
11...*	1215	.68	758	13.2	144	8.8	749	19.5	1.40
11...*	1216	.62	758	13.2	144	8.8	751	19.5	1.70
11...*	1217	.50	758	13.2	144	8.8	751	19.5	2.00
11...*	1218	.62	758	13.1	143	8.8	751	19.5	2.30
11...*	1219	.70	758	13.2	144	8.8	752	19.5	2.60
11...*	1220	.68	758	13.1	143	8.8	752	19.5	2.90
11...*	1221	.62	758	12.9	140	8.8	752	19.5	3.20

## CROSS-SECTIONAL DATA AT LONG POOL, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Depth at sample location, feet (81903)	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 unf 25 degC uS/cm (00095)	Temperature, water, deg C (00010)	Locatn in X-sect. looking downstrm ft from 1 bank (00009)
SEP									
16...*	1500	2.00	735	9.1	104	8.0	836	20.0	.00
16...*	1502	2.00	735	9.0	102	8.0	839	19.5	10.0
16...*	1504	2.20	735	9.3	105	8.0	838	19.5	20.0
16...*	1506	2.40	735	9.3	105	8.0	837	19.5	30.0
16...*	1508	2.20	735	9.4	106	8.0	837	19.0	40.0
16...*	1510	2.50	735	9.7	110	8.0	837	19.5	50.0
16...*	1511	1.50	735	9.8	111	8.0	837	19.5	60.0
16...*	1512	2.30	735	9.8	112	8.0	840	19.5	70.0
16...*	1513	2.80	735	9.7	110	8.0	840	19.5	80.0
16...*	1515	3.20	735	10.1	114	8.1	840	19.5	90.0
16...*	1516	3.20	735	9.3	106	8.0	843	19.5	100
16...*	1518	2.90	735	9.1	103	8.0	842	19.5	110
16...*	1520	1.60	735	8.3	95	7.9	844	20.0	117
16...*	1521	.80	735	7.5	87	7.9	847	20.5	120
16...*	1522	1.40	735	6.2	73	7.8	847	21.0	130

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 11, 1.9 ft<sup>3</sup>/s.; Sept. 16, 2.4 ft<sup>3</sup>/s



## 11126400 SANTA YNEZ RIVER AT HIGHWAY 154, NEAR SANTA YNEZ, CA

LOCATION.—Lat 34° 35' 21", long 120° 01' 45", in Canada de Los Pino Land Grant, T.6 N., R.30 W., Santa Barbara County, Hydrologic Unit 18060010, on upstream side of Highway 154 bridge, 2.1 mi southeast of intersection of Highways 246 and 154, 3 mi southeast of Santa Ynez.

DRAINAGE AREA.—430 mi<sup>2</sup>.

PERIOD OF RECORD.—June 2002 to current year.

DISSOLVED OXYGEN: June 2002 to current year.

SPECIFIC CONDUCTANCE: June 2002 to current year.

WATER TEMPERATURE: June 2002 to current year.

PERIOD OF DAILY RECORD.—June 2002 to current year.

DISSOLVED OXYGEN: June 2002 to current year.

SPECIFIC CONDUCTANCE: June 2002 to current year.

WATER TEMPERATURE: June 2002 to current year.

INSTRUMENTATION: Water-quality monitor since June 2002.

REMARKS.—The dissolved-oxygen record is rated excellent except Oct. 1–5, Oct. 23 to Nov. 1, Dec. 7–20, Dec. 24 to Jan. 5, Jan. 24 to Feb. 7, Feb. 21–27, Mar. 17 to July 2, Sept. 28–30, which is rated good, Nov. 2–11, Feb. 8–13, 16–20, Mar. 15–16, which is rated fair, Nov. 12 to Dec. 6, Feb. 14–15, Feb. 28 to Mar. 14, July 3 to Sept. 19, which is rated poor. The specific-conductance record is rated excellent except Oct. 1–5, Oct. 23 to Nov. 1, Dec. 7–20, Dec. 24 to Jan. 5, Jan. 24 to Aug. 16, which is rated good, Nov. 2–11, which is rated fair, Nov. 12 to Dec. 6, which is rated poor. The water-temperature record is rated excellent except Oct. 1–5, Oct. 23 to Nov. 1, Dec. 7–20, Dec. 24 to Jan. 5, Jan. 24 to Aug. 16, which is rated good, Nov. 2–11, which is rated fair, Nov. 12 to Dec. 5, which is rated poor. On May 12 the sensor was moved from a lentic to a lotic environment to obtain better representation of the stream cross section. Interruptions in record due to malfunction of recording equipment.

EXTREMES FOR PERIOD OF DAILY RECORD.—

DISSOLVED OXYGEN: Maximum recorded, 10.7 mg/L, Feb. 20, 2003; minimum recorded, 0.1 mg/L, many days in 2003.

SPECIFIC CONDUCTANCE: Maximum recorded, 967 microsiemens, Sept. 12, 2003; minimum recorded, 801 microsiemens, Sept. 12, 2002.

WATER TEMPERATURE: Maximum recorded, 22.5° C, May 28, 2003; minimum recorded, 13.0° C, several days in February 2003.

EXTREMES FOR CURRENT YEAR.—

DISSOLVED OXYGEN: Maximum recorded, 10.7 mg/L, Feb. 20; minimum recorded, 0.1 mg/L, many days.

SPECIFIC CONDUCTANCE: Maximum recorded, 967 microsiemens, Sept. 12; minimum recorded, 830 microsiemens, Oct. 1.

WATER TEMPERATURE: Maximum recorded, 22.5° C, May 28; minimum recorded, 13.0° C, several days in February.

## DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	6.0	3.8	3.8	0.6	1.7	0.3	6.0	4.2	7.7	4.5	6.7	4.0
2	5.9	4.0	2.7	0.5	2.4	0.3	5.4	4.0	7.4	4.4	7.2	3.4
3	6.2	4.3	2.7	0.5	1.3	0.3	6.1	3.7	7.9	5.2	7.2	3.7
4	5.7	3.8	2.4	0.6	1.3	0.3	6.5	3.8	8.2	5.2	---	4.0
5	---	---	2.6	0.4	1.6	0.3	---	---	8.4	4.9	---	2.8
6	---	---	4.2	1.5	---	---	---	---	8.2	4.1	---	2.7
7	---	---	2.9	0.6	5.9	3.2	---	---	7.6	3.9	---	3.6
8	---	---	3.0	0.5	6.6	3.6	---	---	6.9	3.3	---	3.4
9	---	---	2.7	1.1	6.3	3.7	---	---	8.2	4.4	---	1.8
10	---	---	3.6	1.4	6.4	3.9	---	---	7.0	2.8	---	3.3
11	---	---	4.2	1.2	6.0	3.3	---	---	4.5	1.5	---	2.8
12	---	---	4.2	0.8	6.9	3.5	---	---	2.9	1.7	---	0.8
13	---	---	3.5	0.6	6.6	3.4	---	---	4.7	2.2	---	0.7
14	---	---	3.4	1.5	6.1	2.9	---	---	6.0	3.2	---	1.2
15	---	---	3.0	1.5	5.5	2.8	---	---	6.9	5.2	7.6	2.4
16	---	---	3.9	0.2	3.9	2.7	---	---	6.8	5.1	5.4	4.2
17	---	---	2.7	0.2	3.5	0.4	---	---	7.5	5.2	5.5	3.9
18	---	---	1.2	0.2	6.4	1.0	---	---	7.4	5.4	4.6	3.4
19	---	---	1.0	0.2	6.0	3.1	---	---	7.9	5.3	5.0	3.1
20	---	---	3.3	0.2	---	---	---	---	10.7	4.8	5.9	2.9
21	---	---	2.0	0.6	---	---	---	---	7.7	4.9	5.8	2.3
22	---	---	2.5	0.5	---	---	---	---	7.4	4.6	4.9	2.1
23	---	---	2.3	0.6	---	---	---	---	7.1	4.2	5.3	2.1
24	5.2	3.1	2.6	0.4	---	---	---	---	6.4	4.0	4.5	2.1
25	5.4	3.0	3.4	1.0	5.3	4.2	4.3	0.4	6.9	4.3	5.5	1.8
26	4.9	3.0	2.6	0.4	5.1	4.1	2.6	0.4	6.4	4.2	4.9	1.8
27	5.1	2.9	2.9	0.4	5.0	4.1	3.5	1.0	7.0	2.5	5.2	2.0
28	4.1	2.3	3.7	0.3	5.7	4.0	---	---	6.6	3.2	4.8	2.3
29	4.3	2.2	2.8	0.5	5.6	4.0	7.0	5.3	---	---	5.4	2.1
30	5.2	2.7	1.7	0.3	5.5	4.1	7.1	5.1	---	---	5.3	2.0
31	4.9	2.0	---	---	5.5	4.1	7.1	4.9	---	---	5.2	2.0
MONTH	---	---	4.2	0.2	---	---	---	---	10.7	1.5	---	0.7

## 11126400 SANTA YNEZ RIVER AT HIGHWAY 154, NEAR SANTA YNEZ, CA—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.4	2.2	3.6	0.2	5.9	3.8	4.4	0.2	---	0.1	---	1.1
2	5.3	2.7	3.6	0.3	5.7	3.4	4.6	0.3	---	0.1	---	1.3
3	5.0	2.5	2.7	0.3	5.6	3.5	---	---	---	0.1	---	1.2
4	6.0	3.1	2.7	0.1	6.2	3.5	3.3	0.4	---	0.1	2.3	1.4
5	5.7	2.7	2.7	0.1	5.7	3.2	3.5	0.3	---	0.1	2.2	1.4
6	6.2	2.1	2.6	0.1	5.2	2.8	1.9	0.2	---	0.1	2.3	1.3
7	5.3	1.7	2.3	0.1	5.3	1.7	---	0.2	---	0.2	---	1.2
8	5.5	1.4	2.8	0.1	5.2	1.6	---	0.2	---	0.2	---	1.4
9	5.7	1.6	2.7	0.2	5.3	1.2	---	0.1	---	0.1	---	1.5
10	5.2	1.5	2.4	0.3	4.5	2.0	---	0.1	---	0.1	---	1.6
11	5.0	1.4	1.9	0.2	5.1	1.9	---	0.1	---	0.1	---	1.0
12	6.3	1.2	---	---	5.4	1.5	---	0.1	---	0.1	---	0.4
13	5.7	1.1	8.2	5.5	4.7	1.4	---	0.1	---	0.1	---	0.3
14	5.8	1.2	7.9	5.2	4.4	1.4	---	0.1	---	0.1	---	0.3
15	6.2	2.2	7.9	5.6	5.0	1.9	---	0.1	---	0.1	---	0.2
16	6.3	1.9	7.8	5.3	5.3	2.2	---	0.2	---	0.5	---	1.4
17	7.3	1.5	7.8	5.3	5.3	3.1	---	0.1	---	---	---	1.7
18	4.8	1.8	7.5	5.2	6.0	3.7	---	0.1	2.1	1.0	---	1.3
19	5.4	1.6	7.3	5.1	6.0	3.7	---	0.1	1.9	0.6	---	1.6
20	5.4	1.4	7.2	4.8	5.4	3.8	---	0.1	2.0	0.5	2.1	1.1
21	5.1	1.7	6.9	4.8	5.5	3.9	---	0.2	---	0.7	1.6	0.8
22	5.7	2.0	6.6	4.5	6.4	3.7	---	0.2	---	0.6	1.6	0.8
23	5.4	1.5	6.6	4.4	6.7	3.4	---	0.2	---	0.4	1.7	0.7
24	5.4	1.3	6.8	4.5	6.4	2.3	1.5	0.2	---	0.3	1.8	0.7
25	4.3	1.2	6.6	4.5	4.8	1.4	1.4	0.2	---	0.3	1.8	0.6
26	4.9	0.3	6.2	4.2	3.6	1.3	1.7	0.2	---	0.4	1.9	0.7
27	3.2	0.2	6.0	3.8	4.3	1.2	---	0.2	---	0.4	2.0	0.9
28	2.3	0.3	5.8	3.4	3.7	0.7	---	0.2	---	0.5	2.1	1.1
29	3.9	0.3	5.8	3.8	3.9	0.5	---	0.1	---	0.7	2.2	1.2
30	2.6	0.1	6.2	4.0	4.7	0.3	---	0.1	---	0.9	2.1	1.3
31	---	---	6.2	4.1	---	---	---	0.1	---	1.1	---	---
MONTH	7.3	0.1	---	---	6.7	0.3	---	---	---	---	---	0.2

## 11126400 SANTA YNEZ RIVER AT HIGHWAY 154, NEAR SANTA YNEZ, CA—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	841	830	860	853	887	882	902	894	904	900	904	900
2	841	832	866	859	891	881	904	893	906	902	906	902
3	838	833	869	865	888	881	903	893	905	901	905	902
4	840	835	871	864	888	882	902	893	904	900	905	900
5	---	---	873	868	887	883	---	---	905	900	906	898
6	---	---	874	869	---	---	---	---	905	900	906	902
7	---	---	875	866	900	894	---	---	907	903	910	904
8	---	---	874	865	899	895	---	---	907	901	910	903
9	---	---	869	864	904	894	---	---	906	902	913	902
10	---	---	874	868	904	899	---	---	906	902	913	904
11	---	---	876	872	900	895	---	---	905	894	913	905
12	---	---	879	874	899	896	---	---	903	890	908	903
13	---	---	884	876	900	897	---	---	899	896	909	901
14	---	---	886	881	900	896	---	---	901	897	914	902
15	---	---	887	882	900	897	---	---	902	899	904	849
16	---	---	887	876	900	863	---	---	903	900	854	834
17	---	---	881	875	900	892	---	---	903	901	882	852
18	---	---	881	874	902	897	---	---	905	901	895	879
19	---	---	881	875	903	832	---	---	905	901	901	885
20	---	---	885	875	---	---	---	---	907	898	902	886
21	---	---	886	875	---	---	---	---	906	902	905	889
22	---	---	886	873	---	---	---	---	906	903	906	889
23	---	---	886	877	---	---	---	---	907	903	906	889
24	848	843	886	879	---	---	---	---	907	885	907	891
25	848	843	892	879	901	898	909	903	903	892	904	891
26	850	846	891	878	902	900	909	903	904	899	906	891
27	850	845	886	878	903	900	909	906	904	898	908	889
28	852	847	891	879	903	889	---	---	905	899	900	878
29	852	848	889	882	901	895	904	901	---	---	900	878
30	852	844	886	882	902	894	904	901	---	---	903	879
31	856	850	---	---	903	895	904	900	---	---	905	881
MONTH	---	---	892	853	---	---	---	---	907	885	914	834
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	904	883	911	895	872	863	886	869	903	898	929	918
2	904	885	904	884	872	862	886	872	911	899	926	923
3	906	887	903	868	872	863	897	876	910	899	931	924
4	903	889	901	888	871	864	898	881	919	898	930	927
5	912	893	901	883	875	862	898	882	922	902	932	927
6	913	894	901	892	875	870	897	883	922	902	932	928
7	914	894	901	882	876	869	895	884	922	899	934	930
8	916	891	904	888	877	870	899	885	921	899	937	932
9	915	893	900	881	878	870	900	885	921	902	944	936
10	911	896	902	882	878	872	893	885	908	898	949	941
11	911	899	903	882	878	873	893	885	906	900	954	940
12	913	895	---	---	879	872	890	885	909	902	967	943
13	906	894	863	851	879	873	893	886	907	903	963	943
14	906	893	863	854	880	872	899	887	911	904	961	947
15	901	892	861	851	880	873	896	887	922	909	960	945
16	901	890	862	850	880	871	900	888	924	918	964	952
17	904	891	861	850	880	869	898	888	---	---	965	956
18	901	887	861	849	882	870	899	889	929	924	964	957
19	907	885	861	848	881	871	893	888	929	922	964	960
20	908	885	860	848	882	871	895	890	929	923	966	962
21	910	889	862	847	881	870	897	891	929	925	965	960
22	909	890	865	851	881	873	898	891	930	926	963	958
23	910	890	867	856	881	875	903	892	929	924	962	957
24	912	889	868	858	883	876	907	901	929	923	960	952
25	912	891	868	858	884	876	909	902	927	922	961	957
26	912	890	869	858	896	870	910	902	928	921	960	956
27	910	893	872	858	896	870	908	902	928	921	958	955
28	910	894	871	859	891	869	909	901	927	922	957	954
29	911	892	871	861	891	870	911	899	925	920	956	953
30	909	894	872	863	887	867	904	898	925	920	958	953
31	---	---	872	862	---	---	906	898	925	922	---	---
MONTH	916	883	---	---	896	862	911	869	---	---	967	918

## 11126400 SANTA YNEZ RIVER AT HIGHWAY 154, NEAR SANTA YNEZ, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.5	18.0	18.0	17.0	17.0	16.0	16.0	14.5	16.0	14.5	16.0	13.5
2	19.0	17.5	18.0	17.5	17.0	16.0	16.5	14.5	16.0	14.0	16.5	13.5
3	19.0	17.0	18.0	17.0	17.0	16.0	16.5	14.5	16.0	13.0	16.0	13.5
4	19.0	17.0	18.0	17.0	17.0	16.0	16.5	14.5	15.5	13.0	15.5	14.0
5	---	---	18.0	17.0	17.0	16.0	---	---	15.5	13.0	17.0	14.0
6	---	---	17.5	16.5	---	---	---	---	15.5	13.0	17.0	13.5
7	---	---	18.0	17.0	17.0	16.0	---	---	15.0	13.0	17.0	13.5
8	---	---	18.0	17.0	17.0	15.5	---	---	16.0	14.0	17.0	13.5
9	---	---	17.5	17.0	17.0	15.5	---	---	15.5	13.0	17.0	14.0
10	---	---	17.5	17.0	16.5	15.5	---	---	15.5	14.0	17.5	14.0
11	---	---	18.0	16.5	17.0	16.0	---	---	17.0	14.5	17.5	14.0
12	---	---	17.5	16.5	16.5	15.0	---	---	16.5	15.5	17.5	14.5
13	---	---	18.0	16.5	17.0	15.5	---	---	16.5	15.0	17.0	15.5
14	---	---	18.0	17.0	17.0	16.0	---	---	17.0	15.0	17.5	15.0
15	---	---	18.0	16.5	17.0	16.0	---	---	16.0	14.5	17.0	15.5
16	---	---	18.0	16.5	16.5	16.0	---	---	16.0	14.5	16.5	15.0
17	---	---	17.5	16.5	17.5	16.5	---	---	15.5	14.0	16.5	14.5
18	---	---	17.5	17.0	17.0	15.5	---	---	16.5	13.5	16.5	14.5
19	---	---	17.5	16.5	16.5	15.0	---	---	15.5	13.0	17.0	14.0
20	---	---	17.5	16.5	---	---	---	---	16.5	13.5	17.0	14.5
21	---	---	17.5	16.5	---	---	---	---	16.5	13.0	17.5	14.5
22	---	---	17.0	16.0	---	---	---	---	16.5	13.5	17.5	14.5
23	---	---	17.5	16.5	---	---	---	---	15.5	13.5	17.5	15.0
24	18.5	17.5	17.0	16.0	---	---	---	---	15.0	14.0	17.0	15.0
25	18.0	17.0	17.0	15.5	16.0	14.5	17.5	15.5	16.0	14.0	18.0	14.5
26	18.0	17.5	17.0	15.5	16.5	15.0	17.5	16.0	16.0	14.0	18.0	14.5
27	18.0	17.5	17.0	16.0	17.0	15.0	17.0	16.0	16.5	14.0	17.5	15.0
28	18.0	17.0	17.0	14.5	16.0	15.0	---	---	16.5	13.5	17.5	14.5
29	18.0	17.0	17.0	15.5	16.5	15.0	16.0	14.0	---	---	17.5	14.5
30	18.0	17.0	17.0	16.0	16.0	15.0	16.5	14.0	---	---	17.0	14.0
31	18.0	17.0	---	---	16.5	15.0	16.5	14.5	---	---	17.5	14.5
MONTH	---	---	18.0	14.5	---	---	---	---	17.0	13.0	18.0	13.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17.0	14.5	17.0	15.0	22.0	16.5	18.5	17.5	19.5	18.5	21.5	20.5
2	17.0	14.5	16.0	15.5	21.5	16.5	19.0	17.5	19.5	18.5	21.5	21.0
3	17.5	14.0	17.0	15.5	21.5	17.5	19.5	17.5	19.5	18.5	21.5	21.0
4	16.5	14.0	18.5	16.0	20.0	17.5	19.5	17.5	20.5	18.5	21.5	21.0
5	17.5	14.0	18.0	16.0	19.0	17.5	19.5	17.5	20.5	18.5	21.5	21.0
6	17.5	14.0	17.5	16.0	18.5	17.0	19.0	17.5	21.5	18.5	21.5	21.0
7	17.5	14.0	17.5	15.5	19.0	17.0	19.5	17.5	20.5	19.0	21.0	20.5
8	17.5	14.0	18.0	16.0	19.0	17.0	19.0	17.5	20.0	18.5	21.0	20.5
9	18.0	14.5	18.0	15.5	19.0	17.0	19.0	17.5	20.0	18.5	21.0	20.5
10	18.0	15.5	18.0	15.5	18.0	17.0	19.0	17.5	19.5	18.5	21.5	20.5
11	17.5	15.5	18.0	15.5	18.5	17.0	18.5	17.5	20.0	18.5	22.0	20.5
12	17.5	15.5	---	---	19.0	17.0	19.0	17.5	20.0	18.5	22.0	20.5
13	17.0	15.5	20.5	16.0	19.0	17.0	19.5	17.5	20.0	19.0	22.0	20.5
14	17.0	15.5	18.0	16.0	18.5	17.0	19.0	18.0	20.5	19.0	21.5	20.5
15	18.0	15.0	20.5	16.0	19.5	16.5	19.5	18.0	20.5	19.5	21.5	20.5
16	18.0	14.5	20.5	16.0	20.0	17.0	19.0	18.0	20.5	19.5	21.0	20.0
17	18.0	15.5	19.5	16.0	21.0	17.0	19.5	18.0	---	---	21.0	20.0
18	17.5	15.0	20.5	15.5	20.5	17.5	19.0	18.0	21.0	20.0	21.5	19.5
19	17.0	14.5	21.0	15.0	21.0	17.5	19.0	18.0	21.5	20.0	21.5	20.0
20	17.0	15.0	21.5	15.5	20.5	17.5	19.5	18.5	21.5	20.0	21.5	20.5
21	17.0	15.5	21.5	15.5	20.5	17.5	19.5	18.5	21.5	20.5	21.5	20.5
22	17.0	15.0	21.5	16.5	21.5	17.5	20.0	18.5	21.5	20.5	21.5	20.5
23	17.5	15.0	21.0	16.5	21.0	17.5	20.0	18.5	21.5	20.5	21.5	21.0
24	17.0	14.5	20.5	16.5	22.0	17.5	20.0	18.5	21.5	20.5	21.5	21.0
25	17.0	15.5	20.0	17.0	20.5	17.0	20.0	19.0	21.5	20.5	21.5	21.0
26	17.5	15.0	21.0	17.0	19.5	17.5	20.0	19.0	21.5	20.5	21.0	21.0
27	17.5	15.0	22.0	16.0	21.0	17.5	20.0	19.0	21.5	20.5	21.5	21.0
28	17.5	15.5	22.5	16.5	19.5	18.0	20.0	19.0	21.5	20.5	21.5	21.0
29	17.5	14.5	21.5	17.0	19.0	18.0	19.5	19.0	21.5	21.0	21.5	21.0
30	17.5	15.0	21.0	17.0	19.0	17.5	20.0	18.5	21.5	21.0	21.5	21.0
31	---	---	21.5	16.5	---	---	20.0	18.5	21.5	21.0	---	---
MONTH	18.0	14.0	22.5	15.0	22.0	16.5	20.0	17.5	---	---	22.0	19.5

## 11126400 SANTA YNEZ RIVER AT HIGHWAY 154, NEAR SANTA YNEZ, CA—Continued

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

Date	Time	Depth at sample location, feet (81903)	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)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
OCT							
25...*	1515	.70	5.8	7.7	827	17.5	.60
25...*	1517	.80	5.9	7.7	827	17.5	1.20
25...*	1519	.80	6.0	7.7	803	17.5	1.80
25...*	1520	1.00	5.9	7.7	805	17.5	2.40
25...*	1521	.80	5.9	7.7	805	17.5	3.00
25...*	1522	.90	6.0	7.7	804	17.5	3.60
25...*	1524	.90	6.1	7.7	804	17.5	4.20
25...*	1526	.80	6.1	7.7	804	17.5	4.80
25...*	1528	.70	6.2	7.7	803	17.5	5.60
25...*	1530	.70	6.2	7.7	804	17.5	6.20

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

Date	Time	Depth at sample location, feet (81903)	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 unfltrd uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
MAY									
12...*	1247	.32	741	6.5	73	7.8	838	19.0	.20
12...*	1248	.58	741	6.6	74	7.8	837	19.0	2.20
12...*	1249	1.22	741	7.1	79	7.8	846	19.5	4.20
12...*	1250	1.50	741	7.1	80	7.8	849	19.5	6.20
12...*	1251	1.29	741	7.1	80	7.8	846	19.5	8.20
12...*	1252	1.23	741	7.0	78	7.8	846	19.5	10.2
12...*	1253	1.98	741	6.8	75	7.8	850	19.0	12.2
12...*	1254	1.02	741	6.3	70	7.7	850	19.0	14.2
12...*	1255	.83	741	6.1	68	7.7	851	19.0	16.2

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

Date	Time	Depth at sample location, feet (81903)	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 unfltrd uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
JUL									
03...*	1240	1.41	741	2.5	29	--	887	20.5	2.00
03...*	1241	.82	741	3.9	46	7.6	840	22.0	3.00
03...*	1242	1.10	741	4.1	49	7.6	854	22.0	5.00
03...*	1243	1.33	741	4.2	49	7.6	868	22.0	7.00
03...*	1244	1.53	741	4.3	51	7.6	870	22.0	9.00

\* Instantaneous discharge at time of cross-sectional measurement: unknown.

## 11128250 ALAMO PINTADO CREEK NEAR SOLVANG, CA

LOCATION.—Lat 34° 37' 06", long 120° 07' 11", in NW 1/4 NW 1/4 sec.11, T.6 N., R.31 W., [Santa Barbara County](#), Hydrologic Unit 18060010, on right bank, at downstream side of bridge on Alamo Pintado Road, and 1.7 mi northeast of Solvang.

DRAINAGE AREA.—29.4 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1970 to September 1985, October 1989 to September 1992, October 1994 to current year. Records prior to October 1970 in files of Santa Barbara County Flood Control District.

CHEMICAL DATA: Water year 1997.

REVISED RECORDS.—WDR CA-98-1: 1997.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 540.49 ft above NGVD of 1929, Santa Barbara County datum.

REMARKS.—Records poor. No regulation upstream from station. Pumping from wells along stream for irrigation. See schematic diagram of [Santa Ynez River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,680 ft<sup>3</sup>/s, Feb. 3, 1998, gage height, 11.69 ft, from rating curve extended above 1,050 ft<sup>3</sup>/s; no flow part of most years.

EXTREMES FOR OUTSIDE PERIOD OF RECORD.—Flood of Jan. 25, 1969, reached a stage of 10.32 ft, from information provided by Santa Barbara County Flood Control District.

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. 19	2235	36	3.25

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.30	e0.31	0.43	0.52	e0.78	e0.56	e0.59	e0.42	0.21	e0.12	e0.09	e0.08
2	e0.28	e0.32	0.43	0.52	e0.77	e0.56	e0.59	e0.40	0.21	e0.12	e0.09	e0.06
3	e0.32	e0.32	0.42	0.50	e0.76	e0.56	e0.59	e0.87	0.20	e0.12	e0.11	e0.06
4	e0.34	e0.32	0.43	0.51	e0.73	e0.56	e0.60	e0.50	0.21	e0.12	e0.09	e0.06
5	e0.35	e0.34	0.43	0.56	e0.68	e0.63	e0.60	e0.46	0.23	e0.11	e0.09	e0.10
6	e0.35	e0.33	0.43	0.54	e0.75	e0.58	e0.65	e0.46	0.24	e0.13	e0.08	e0.12
7	e0.31	e0.55	0.40	e0.65	e0.74	e0.52	e0.69	e0.44	0.23	e0.12	e0.09	e0.12
8	e0.34	2.7	0.37	e0.76	e0.72	e0.50	e0.63	e0.45	0.22	e0.12	e0.07	e0.12
9	e0.34	1.3	0.37	e0.78	e0.72	e0.49	e0.66	e0.45	0.22	e0.12	e0.07	e0.12
10	e0.31	0.82	0.38	e0.79	e1.0	e0.45	e0.73	e0.45	0.22	e0.12	e0.09	e0.09
11	e0.29	0.70	0.40	e0.80	e1.6	e0.40	e0.68	e0.41	0.21	e0.13	e0.09	e0.07
12	e0.32	0.65	0.40	e0.82	e2.8	e0.36	e0.70	e0.39	0.21	e0.12	e0.10	e0.10
13	e0.29	0.68	0.38	e0.85	e2.0	e0.38	e2.3	e0.37	0.20	e0.11	e0.09	e0.10
14	e0.31	0.62	0.36	e0.86	e1.3	e0.39	e3.7	e0.36	0.18	e0.10	e0.08	e0.10
15	e0.27	0.62	0.37	e0.82	e1.2	e6.3	e1.6	e0.35	0.20	e0.11	e0.08	e0.10
16	e0.31	0.66	0.86	e0.82	e1.1	e1.1	e0.84	e0.35	0.19	e0.11	e0.09	e0.10
17	e0.29	0.62	0.78	e0.84	e1.0	e0.70	e0.74	e0.36	0.20	e0.10	e0.10	e0.10
18	e0.32	0.62	0.58	e0.84	e0.87	e0.55	e0.74	e0.36	0.21	e0.09	e0.10	e0.10
19	e0.32	0.60	3.4	e0.83	e0.82	e0.48	e0.72	e0.33	0.21	e0.07	e0.09	e0.10
20	e0.32	0.58	6.5	e0.84	e0.67	e0.43	e0.68	e0.34	0.20	e0.09	e0.05	e0.10
21	e0.33	0.53	2.2	e0.80	e0.63	e0.45	e0.65	e0.29	0.20	e0.09	e0.06	e0.10
22	e0.34	0.57	1.3	e0.81	e0.61	e0.45	e0.63	e0.25	0.19	e0.10	e0.05	e0.10
23	e0.34	0.55	0.60	e0.79	e0.58	e0.45	e0.64	0.22	0.20	e0.09	e0.04	0.09
24	e0.33	0.58	0.55	e0.79	e0.64	e0.45	e0.58	0.23	0.17	e0.09	e0.05	0.10
25	e0.32	0.56	0.48	e0.79	e1.3	e0.45	e0.58	0.23	0.16	e0.11	e0.04	0.10
26	e0.32	0.51	0.46	e0.80	e0.58	e0.48	e0.55	0.22	0.14	e0.12	e0.05	0.10
27	e0.33	0.47	0.45	e0.82	e0.68	e0.50	e0.54	0.21	e0.14	e0.09	e0.06	0.10
28	e0.33	0.43	0.77	e0.79	e0.56	e0.45	e0.50	0.20	e0.12	e0.11	e0.04	0.11
29	e0.30	0.43	0.64	e0.85	---	e0.49	e0.51	0.20	e0.12	e0.10	e0.04	0.10
30	e0.28	0.46	0.54	e0.83	---	e0.50	e0.45	0.21	e0.14	e0.09	e0.06	0.10
31	e0.28	---	0.57	e0.87	---	e0.47	---	0.21	---	e0.08	e0.08	---
TOTAL	9.78	18.75	26.68	23.39	26.59	21.64	24.66	10.99	5.78	3.30	2.31	2.90
MEAN	0.32	0.62	0.86	0.75	0.95	0.70	0.82	0.35	0.19	0.11	0.075	0.097
MAX	0.35	2.7	6.5	0.87	2.8	6.3	3.7	0.87	0.24	0.13	0.11	0.12
MIN	0.27	0.31	0.36	0.50	0.56	0.36	0.45	0.20	0.12	0.07	0.04	0.06
AC-FT	19	37	53	46	53	43	49	22	11	6.5	4.6	5.8

e Estimated.

## 11128250 ALAMO PINTADO CREEK NEAR SOLVANG, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.47	0.66	0.79	3.81	12.3	8.05	2.25	1.09	0.81	0.48	0.56	0.42
MAX	3.06	5.73	3.31	56.8	219	44.8	22.9	7.62	4.83	3.29	3.38	3.53
(WY)	1999	1996	1999	1995	1998	1995	1998	1998	1995	1999	1998	1998
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1971	1971	1973	1971	1971	1971	1971	1971	1971	1971	1971	1971

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1971 - 2003	
ANNUAL TOTAL	400.89		176.77			
ANNUAL MEAN	1.10		0.48		2.59	
HIGHEST ANNUAL MEAN					25.3	
LOWEST ANNUAL MEAN					0.000	
HIGHEST DAILY MEAN	6.5	Dec 20	6.5	Dec 20	1150	Feb 3 1998
LOWEST DAILY MEAN	0.23	Sep 25	0.04	Aug 23	0.00	Oct 1 1970
ANNUAL SEVEN-DAY MINIMUM	0.29	Sep 24	0.05	Aug 23	0.00	Oct 1 1970
MAXIMUM PEAK FLOW			36	Dec 19	3680	Feb 3 1998
MAXIMUM PEAK STAGE			3.25	Dec 19	11.69	Feb 3 1998
ANNUAL RUNOFF (AC-FT)	795		351		1880	
10 PERCENT EXCEEDS	2.0		0.82		3.2	
50 PERCENT EXCEEDS	0.99		0.37		0.00	
90 PERCENT EXCEEDS	0.33		0.09		0.00	

## 11128300 ALISAL RESERVOIR NEAR SOLVANG, CA

LOCATION.—Lat 34° 32' 56", long 120° 07' 45", in NE 1/4 NW 1/4 sec.4, T.5 N., R.31 W., Santa Barbara County, Hydrologic Unit 18060010, in cove on right bank, 0.4 mi upstream from reservoir spillway, and 3 mi south of Solvang.

DRAINAGE AREA.—7.83 mi<sup>2</sup>.

PERIOD OF RECORD.—December 1971 to current year. Prior to October 1985, only monthend elevations and contents published.

GAGE.—Water-stage recorder. Datum of gage is NGVD of 1929.

REMARKS.—Lake is formed by earthfill dam. Storage began Dec. 19, 1970. Usable capacity, 2,260 acre-ft, between bottom of outlet gate at elevation 555.70 ft, and crest of spillway at elevation 599.88 ft. Dead storage, 110 acre-ft. Inflow must total 150 acre-ft during any one month between November and June in order to store flows for that water year. Records, including extremes, represent total contents at 2400 hours. See schematic diagram of [Santa Ynez River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum contents, 2,800 acre-ft, Mar. 5, 2001, elevation, 604.57 ft; minimum, 748 acre-ft, Nov. 8–10, 1972, elevation, 577.15 ft.

EXTREMES FOR CURRENT YEAR.—Maximum contents, 2,440 acre-ft, Mar. 15, maximum elevation, 600.71 ft, Mar. 15; minimum contents, 1,650 acre-ft, Dec. 11–13, minimum elevation, 591.40 ft, Dec. 14.

Capacity table (elevation in feet, and contents, in acre-feet)  
(Based on data provided by Santa Barbara County Flood Control District in 1971)

	590	1,540	595	1,940	600	2,380	605	2,840				
RESERVOIR STORAGE, ACRE FEET, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003												
DAILY OBSERVATION AT 2400 HOURS												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1740	1660	1670	2070	2090	2270	2380	2370	2370	2340	2260	2170
2	e1730	1660	1670	2070	2090	2280	2380	2380	2370	2340	2250	2170
3	e1730	1660	1660	2070	2090	2280	2380	2400	2370	2340	2250	2170
4	e1730	1660	1660	2080	2080	2280	2380	2390	2370	2340	2250	2160
5	e1730	1660	1660	2080	2080	2280	2380	2380	2370	2340	2250	2160
6	e1720	1660	1660	2080	2080	2290	2380	2380	2370	2340	2240	2160
7	e1720	1670	1660	2080	2080	2290	2370	2380	2370	2330	2240	2150
8	e1720	1680	1660	2080	2080	2290	2370	2380	2370	2330	2240	2150
9	e1710	1680	1660	2090	2080	2290	2370	2380	2370	2330	2230	2150
10	e1710	1680	1660	2090	2080	2290	2370	2380	2370	2320	2230	2150
11	e1710	1680	1650	2090	2090	2290	2370	2380	2370	2320	2230	2140
12	e1710	1680	1650	2090	2110	2290	2380	2380	2370	2320	2230	2140
13	e1700	1680	1650	2090	2170	2290	2390	2380	2370	2320	2220	2140
14	e1700	1680	1660	2090	2200	2290	2390	2370	2370	2310	2220	2140
15	e1700	1680	1660	2090	2210	2440	2380	2370	2370	2310	2220	2140
16	e1690	1680	1700	2090	2220	2400	2380	2370	2370	2310	2220	2130
17	e1690	1680	1700	2090	2220	2390	2380	2370	2370	2300	2210	2130
18	e1690	1680	1700	2090	2230	2390	2380	2370	2370	2300	2210	2130
19	1690	1680	1760	2090	2230	2380	2380	2370	2360	2300	2210	2130
20	1690	1670	1910	2090	2240	2380	2380	2370	2360	2290	2200	2130
21	1690	1670	1980	2090	2240	2380	2380	2370	2360	2290	2200	2130
22	1680	1670	2010	2090	2240	2380	2380	2370	2360	2290	2200	2120
23	1680	1670	2030	2090	2250	2380	2380	2370	2360	2290	2200	2120
24	1680	1670	2030	2090	2260	2380	2370	2370	2360	2280	2200	2120
25	1680	1670	2040	2090	2260	2380	2370	2370	2350	2280	2190	2110
26	1670	1670	2050	2090	2260	2380	2370	2370	2350	2280	2190	2110
27	1670	1670	2050	2090	2270	2380	2370	2370	2350	2280	2180	2110
28	1670	1670	2060	2090	2270	2370	2370	2370	2350	2270	2180	2110
29	1670	1670	2060	2090	---	2370	2370	2370	2350	2270	2180	2110
30	1670	1670	2070	2090	---	2380	2370	2370	2350	2260	2180	2100
31	1670	---	2070	2090	---	2380	---	2370	---	2260	2180	---
MAX	1740	1680	2070	2090	2270	2440	2390	2400	2370	2340	2260	2170
MIN	1670	1660	1650	2070	2080	2270	2370	2370	2350	2260	2180	2100
a	591.57	591.57	596.54	596.74	598.80	599.96	599.91	599.86	599.62	598.68	597.74	596.92
b	-70	+10	+400	+20	+180	+110	-10	0	-20	-80	-80	-70

e Estimated.

a Elevation, in feet, at end of month.

b Change in contents, in acre-feet.



## 11128500 SANTA YNEZ RIVER AT SOLVANG, CA

LOCATION.—Lat 34° 35' 06", long 120° 08' 37", in San Carlos de Jonata Grant, [Santa Barbara County](#), Hydrologic Unit 18060010, near left bank, on downstream end of pier of Alisal Road Bridge, 25 ft downstream from Alisal Creek, 0.8 mi southwest of Solvang, and 10 mi downstream from Lake Cachuma.

DRAINAGE AREA.—579 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1928 to November 1936, June 1937 to November 1940 (irrigation seasons only), October 1946 to September 1999, July 2002 to current year.

REVISED RECORDS.—WSP 2128: Drainage area.

GAGE.—Water-stage recorder and crest-stage gage. Datum of gage is 357.43 ft above NGVD of 1929. Various datums used during period of record. July 29 to Sept. 30, 1953, auxiliary water-stage recorder 750 ft upstream at different datum. Oct. 1, 1953, to Sept. 30, 1968, water-stage recorder at datum 7.00 ft higher. Oct. 1, 1968, to Sept. 30, 1988, water-stage recorder at datum 10.00 ft higher. Oct. 1, 1988, to Aug. 6, 1998, water-stage recorder at datum 5.00 ft. higher. Since July 12, 2002, supplemental gage 0.2 mi downstream at different datum.

REMARKS.—Records fair. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952, by Lake Cachuma (stations 11121000, 11122000, and 11125500, respectively). Additional water may be added by releases from Alisal Reservoir (station 11128300). Water diverted out of basin from Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water for irrigation pumped from wells along banks of river in valley upstream. See schematic diagram of [Santa Ynez River Basin](#).

EXTREMES FOR PERIOD OF RECORD (water years 1928–36, 1946–99, 2002 to current year).—Maximum discharge, 82,000 ft<sup>3</sup>/s, Jan. 25, 1969, estimated, on basis of discharge measurements up to 81,000 ft<sup>3</sup>/s for Santa Ynez River near Buellton, gage height, 17.1 ft, from floodmark; no flow for several months in many years.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	10	11	11	9.9	12	11	7.7	2.7	0.24	0.00	0.00
2	26	8.0	8.9	11	9.6	12	11	9.7	2.4	0.09	0.00	0.00
3	26	6.6	7.1	11	8.2	11	10	46	2.3	0.00	0.00	0.00
4	24	4.8	6.1	12	8.6	13	9.9	45	2.0	0.00	0.00	0.00
5	22	3.9	6.5	11	8.8	12	10	27	2.2	0.00	0.00	0.00
6	23	2.6	7.5	9.7	8.6	12	9.9	18	2.4	0.00	0.00	0.00
7	24	4.5	7.2	9.8	9.6	11	9.9	15	2.8	0.00	0.00	0.00
8	29	15	7.9	11	9.1	11	9.1	11	3.2	0.00	0.00	0.00
9	33	12	6.3	11	9.1	9.3	8.7	8.3	2.7	0.00	0.00	0.00
10	35	12	6.1	10	9.5	11	8.6	6.7	2.3	0.00	0.00	0.00
11	36	9.9	6.4	11	14	11	8.3	5.5	2.6	0.00	0.00	0.00
12	38	8.5	5.9	11	25	9.9	8.9	5.8	2.4	0.00	0.00	0.00
13	36	8.2	6.4	11	30	10	30	6.4	2.4	0.00	0.00	0.00
14	37	8.7	7.1	11	22	11	48	6.9	1.6	0.00	0.00	0.00
15	32	9.3	8.3	11	16	237	33	8.0	1.6	0.00	0.00	0.00
16	27	8.9	21	11	13	93	26	9.0	1.9	0.00	0.00	0.00
17	24	8.8	25	12	12	45	22	7.8	1.7	0.00	0.00	0.00
18	23	8.6	21	12	12	32	20	5.5	1.3	0.00	0.00	0.00
19	22	8.1	93	11	12	26	16	5.6	1.4	0.00	0.00	0.00
20	22	7.7	151	11	11	23	15	4.7	1.6	0.00	0.00	0.00
21	22	6.4	69	9.8	10	19	14	4.4	0.74	0.00	0.00	0.00
22	20	5.2	63	10	10	15	13	5.2	0.60	0.00	0.00	0.00
23	17	5.8	27	10	9.8	12	13	5.1	0.74	0.00	0.00	0.00
24	15	6.5	21	9.9	12	12	13	4.2	0.57	0.00	0.00	0.00
25	13	7.3	17	10	17	11	14	4.4	0.52	0.00	0.00	0.00
26	11	7.2	14	10	12	11	13	4.6	0.56	0.00	0.00	0.00
27	12	9.9	12	10	13	11	12	4.4	0.59	0.00	0.00	0.00
28	11	10	12	11	13	11	11	4.0	0.53	0.00	0.00	0.00
29	11	9.0	13	11	---	9.5	11	3.3	0.46	0.00	0.00	0.00
30	12	9.8	12	9.7	---	9.4	9.1	2.7	0.36	0.00	0.00	0.00
31	12	---	12	9.9	---	10	---	2.8	---	0.00	0.00	---
TOTAL	722	243.2	691.7	330.8	354.8	743.1	448.4	304.7	49.17	0.33	0.00	0.00
MEAN	23.3	8.11	22.3	10.7	12.7	24.0	14.9	9.83	1.64	0.011	0.000	0.000
MAX	38	15	151	12	30	237	48	46	3.2	0.24	0.00	0.00
MIN	11	2.6	5.9	9.7	8.2	9.3	8.3	2.7	0.36	0.00	0.00	0.00
AC-FT	1430	482	1370	656	704	1470	889	604	98	0.7	0.00	0.00

## SANTA YNEZ RIVER BASIN

## 11128500 SANTA YNEZ RIVER AT SOLVANG, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1950, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.92	7.04	32.8	62.0	176	52.4	48.1	11.7	8.56	4.00	2.41	2.51
MAX	6.69	34.9	257	211	1240	164	375	59.3	36.8	17.0	6.36	5.69
(WY)	1939	1947	1932	1935	1932	1935	1935	1935	1938	1938	1938	1938
MIN	.25	2.40	4.20	4.87	5.90	4.95	3.51	2.36	1.27	.21	.000	.000
(WY)	1950	1930	1930	1948	1948	1950	1931	1948	1948	1949	1948	1948

## SUMMARY STATISTICS

## WATER YEARS 1929 - 1950

ANNUAL TOTAL	
ANNUAL MEAN	32.9
HIGHEST ANNUAL MEAN	152 1932
LOWEST ANNUAL MEAN	3.31 1948
HIGHEST DAILY MEAN	12300 Feb 9 1932
LOWEST DAILY MEAN	.00 Jul 15 1931
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 15 1931
MAXIMUM PEAK FLOW	18700 Feb 9 1932
ANNUAL RUNOFF (AC-FT)	23800
10 PERCENT EXCEEDS	35
50 PERCENT EXCEEDS	5.3
90 PERCENT EXCEEDS	1.5

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2003, BY WATER YEAR (WY)

MEAN	6.61	4.66	20.6	235	483	404	159	57.1	14.9	6.73	7.94	7.00
MAX	88.7	96.2	263	3572	7445	4029	1258	956	243	57.4	64.8	38.3
(WY)	1992	1966	1984	1995	1998	1983	1983	1998	1998	1998	2002	1994
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1952	1952	1963	1976	1991	1989	1961	1961	1961	1957	1954	1954

## SUMMARY STATISTICS

## FOR 2003 WATER YEAR

## WATER YEARS 1952 - 2003

ANNUAL TOTAL	3888.20	
ANNUAL MEAN	10.7	115
HIGHEST ANNUAL MEAN		905 1998
LOWEST ANNUAL MEAN		0.86 1961
HIGHEST DAILY MEAN	237 Mar 15	40000 Jan 25 1969
LOWEST DAILY MEAN	0.00 Jul 3	0.00 Oct 1 1951
ANNUAL SEVEN-DAY MINIMUM	0.00 Jul 3	0.00 Oct 1 1951
MAXIMUM PEAK FLOW	1020 Dec 19	82000 Jan 25 1969
MAXIMUM PEAK STAGE	6.10 Dec 19	17.10 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	7710	83590
10 PERCENT EXCEEDS	23	75
50 PERCENT EXCEEDS	8.8	2.4
90 PERCENT EXCEEDS	0.00	0.00



## SANTA YNEZ RIVER BASIN

11128500 SANTA YNEZ RIVER AT SOLVANG, CA—Continued

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

Date	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Carbon- ate, wat flt incrm. titr., field, mg/L (00452)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)
NOV								
08...	--	--	--	--	--	--	--	--
DEC								
10...	--	--	--	--	--	--	--	--
JAN								
16...	--	--	--	--	--	--	--	--
FEB								
21...	--	--	--	--	--	--	--	--
MAR								
07...	--	--	--	--	--	--	--	--
APR								
02...	284	4	45.0	.36	25.9	227	637	.96
MAY								
13...	--	--	--	--	--	--	--	--
JUN								
06...	--	--	--	--	--	--	--	--

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)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
NOV								
08...	646	--	--	--	--	--	--	--
DEC								
10...	690	--	--	--	--	--	--	--
JAN								
16...	682	--	--	--	--	--	--	--
FEB								
21...	704	--	--	--	--	--	--	--
MAR								
07...	700	--	--	--	--	--	--	--
APR								
02...	709	<.04	.07	<.008	.03	250	<10	e1.1
MAY								
13...	708	--	--	--	--	--	--	--
JUN								
06...	725	--	--	--	--	--	--	--

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

## 11128500 SANTA YNEZ RIVER AT SOLVANG, CA—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	3.9	2.1	---	---	---	---	15.4	8.4	17.1	7.6	15.0	7.5
2	3.5	2.1	---	---	---	---	16.6	7.5	16.2	8.0	15.0	7.4
3	3.5	2.0	---	---	---	---	17.3	8.3	---	---	15.2	7.5
4	3.4	2.1	---	---	---	---	17.0	8.7	---	---	14.5	7.5
5	3.0	2.0	---	---	---	---	17.7	9.3	16.2	7.9	14.9	7.1
6	2.9	1.9	---	---	---	---	18.3	9.4	16.5	7.8	14.7	6.9
7	2.5	1.9	---	---	18.1	6.2	18.2	9.1	16.0	7.9	15.1	6.9
8	2.7	1.7	---	---	17.9	6.3	16.4	8.4	16.6	7.9	14.9	6.7
9	2.5	1.9	---	---	18.2	6.0	16.3	8.2	16.7	7.8	15.1	6.6
10	2.4	1.8	---	---	17.6	6.1	14.8	6.6	16.7	7.6	15.1	6.3
11	2.7	1.6	---	---	17.2	6.1	17.0	7.6	17.2	7.0	14.8	6.1
12	3.2	2.0	---	---	17.2	6.3	17.1	7.5	12.9	6.9	14.8	5.9
13	3.2	2.3	---	---	17.4	6.0	16.8	6.5	14.9	8.2	15.0	5.8
14	3.2	2.4	13.7	5.5	16.9	5.8	14.4	5.7	15.4	8.3	15.0	5.6
15	3.1	2.3	14.0	5.9	16.6	5.9	---	---	15.5	8.0	9.4	5.8
16	2.4	2.0	14.5	5.8	---	---	17.1	8.3	15.7	8.4	9.6	7.6
17	2.3	1.8	14.3	5.9	---	---	17.2	7.7	16.1	8.4	10.2	7.8
18	2.4	1.8	14.7	6.1	---	---	17.2	7.9	15.9	8.5	10.8	7.5
19	2.6	1.9	14.8	5.9	---	---	17.0	7.6	15.7	8.6	10.6	7.2
20	2.2	1.6	14.7	5.7	11.6	2.3	17.0	7.4	15.3	8.2	11.0	6.8
21	2.5	1.4	15.2	5.1	9.1	3.1	17.1	7.2	15.1	7.4	11.1	6.5
22	---	---	16.0	4.9	7.9	4.3	15.6	7.0	15.1	7.4	11.4	6.3
23	---	---	16.2	4.7	8.2	5.4	16.6	7.5	15.3	7.4	12.3	6.3
24	---	---	16.1	5.2	11.9	7.4	17.0	7.4	13.6	7.5	12.4	6.4
25	12.0	6.6	15.8	5.5	10.9	7.0	16.4	7.3	14.6	7.3	12.6	6.1
26	12.7	6.4	16.2	5.6	9.6	6.6	16.7	7.5	14.9	7.4	12.3	6.2
27	13.0	6.2	---	---	12.1	6.5	16.6	7.4	14.2	7.4	12.6	6.4
28	12.8	6.1	15.2	6.7	14.2	9.1	16.2	7.3	14.9	7.6	12.8	6.1
29	12.4	6.0	14.6	6.4	14.7	8.9	16.4	7.5	---	---	13.1	6.0
30	---	---	16.0	6.6	15.2	8.8	16.4	7.4	---	---	12.8	5.8
31	---	---	---	---	15.0	8.2	16.4	7.2	---	---	13.0	5.5
MONTH	---	---	---	---	---	---	---	---	---	---	15.2	5.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.6	5.9	14.9	5.6	14.6	3.9	---	---	---	---	---	---
2	13.0	6.3	11.4	5.7	14.9	3.3	---	---	---	---	---	---
3	13.3	6.0	12.8	5.9	15.1	2.8	---	---	---	---	---	---
4	14.0	6.2	12.9	5.9	14.7	2.7	---	---	---	---	---	---
5	13.7	6.3	13.0	5.4	15.2	3.2	---	---	---	---	---	---
6	13.7	5.8	13.3	5.2	13.7	3.1	---	---	---	---	---	---
7	13.2	5.5	13.0	5.4	15.2	3.6	---	---	---	---	---	---
8	13.6	5.3	13.1	5.4	14.6	3.1	---	---	---	---	---	---
9	13.9	5.2	14.4	5.2	14.9	3.3	---	---	---	---	---	---
10	14.0	5.3	14.7	5.7	13.7	3.1	---	---	---	---	---	---
11	14.1	4.7	14.3	5.6	14.7	3.3	---	---	---	---	---	---
12	15.2	6.0	14.0	5.5	15.0	3.6	---	---	---	---	---	---
13	13.1	6.1	14.2	5.4	14.3	3.2	---	---	---	---	---	---
14	13.3	6.9	14.1	5.4	14.1	2.8	---	---	---	---	---	---
15	14.1	7.0	---	---	14.4	2.7	---	---	---	---	---	---
16	14.4	6.7	---	---	15.0	2.7	---	---	---	---	---	---
17	14.5	6.7	14.5	5.3	15.0	2.4	---	---	---	---	---	---
18	15.0	6.7	14.3	5.4	15.6	2.5	---	---	---	---	---	---
19	15.1	6.7	13.8	5.1	15.5	2.3	---	---	---	---	---	---
20	15.1	6.5	14.0	4.8	15.7	2.3	---	---	---	---	---	---
21	15.7	6.7	14.5	4.7	16.6	2.4	---	---	---	---	---	---
22	---	---	14.6	4.6	16.3	2.8	---	---	---	---	---	---
23	16.1	7.0	14.4	4.6	16.8	2.5	---	---	---	---	---	---
24	15.7	5.9	14.9	4.6	17.5	2.5	---	---	---	---	---	---
25	15.6	5.8	14.5	4.2	16.5	2.3	---	---	---	---	---	---
26	15.3	6.0	13.9	4.0	16.8	2.5	---	---	---	---	---	---
27	15.2	5.7	13.5	3.5	15.6	2.4	---	---	---	---	---	---
28	14.3	5.8	13.7	3.5	16.1	2.0	---	---	---	---	---	---
29	14.8	5.9	14.3	3.8	15.5	2.1	---	---	---	---	---	---
30	15.0	5.5	15.4	4.0	16.1	2.1	---	---	---	---	---	---
31	---	---	14.6	3.9	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	17.5	2.0	---	---	---	---	---	---



## 11128500 SANTA YNEZ RIVER AT SOLVANG, CA—Continued

## TEMPERATURE, WATER, DEGREES CELSIUS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.0	18.5	---	---	---	---	16.5	11.5	17.0	13.0	19.0	12.5
2	19.0	18.0	---	---	---	---	17.0	11.5	17.5	11.5	19.0	12.5
3	19.0	18.0	---	---	---	---	17.0	12.5	17.5	10.5	17.0	12.5
4	19.0	18.0	---	---	---	---	17.5	12.5	17.0	11.0	16.5	13.0
5	19.0	18.5	---	---	---	---	17.5	12.5	17.5	10.5	19.5	12.0
6	19.0	18.0	---	---	---	---	17.0	12.0	16.5	10.5	19.5	13.0
7	18.5	18.5	---	---	18.0	14.5	17.5	12.0	14.5	11.0	20.0	13.0
8	19.0	18.5	---	---	17.5	14.0	16.0	12.0	17.0	11.0	20.0	12.5
9	18.5	18.5	---	---	17.5	14.5	16.5	13.0	17.0	10.0	20.0	13.0
10	18.5	18.5	---	---	17.0	14.0	16.0	14.0	15.0	10.5	20.5	13.5
11	19.0	18.5	---	---	17.5	13.5	17.0	14.0	18.5	12.5	20.5	13.0
12	19.0	18.5	---	---	17.0	12.5	17.5	14.0	15.5	14.0	21.5	13.5
13	19.0	18.5	---	---	17.0	13.5	17.0	14.0	18.5	14.5	20.5	15.0
14	19.0	18.5	20.5	16.0	16.0	14.0	17.5	13.5	18.5	14.0	21.5	14.5
15	19.0	18.5	20.0	15.5	16.5	14.5	---	---	17.0	14.5	16.0	14.0
16	19.0	18.5	19.5	14.5	15.5	14.5	17.5	11.5	17.0	14.5	18.5	14.0
17	19.0	18.5	19.5	14.5	16.0	13.5	17.5	11.5	16.5	13.0	18.0	13.5
18	19.0	18.5	19.5	14.0	16.0	12.5	17.5	12.0	18.5	11.5	19.0	13.0
19	18.5	18.5	19.5	14.0	15.5	10.0	17.5	12.0	16.5	11.5	20.0	13.0
20	18.5	18.5	20.0	14.5	14.0	10.5	17.5	13.5	18.0	11.5	20.0	13.5
21	19.0	18.5	19.5	15.0	14.0	11.5	18.0	14.0	18.5	11.0	21.0	13.0
22	---	---	19.0	15.0	15.0	12.0	17.0	14.0	19.0	12.5	21.5	13.0
23	---	---	19.5	16.0	15.0	11.0	18.0	14.0	16.5	12.5	20.5	14.5
24	---	---	19.5	15.5	14.5	11.0	18.5	13.5	15.5	13.0	20.0	14.5
25	18.0	15.0	19.0	14.5	15.5	11.0	19.0	13.5	18.0	13.0	22.0	13.0
26	20.0	15.5	18.5	14.0	16.0	13.0	18.5	12.5	18.5	13.5	22.0	13.5
27	20.5	16.0	17.5	13.5	17.5	13.0	18.0	13.0	18.0	13.5	20.5	13.0
28	20.5	15.0	17.5	12.5	15.5	13.5	17.5	13.5	19.0	12.0	22.0	13.5
29	19.5	16.0	17.5	14.5	16.0	12.5	18.5	13.0	---	---	21.5	13.0
30	---	---	18.0	14.5	16.0	12.0	19.0	12.5	---	---	22.5	13.0
31	---	---	---	---	16.5	12.5	19.0	12.5	---	---	23.0	14.0
MONTH	---	---	---	---	---	---	---	---	19.0	10.0	23.0	12.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	21.0	14.5	19.5	15.0	25.0	17.0	---	---	---	---	---	---
2	19.0	14.0	16.0	15.0	25.0	17.5	---	---	---	---	---	---
3	20.0	13.5	19.0	15.5	24.0	18.5	---	---	---	---	---	---
4	18.5	12.5	21.5	16.0	21.0	18.5	---	---	---	---	---	---
5	20.0	12.5	21.5	15.0	20.5	18.0	---	---	---	---	---	---
6	20.0	12.5	21.0	15.5	20.0	18.0	---	---	---	---	---	---
7	21.5	13.0	19.5	15.0	22.5	17.5	---	---	---	---	---	---
8	22.0	13.5	20.0	15.0	23.0	18.0	---	---	---	---	---	---
9	22.5	13.5	21.0	14.0	23.0	17.5	---	---	---	---	---	---
10	22.0	15.0	22.5	14.5	20.5	18.0	---	---	---	---	---	---
11	22.0	15.5	23.0	15.0	21.5	17.5	---	---	---	---	---	---
12	21.0	15.5	23.5	15.0	23.0	17.0	---	---	---	---	---	---
13	19.0	15.5	23.0	16.5	23.5	17.5	---	---	---	---	---	---
14	18.0	15.5	19.5	16.5	23.5	17.5	---	---	---	---	---	---
15	21.0	14.5	---	---	23.5	17.0	---	---	---	---	---	---
16	21.0	14.0	---	---	24.0	17.5	---	---	---	---	---	---
17	20.5	15.0	21.5	16.0	23.5	17.5	---	---	---	---	---	---
18	20.5	14.5	23.5	15.5	22.5	17.5	---	---	---	---	---	---
19	22.0	14.0	24.5	15.0	22.5	17.5	---	---	---	---	---	---
20	20.0	15.5	24.5	15.5	23.0	17.5	---	---	---	---	---	---
21	20.0	15.0	24.5	16.0	23.5	17.0	---	---	---	---	---	---
22	---	---	24.0	16.5	23.5	17.0	---	---	---	---	---	---
23	21.5	15.0	24.5	17.0	23.5	17.0	---	---	---	---	---	---
24	21.0	14.0	23.0	16.5	24.5	17.0	---	---	---	---	---	---
25	21.5	16.0	23.0	17.0	26.0	16.0	---	---	---	---	---	---
26	22.0	14.5	24.5	17.5	26.5	17.0	---	---	---	---	---	---
27	21.5	14.5	25.5	16.0	26.5	16.5	---	---	---	---	---	---
28	21.5	15.5	26.0	17.5	26.5	16.0	---	---	---	---	---	---
29	21.5	14.0	24.5	17.5	25.5	16.5	---	---	---	---	---	---
30	22.0	14.0	24.0	17.5	26.0	16.5	---	---	---	---	---	---
31	---	---	24.0	17.5	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	26.5	16.0	---	---	---	---	---	---

## 11128500 SANTA YNEZ RIVER AT SOLVANG, CA—Continued

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

Date	Time	Depth at sample locat- ion, feet (81903)	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)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
NOV									
25...*	1228	1.00	760	6.4	66	7.6	1080	17.0	2.00
25...*	1231	2.66	760	6.8	70	7.7	1070	17.0	4.00
25...*	1234	2.75	760	7.7	80	7.9	1040	17.0	6.00
25...*	1237	2.65	760	8.1	84	7.8	1050	17.0	8.00
25...*	1240	2.16	760	7.6	79	7.9	1040	17.0	10.0
25...*	1243	1.70	760	8.7	90	8.0	1020	17.0	12.0
25...*	1246	1.40	760	9.4	99	8.0	1020	17.5	14.0
25...*	1249	.56	760	9.4	98	8.0	1020	17.0	16.0

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

Date	Time	Depth at sample locat- ion, feet (81903)	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)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
OCT									
30...*	1415	.86	754	12.4	138	8.6	950	20.0	1.00
30...*	1418	1.04	754	12.2	136	8.6	950	20.0	3.00
30...*	1421	.86	754	12.3	137	8.6	949	20.0	5.00
30...*	1424	1.04	754	12.3	139	8.6	949	20.5	7.00
30...*	1427	1.06	754	12.3	138	8.6	949	20.5	9.00
30...*	1430	1.11	754	12.4	139	8.6	951	20.5	11.0
30...*	1433	1.13	754	12.4	140	8.6	950	20.5	13.0
30...*	1436	1.01	754	12.4	140	8.6	950	20.5	15.0
30...*	1439	.74	754	12.6	142	8.6	952	20.5	17.0
30...*	1442	.56	754	12.8	146	8.7	951	21.0	19.0
APR									
02...*	1311	.64	749	12.9	139	8.5	1040	19.0	1.60
02...*	1312	.82	749	13.2	143	8.5	1040	19.0	3.60
02...*	1313	1.02	749	12.8	138	8.5	1030	19.0	5.60
02...*	1314	1.20	749	12.4	134	8.4	1030	19.0	7.60
02...*	1315	1.20	749	12.3	133	8.4	1030	19.0	9.60
02...*	1316	1.18	749	12.2	132	8.4	1030	19.0	11.6
02...*	1317	1.12	749	12.2	131	8.4	1030	19.0	13.6
02...*	1318	1.20	749	12.0	130	8.4	1030	19.0	15.6
02...*	1319	1.24	749	12.0	129	8.4	1030	19.0	17.6
02...*	1320	1.02	749	12.0	129	8.4	1030	19.0	19.6
02...*	1321	.82	749	12.0	129	8.4	1030	19.0	21.6
02...*	1322	.72	749	11.9	128	8.4	1030	19.0	23.6
02...*	1323	.54	749	11.9	128	8.4	1030	19.0	25.6

\* Instantaneous discharge at time of cross-sectional measurement: Nov. 25, 7.0 ft<sup>3</sup>/s; Oct. 30, 14.0 ft<sup>3</sup>/s; Apr. 2, 11.0 ft<sup>3</sup>/s.



## 11129800 ZACA CREEK NEAR BUELLTON, CA

LOCATION.—Lat 34° 38' 55", long 120° 11' 00", in San Carlos de Jonata Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank, 2 ft upstream from bridge on Frontage Road, 0.9 mi upstream from Dry Creek, 2.4 mi north of Buellton, and 4.0 mi upstream from mouth.

DRAINAGE AREA.—32.8 mi<sup>2</sup>.

PERIOD OF RECORD.—September 1963 to September 1981, October 1989 to September 1992, October 1994 to current year.

CHEMICAL DATA: April 1997 to September 1997.

GAGE.—Water-stage recorder. Elevation of gage is 471.54 ft above NGVD of 1929.

REMARKS.—Records are poor. Some pumping from wells along stream for irrigation upstream from station. Small regulation by Zaca Lake, about 15 mi upstream. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,390 ft<sup>3</sup>/s, Feb. 24, 1969, gage height, 9.20 ft, maximum gage height, 12.59 ft, Feb. 3, 1998; no flow most of 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)
Dec. 20	0000	32	3.11

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.15	0.00	0.05	0.01	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.14	0.00	0.05	0.04	0.07	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.13	0.00	0.07	0.04	0.60	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.13	0.00	0.08	0.05	0.15	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.13	0.00	0.05	0.06	0.02	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.12	0.00	0.04	0.03	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.12	0.00	0.04	0.01	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.10	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.11	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.11	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.11	0.18	0.01	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.08	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.07	0.28	0.01	0.40	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.07	0.09	0.01	0.52	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.07	0.06	3.4	0.14	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.03	0.06	0.05	0.35	0.07	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.07	0.05	0.18	0.04	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.07	0.04	0.14	0.02	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	1.8	0.07	0.04	0.12	0.01	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	4.1	0.07	0.04	0.12	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	3.0	0.07	0.04	0.11	0.01	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	1.2	0.03	0.05	0.11	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.20	0.04	0.05	0.11	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.13	0.03	0.15	0.10	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.11	0.02	0.20	0.08	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.10	0.02	0.07	0.08	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.09	0.02	0.12	0.06	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.36	0.02	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.26	0.01	---	0.02	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.14	0.02	---	0.02	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.25	0.02	---	0.02	---	0.00	---	0.00	0.00	---
TOTAL	0.00	0.00	11.77	2.28	2.00	5.52	1.47	0.84	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.38	0.074	0.071	0.18	0.049	0.027	0.000	0.000	0.000	0.000
MAX	0.00	0.00	4.1	0.15	0.42	3.4	0.52	0.60	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	0.00	23	4.5	4.0	11	2.9	1.7	0.00	0.00	0.00	0.00

## SANTA YNEZ RIVER BASIN

## 11129800 ZACA CREEK NEAR BUELLTON, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.009	0.061	0.45	2.88	9.21	4.96	1.31	0.49	0.17	0.027	0.007	0.005
MAX	0.13	1.22	7.64	32.1	120	40.1	9.75	5.69	2.52	0.42	0.13	0.090
(WY)	1999	1997	1997	1969	1998	1995	1995	1998	1998	1998	1998	1998
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1964	1967	1964	1968	1964	1964	1964	1964	1964	1964	1964	1964

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1964 - 2003
ANNUAL TOTAL	23.31	23.88	
ANNUAL MEAN	0.064	0.065	1.59
HIGHEST ANNUAL MEAN			11.6 1998
LOWEST ANNUAL MEAN			0.000 1990
HIGHEST DAILY MEAN	4.1 Dec 20	4.1 Dec 20	598 Feb 3 1998
LOWEST DAILY MEAN	0.00 Apr 11	0.00 Oct 1	0.00 Oct 1 1963
ANNUAL SEVEN-DAY MINIMUM	0.00 Apr 11	0.00 Oct 1	0.00 Oct 1 1963
MAXIMUM PEAK FLOW		32 Dec 20	1390 Feb 24 1969
MAXIMUM PEAK STAGE		3.11 Dec 20	12.59 Feb 3 1998
ANNUAL RUNOFF (AC-FT)	46	47	1150
10 PERCENT EXCEEDS	0.13	0.11	0.88
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

## 11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA

LOCATION.—Lat 34° 35' 19", long 120° 24' 27", in W 1/2 sec.24, T.6 N., R.34 W., Santa Barbara County, Hydrologic Unit 18060010, on right bank, at bridge on Jalama Road, 0.4 mi downstream from El Jaro Creek, and 4.4 mi southeast of Lompoc.

DRAINAGE AREA.—47.1 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—January 1941 to current year.

REVISED RECORDS.—WSP 2128: Drainage area.

GAGE.—Water-stage recorder and concrete low-water control. Elevation of gage is 220 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair. No regulation upstream from station. Small diversions for irrigation upstream from station. See schematic diagram of [Santa Ynez River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,400 ft<sup>3</sup>/s, Mar. 15, 1952, gage height, 20.80 ft; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 300 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. 16	1345	780	3.97	Mar. 15	1045	1,430	5.26
Dec. 19	2100	1,330	5.07				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	0.28	0.87	2.5	1.7	3.0	2.8	2.8	1.8	0.96	0.40	0.31
2	0.89	0.22	0.87	2.4	1.7	2.9	2.8	5.0	1.7	0.87	0.48	0.32
3	0.62	0.13	0.86	2.7	1.7	2.8	2.8	32	1.7	0.72	0.39	0.26
4	0.53	0.09	0.84	2.8	1.7	2.9	2.8	8.8	1.8	0.69	0.37	0.37
5	0.46	0.13	0.89	3.0	1.7	2.8	2.8	5.0	1.8	0.63	0.32	0.37
6	0.33	0.10	0.97	2.3	1.7	2.6	2.8	4.0	1.8	0.62	0.35	0.22
7	0.23	1.4	0.97	1.9	1.7	2.6	2.8	3.8	1.8	0.79	0.34	0.21
8	0.14	67	0.97	1.9	1.7	2.6	2.7	3.3	1.8	0.78	0.31	0.16
9	0.19	17	0.97	1.8	1.7	2.5	2.8	2.8	1.8	0.69	0.27	0.14
10	0.27	2.4	0.99	1.9	1.7	2.5	2.8	2.6	1.7	0.63	0.20	0.22
11	0.39	1.1	0.97	2.0	2.8	2.5	2.8	2.6	1.6	0.56	0.21	0.24
12	0.44	0.67	0.98	2.0	12	2.5	2.8	2.6	1.5	0.54	0.15	0.22
13	0.44	0.61	1.1	2.0	80	2.5	17	2.6	1.4	0.49	0.18	0.17
14	0.36	0.54	1.2	1.9	11	2.5	11	2.4	1.3	0.42	0.17	0.13
15	0.41	0.45	15	1.8	5.6	503	5.4	2.5	1.3	0.39	0.17	0.20
16	0.39	0.40	91	1.7	4.4	40	3.9	2.5	1.3	0.39	0.17	0.24
17	0.38	0.40	8.2	1.7	3.9	14	3.4	2.5	1.3	0.30	0.17	0.20
18	0.39	0.40	3.9	1.7	3.3	9.0	2.9	2.5	1.4	0.26	0.17	0.19
19	0.44	0.40	122	1.7	3.0	7.2	2.8	2.4	1.5	0.34	0.17	0.20
20	0.45	0.40	84	1.7	3.0	6.2	2.8	2.2	1.4	0.45	0.16	0.20
21	0.48	0.38	97	1.8	2.9	5.8	2.8	2.2	1.4	0.47	0.17	0.18
22	0.58	0.40	31	1.8	2.8	5.0	2.8	2.2	1.3	0.50	0.17	0.17
23	0.45	0.43	8.4	1.8	2.8	4.7	2.8	2.2	1.3	0.47	0.17	0.17
24	0.45	0.49	5.3	1.8	6.2	4.2	2.8	2.2	1.2	0.46	0.17	0.23
25	0.46	0.56	4.0	1.8	9.2	4.1	2.8	2.2	1.1	0.58	0.17	0.24
26	0.52	0.58	2.9	1.7	3.6	3.8	2.8	2.1	1.00	0.62	0.17	0.20
27	0.42	0.59	2.7	1.7	5.1	3.4	2.8	2.1	0.97	0.59	0.22	0.18
28	0.33	0.56	3.9	1.7	3.4	3.3	3.0	2.1	0.97	0.52	0.24	0.26
29	0.32	0.63	8.0	1.7	---	3.0	2.8	2.0	0.97	0.53	0.24	0.43
30	0.26	0.81	3.6	1.7	---	2.8	2.8	2.0	0.97	0.42	0.27	0.47
31	0.25	---	2.6	1.7	---	2.8	---	1.9	---	0.42	0.30	---
TOTAL	13.27	99.55	506.95	60.6	182.0	659.5	110.9	118.1	42.88	17.10	7.44	7.10
MEAN	0.43	3.32	16.4	1.95	6.50	21.3	3.70	3.81	1.43	0.55	0.24	0.24
MAX	1.0	67	122	3.0	80	503	17	32	1.8	0.96	0.48	0.47
MIN	0.14	0.09	0.84	1.7	1.7	2.5	2.7	1.9	0.97	0.26	0.15	0.13
AC-FT	26	197	1010	120	361	1310	220	234	85	34	15	14

## SANTA YNEZ RIVER BASIN

## 11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.86	2.30	7.51	23.3	43.5	40.6	15.6	4.78	2.44	1.43	0.99	0.83
MAX	4.26	48.6	102	281	474	545	158	33.1	12.7	8.69	5.77	4.51
(WY)	1942	1966	1956	1995	1998	1995	1941	1998	1998	1998	1941	1941
MIN	0.000	0.041	0.050	0.081	0.33	0.36	0.21	0.000	0.000	0.000	0.015	0.010
(WY)	1962	1991	1990	1991	1991	1990	1989	1961	1961	1961	1972	1972

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1941 - 2003	
ANNUAL TOTAL	1058.78		1825.39			
ANNUAL MEAN	2.90		5.00		11.6	
HIGHEST ANNUAL MEAN					80.6 1995	
LOWEST ANNUAL MEAN					0.17 1990	
HIGHEST DAILY MEAN	122	Dec 19	503	Mar 15	5390	Mar 11 1995
LOWEST DAILY MEAN	0.03	Sep 10	0.09	Nov 4	0.00	Jul 23 1948
ANNUAL SEVEN-DAY MINIMUM	0.04	Sep 6	0.17	Aug 12	0.00	Jul 23 1948
MAXIMUM PEAK FLOW			1430	Mar 15	11400	Mar 15 1952
MAXIMUM PEAK STAGE			5.26	Mar 15	20.80	Mar 15 1952
INSTANTANEOUS LOW FLOW			0.00	Oct 8		
ANNUAL RUNOFF (AC-FT)	2100		3620		8400	
10 PERCENT EXCEEDS	3.6		4.3		12	
50 PERCENT EXCEEDS	0.94		1.5		1.5	
90 PERCENT EXCEEDS	0.25		0.21		0.10	



## 11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA—Continued

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

Date	Bicar- bonate, wat flt titr., field, mg/L (00453)	Carbon- ate, wat flt titr., field, mg/L (00452)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)
OCT								
08...	--	--	--	--	--	--	--	--
NOV								
10...	--	--	--	--	--	--	--	--
DEC								
10...	--	--	--	--	--	--	--	--
JAN								
14...	--	--	--	--	--	--	--	--
FEB								
12...	--	--	--	--	--	--	--	--
MAR								
10...	--	--	--	--	--	--	--	--
APR								
07...	332	3	101	.57	22.2	286	872	1.31
MAY								
05...	--	--	--	--	--	--	--	--
JUN								
02...	--	--	--	--	--	--	--	--
JUL								
02...	--	--	--	--	--	--	--	--
AUG								
05...	--	--	--	--	--	--	--	--
SEP								
03...	--	--	--	--	--	--	--	--

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)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
OCT								
08...	1040	--	--	--	--	--	--	--
NOV								
10...	926	--	--	--	--	--	--	--
DEC								
10...	986	--	--	--	--	--	--	--
JAN								
14...	970	--	--	--	--	--	--	--
FEB								
12...	863	--	--	--	--	--	--	--
MAR								
10...	946	--	--	--	--	--	--	--
APR								
07...	966	<.04	.12	<.008	.11	600	e10	48.3
MAY								
05...	822	--	--	--	--	--	--	--
JUN								
02...	939	--	--	--	--	--	--	--
JUL								
02...	1000	--	--	--	--	--	--	--
AUG								
05...	1050	--	--	--	--	--	--	--
SEP								
03...	1040	--	--	--	--	--	--	--

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

## 11132500 SALSIPUEDES CREEK NEAR LOMPOC, CA—Continued

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

Date	Time	Depth at sample locat- ion, feet (81903)	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 un- f uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR									
07...*	1245	.22	759	9.9	104	8.1	1400	17.5	1.00
07...*	1246	.22	759	9.9	104	8.2	1310	17.5	2.00
07...*	1247	.24	759	9.9	104	8.2	1370	17.5	3.00
07...*	1248	.28	759	9.9	104	8.2	1370	17.5	4.00
07...*	1249	.30	759	9.9	104	8.2	1370	17.5	5.00
07...*	1250	.30	759	9.9	104	8.2	1410	17.5	6.00
07...*	1251	.28	759	9.9	104	8.2	1410	17.5	7.00
07...*	1252	.24	759	9.9	103	8.2	1410	17.5	8.00
07...*	1253	.20	759	9.9	103	8.2	1410	17.5	9.00
07...*	1254	.20	759	9.8	103	8.2	1410	17.5	10.0
07...*	1255	.20	759	9.9	103	8.2	1410	17.5	11.0
07...*	1256	.26	759	10.0	105	8.2	1410	17.5	12.0
07...*	1257	.26	759	10.1	106	8.2	1410	17.5	13.0
07...*	1258	.24	759	10.6	111	8.2	1410	17.5	14.0

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 07, 2.8 ft<sup>3</sup>/s.

## 11133000 SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CA

LOCATION.—Lat 34° 38' 14", long 120° 25' 28", in Canada de Salsipuedes Grant, [Santa Barbara County](#), Hydrologic Unit 18060010, on left bank, 0.6 mi upstream from State Highway 246, 1.9 mi east of Lompoc, 1.8 mi downstream from Salsipuedes Creek, and 12.4 mi downstream from Lake Cachuma.

DRAINAGE AREA.—789 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—May 1947 to November 1951 (irrigation seasons only), May 1952 to September 1963, October 1964 to September 1979, October 1980 to current year. Records equivalent, except for low-flow periods, to those published as "near Lompoc" (station 11133500), November to December 1906, October 1907 to September 1918, May 1925 to September 1960, and October 1978 to September 1980.

REVISIONS.—WSP 1928: Drainage area.

GAGE.—Two water-stage recorders. Elevation of main gage is 85 ft above NGVD of 1929, from topographic map. Prior to Apr. 10, 1991, at datum 5 ft higher. See WSP 1715 for history of changes prior to Oct. 1, 1961. Since Oct. 1, 1961, at various sites and datums within 0.1 mi of present site. Supplementary gage, used for high-water periods, at site 0.6 mi downstream at datum 79.25 ft above NGVD of 1929.

REMARKS.—Records fair. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952, by Lake Cachuma (stations 11121000, 11122000, and 11125500, respectively). Water diverted out of Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water pumped from wells along banks of river for irrigation in valley upstream. Satellite telemeter at station. See schematic diagram of [Santa Ynez River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 80,000 ft<sup>3</sup>/s, Jan. 25, 1969, gage height, 24.20 ft, from supplementary gage; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Jan. 9, 1907, reached a stage of 22.0 ft, site and datum then in use, discharge, 120,000 ft<sup>3</sup>/s, from mean-depth study.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	11	10	38	19	25	22	17	6.6	1.5	0.29	0.00
2	24	11	11	35	19	24	21	18	5.9	1.6	0.72	0.00
3	22	11	11	33	19	24	20	52	6.4	1.4	0.91	0.00
4	19	9.9	11	31	19	24	18	39	e6.1	1.1	0.65	0.00
5	17	9.2	11	31	19	24	17	50	e5.8	0.95	0.54	0.00
6	16	8.4	11	30	18	23	17	45	5.5	0.81	0.19	0.00
7	15	9.2	11	29	19	23	17	39	5.7	0.70	0.00	0.00
8	14	31	11	29	18	22	17	35	5.6	0.77	0.00	0.00
9	13	38	11	28	18	21	16	31	5.5	0.71	0.00	0.00
10	13	30	11	28	18	21	14	27	5.6	0.67	0.00	0.00
11	16	25	11	29	21	20	13	23	5.4	0.65	0.00	0.00
12	20	21	11	29	28	19	13	21	4.7	0.63	0.00	0.00
13	22	20	9.9	30	69	18	27	18	4.0	0.61	0.00	0.00
14	24	19	10	30	47	18	31	16	3.8	0.54	0.00	0.00
15	25	19	13	30	39	729	41	15	3.7	0.48	0.00	0.00
16	26	17	78	31	35	363	41	16	3.5	0.52	0.00	0.00
17	26	15	31	32	32	158	36	15	3.4	0.49	0.00	0.00
18	23	14	18	29	29	109	32	16	3.3	0.47	0.00	0.00
19	21	13	16	28	27	85	28	14	3.4	0.36	0.00	0.00
20	21	13	576	26	26	70	26	10	3.3	0.55	0.00	0.00
21	21	12	250	25	25	56	26	9.3	3.0	0.45	0.00	0.00
22	21	12	152	24	24	41	24	8.7	3.1	0.37	0.00	0.00
23	21	12	84	22	24	36	22	8.3	2.6	0.30	0.00	0.00
24	20	12	58	21	25	34	22	7.6	2.3	0.28	0.00	0.00
25	19	12	48	19	34	31	22	7.8	2.2	0.36	0.00	0.00
26	17	11	43	18	28	29	19	8.2	2.0	0.42	0.00	0.00
27	14	10	39	19	29	30	17	8.6	1.8	0.63	0.00	0.00
28	13	10	38	19	27	29	17	8.3	1.9	0.36	0.00	0.00
29	13	9.7	43	19	---	26	17	7.1	1.5	0.34	0.00	0.00
30	12	9.7	42	18	---	23	15	6.9	1.5	0.42	0.00	0.00
31	12	---	40	18	---	22	---	7.6	---	0.32	0.00	---
TOTAL	584	455.1	1719.9	828	755	2177	668	605.4	119.1	19.76	3.30	0.00
MEAN	18.8	15.2	55.5	26.7	27.0	70.2	22.3	19.5	3.97	0.64	0.11	0.000
MAX	26	38	576	38	69	729	41	52	6.6	1.6	0.91	0.00
MIN	12	8.4	9.9	18	18	18	13	6.9	1.5	0.28	0.00	0.00
AC-FT	1160	903	3410	1640	1500	4320	1320	1200	236	39	6.5	0.00

e Estimated.



## 11133000 SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.56	7.25	31.2	227	500	478	185	68.9	18.3	5.08	3.56	3.93
MAX	29.9	112	291	3303	7452	3590	1253	993	310	78.3	26.8	29.4
(WY)	1992	1966	1984	1969	1998	1983	1998	1998	1998	1998	1997	1992
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1955	1955	1955	1989	1961	1990	1961	1961	1961	1960	1954	1954

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1952 - 2003
ANNUAL TOTAL	6343.80	7934.56	
ANNUAL MEAN	17.4	21.7	126
HIGHEST ANNUAL MEAN			941 1998
LOWEST ANNUAL MEAN			0.000 1990
HIGHEST DAILY MEAN	576 Dec 20	729 Mar 15	38000 Jan 25 1969
LOWEST DAILY MEAN	0.00 Jul 21	0.00 Aug 7	0.00 Sep 18 1953
ANNUAL SEVEN-DAY MINIMUM	0.00 Jul 21	0.00 Aug 7	0.00 Oct 23 1953
MAXIMUM PEAK FLOW		2950 Mar 15	80000 Jan 25 1969
MAXIMUM PEAK STAGE		8.49 Mar 15	24.20 Jan 25 1969
ANNUAL RUNOFF (AC-FT)	12580	15740	90990
10 PERCENT EXCEEDS	30	35	114
50 PERCENT EXCEEDS	12	15	2.2
90 PERCENT EXCEEDS	0.06	0.00	0.00

## 11133000 SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CA—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.—Water years 1978–88, October 1996 to current year.

CHEMICAL DATA: Water years 1978–88, October 1996 to current year.

PERIOD OF DAILY RECORD.—October 1998 to current year (seasonal).

SPECIFIC CONDUCTANCE: October 1998 to September 2003 (seasonal).

WATER TEMPERATURE: October 1998 to current year (seasonal).

INSTRUMENTATION.—Water-quality monitor since October 1998.

REMARKS.—No specific conductance record May 29 to June 3, June 8, 9, 13, 14, June 19 to July 2, July 19 to Sept. 30. Specific conductance record rated poor. No water temperature record May 29 to June 3, June 8, 9, 13, 14, June 19 to July 2, July 19 to Sept. 30. Water temperature record rated poor. Continuous water quality is not collected Dec. 1 to Mar. 31.

EXTREMES FOR PERIOD OF DAILY RECORD.—

SPECIFIC CONDUCTANCE: Maximum recorded, 2,150 microsiemens, Aug. 17, 2002; minimum recorded, 922 microsiemens, Apr. 8, 2001.

WATER TEMPERATURE: Maximum recorded, 32.0° C, July 12, 13, 1999; minimum recorded, 7.0° C, Nov. 19, 2000.

EXTREMES FOR CURRENT YEAR.—

SPECIFIC CONDUCTANCE: Maximum recorded, 1,840 microsiemens, Nov. 30; minimum recorded, 1,030 microsiemens, May 3.

WATER TEMPERATURE: Maximum recorded, 27.5° C, July 12; minimum recorded, 12.0° C, Nov. 4, 27.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	
OCT									
08...	1535	14	--	--	--	8.2	1390	21.0	
NOV									
15...	1355	18	--	--	--	8.4	<sup>1</sup> 1390	17.0	
DEC									
13...	1540	9.7	--	--	--	8.3	1580	13.5	
JAN									
22...	1355	24	--	--	--	8.2	1500	16.0	
FEB									
20...	1345	26	--	--	--	8.3	1480	14.0	
MAR									
11...	1620	20	--	--	--	8.4	1500	20.0	
APR									
04...	1310	19	763	9.9	99	8.2	1450	15.5	
MAY									
13...	1702	18	--	--	--	8.2	1410	23.0	
JUN									
14...	1450	3.9	--	--	--	7.9	1620	23.5	
JUL									
18...	1430	.49	--	--	--	7.7	1630	25.0	
Date		Hardness, water, unfltrd mg/L as CaCO3 (00900)	Noncarb hardness, wat fltrd field, mg/L as CaCO3 (00904)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)
OCT									
08...	--	--	--	--	--	--	--	--	
NOV									
15...	--	--	--	--	--	--	--	--	
DEC									
13...	--	--	--	--	--	--	--	--	
JAN									
22...	--	--	--	--	--	--	--	--	
FEB									
20...	--	--	--	--	--	--	--	--	
MAR									
11...	--	--	--	--	--	--	--	--	
APR									
04...	630	330	136	71.4	3.42	1	80.5	22	
MAY									
13...	--	--	--	--	--	--	--	--	
JUN									
14...	--	--	--	--	--	--	--	--	
JUL									
18...	--	--	--	--	--	--	--	--	

<sup>1</sup> Laboratory Value.

## 11133000 SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CA—Continued

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

Date	Alka- linity, wat flt inc tit field, mg/L as CaCO <sub>3</sub> (39086)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residu sum of water fltrd tons/ acre-f (70303)
OCT 08...	--	--	--	--	--	--	--	--
NOV 15...	--	--	--	--	--	--	--	--
DEC 13...	--	--	--	--	--	--	--	--
JAN 22...	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--
MAR 11...	--	--	--	--	--	--	--	--
APR 04...	307	374	88.9	.44	20.3	368	954	1.43
MAY 13...	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--
JUL 18...	--	--	--	--	--	--	--	--

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)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
OCT 08...	1020	--	--	--	--	--	--	--
NOV 15...	1050	--	--	--	--	--	--	--
DEC 13...	1170	--	--	--	--	--	--	--
JAN 22...	1080	--	--	--	--	--	--	--
FEB 20...	1030	--	--	--	--	--	--	--
MAR 11...	1050	--	--	--	--	--	--	--
APR 04...	1050	<.04	<.06	<.008	.06	420	<10	73.8
MAY 13...	1020	--	--	--	--	--	--	--
JUN 14...	1170	--	--	--	--	--	--	--
JUL 18...	1180	--	--	--	--	--	--	--

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





## SANTA YNEZ RIVER BASIN

11133000 SANTA YNEZ RIVER AT NARROWS, NEAR LOMPOC, CA—Continued

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

Date	Time	Depth at sample locatn, feet (81903)	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 un- f uS/cm 25 degC (00095)	Temper- ature, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR									
04...*	1245	2.25	763	9.8	98	8.2	1450	15.5	2.00
04...*	1246	1.94	763	9.7	98	8.2	1450	15.5	4.00
04...*	1247	1.45	763	9.8	99	8.2	1450	15.5	6.00
04...*	1248	1.16	763	9.8	99	8.2	1450	15.5	8.00
04...*	1249	1.10	763	9.8	98	8.2	1450	15.5	10.0
04...*	1250	1.00	763	9.8	98	8.3	1450	15.5	12.0
04...*	1251	1.00	763	9.8	98	8.3	1450	15.5	14.0
04...*	1252	1.03	763	9.8	98	8.3	1450	15.5	16.0
04...*	1253	1.10	763	9.7	99	8.3	1440	16.0	18.0
04...*	1254	1.57	763	9.8	99	8.3	1450	16.0	20.0
04...*	1255	1.05	763	9.8	100	8.3	1440	16.0	22.0
04...*	1256	.89	763	9.8	101	8.3	1440	16.5	24.0

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 4, 19 ft<sup>3</sup>/s.

## 11134000 SANTA YNEZ RIVER AT H STREET, NEAR LOMPOC, CA

LOCATION.—Lat 34° 40'06", long 120° 27'25", in Lompoc Grant, [Santa Barbara County](#), Hydrologic Unit 18060010, near left bank, 1,000 ft downstream of H Street Bridge, on State Highway 1, and 2 mi north of Lompoc.

DRAINAGE AREA.—816 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1946 to September 1962, October 1998 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 57 ft above NGVD of 1929. Various datums used during period of record. Since July 25, 2002, supplementary water-stage recorder 200 ft downstream on the right bank at different datum.

REMARKS.—Records poor. Flow regulated by Jameson Lake, Gibraltar Reservoir, and since November 1952, by Lake Cachuma (stations 11121000, 11122000, and 11125500, respectively). Water diverted out of Jameson Lake, Gibraltar Reservoir, and Lake Cachuma to cities of Montecito, Santa Barbara, and Goleta for municipal supply. Water pumped from wells along banks of river for irrigation in valley upstream. Satellite telemeter at station. See schematic diagram of [Santa Ynez River Basin](#).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge prior to regulation by Lake Cachuma, 37,900 ft<sup>3</sup>/s, Jan. 16, 1952, gage height, 17.4 ft (datum then in use), from rating curve extended above 2,900 ft<sup>3</sup>/s. Maximum discharge after regulation by Lake Cachuma, 41,600 ft<sup>3</sup>/s, Mar. 6, 2001, gage height, 14.09 ft; no flow for several months in each year.

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	0.00	0.00	23	9.9	17	16	6.3	0.00	0.00	0.00	0.00
2	4.6	0.00	0.00	21	9.9	15	14	11	0.00	0.00	0.00	0.00
3	4.7	0.00	0.00	20	11	15	13	53	0.00	0.00	0.00	0.00
4	3.8	0.00	0.00	19	9.8	15	12	33	0.00	0.00	0.00	0.00
5	2.9	0.00	0.00	18	9.0	13	9.6	46	0.00	0.00	0.00	0.00
6	1.2	0.00	0.00	18	7.8	13	8.7	39	0.00	0.00	0.00	0.00
7	0.74	0.00	0.00	17	7.5	11	9.0	31	0.00	0.00	0.00	0.00
8	0.66	11	0.00	17	7.0	11	11	25	0.00	0.00	0.00	0.00
9	0.00	31	0.00	16	6.4	11	9.1	22	0.00	0.00	0.00	0.00
10	0.00	22	0.00	17	7.1	11	7.3	21	0.00	0.00	0.00	0.00
11	0.02	16	0.00	16	13	11	5.6	18	0.00	0.00	0.00	0.00
12	4.4	10	0.00	16	23	10	5.1	16	0.00	0.00	0.00	0.00
13	9.8	6.9	0.00	15	97	9.3	27	13	0.00	0.00	0.00	0.00
14	13	4.6	0.00	15	55	9.1	38	11	0.00	0.00	0.00	0.00
15	14	4.2	0.00	15	33	745	46	8.9	0.00	0.00	0.00	0.00
16	16	2.9	9.6	15	27	553	48	8.2	0.00	0.00	0.00	0.00
17	15	2.3	41	15	22	184	36	6.9	0.00	0.00	0.00	0.00
18	11	2.0	23	13	19	84	28	5.5	0.00	0.00	0.00	0.00
19	9.4	0.85	32	13	18	57	22	5.0	0.00	0.00	0.00	0.00
20	7.6	0.63	424	12	17	51	19	3.9	0.00	0.00	0.00	0.00
21	5.8	0.15	331	11	16	50	18	2.3	0.00	0.00	0.00	0.00
22	6.7	0.00	291	10	14	45	15	1.4	0.00	0.00	0.00	0.00
23	5.4	0.00	132	11	14	39	13	0.66	0.00	0.00	0.00	0.00
24	5.0	0.00	76	11	20	35	13	0.25	0.00	0.00	0.00	0.00
25	4.4	0.00	55	11	32	30	12	0.00	0.00	0.00	0.00	0.00
26	4.1	0.00	44	10	21	26	9.5	0.00	0.00	0.00	0.00	0.00
27	2.9	0.00	35	11	22	23	7.9	0.00	0.00	0.00	0.00	0.00
28	2.0	0.00	31	11	21	21	9.2	0.00	0.00	0.00	0.00	0.00
29	1.6	0.00	35	10	---	18	7.7	0.00	0.00	0.00	0.00	0.00
30	0.16	0.00	29	9.4	---	15	6.0	0.00	0.00	0.00	0.00	0.00
31	0.00	---	25	9.3	---	15	---	0.00	---	0.00	---	---
TOTAL	161.38	114.53	1613.60	445.7	569.4	2162.4	495.7	388.31	0.00	0.00	0.00	0.00
MEAN	5.21	3.82	52.1	14.4	20.3	69.8	16.5	12.5	0.000	0.000	0.000	0.000
MAX	16	31	424	23	97	745	48	53	0.00	0.00	0.00	0.00
MIN	0.00	0.00	0.00	9.3	6.4	9.1	5.1	0.00	0.00	0.00	0.00	0.00
AC-FT	320	227	3200	884	1130	4290	983	770	0.00	0.00	0.00	0.00

## SANTA YNEZ RIVER BASIN

## 11134000 SANTA YNEZ RIVER AT H STREET, NEAR LOMPOC, CA—Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1952, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	.000	2.33	9.46	301	43.9	293	69.8	15.5	2.45	.29	.000	.000
MAX	.000	14.0	54.8	1741	215	1722	416	92.9	14.7	1.73	.000	.000
(WY)	1947	1947	1947	1952	1952	1952	1952	1952	1952	1952	1947	1947
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
(WY)	1947	1948	1948	1948	1948	1948	1948	1948	1947	1947	1947	1947

## SUMMARY STATISTICS

## WATER YEARS 1947 - 1952

ANNUAL MEAN	62.1
HIGHEST ANNUAL MEAN	354 1952
LOWEST ANNUAL MEAN	.000 1948
HIGHEST DAILY MEAN	19600 Jan 16 1952
LOWEST DAILY MEAN	.00 Oct 1 1946
ANNUAL SEVEN-DAY MINIMUM	.00 Oct 1 1946
MAXIMUM PEAK FLOW	37900 Jan 16 1952
MAXIMUM PEAK STAGE	17.40 Jan 16 1952
ANNUAL RUNOFF (AC-FT)	44980
10 PERCENT EXCEEDS	25
50 PERCENT EXCEEDS	.00
90 PERCENT EXCEEDS	.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2003, BY WATER YEAR (WY)

	1953	1955	1954	1957	1955	1960	1957	1953	1953	1953	1953	1953
MEAN	1.53	2.44	26.7	28.7	145	289	116	27.6	3.96	0.034	0.000	0.36
MAX	11.3	19.8	166	181	934	2983	1046	282	50.6	0.51	0.000	4.13
(WY)	1999	1999	1956	1956	1962	2001	1958	1958	1958	1958	1953	2002
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1953	1955	1954	1957	1955	1960	1957	1953	1953	1953	1953	1953

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1953 - 2003

ANNUAL TOTAL	2879.11	5951.02	
ANNUAL MEAN	7.89	16.3	52.9
HIGHEST ANNUAL MEAN			293 2001
LOWEST ANNUAL MEAN			0.051 1957
HIGHEST DAILY MEAN	424 Dec 20	745 Mar 15	31900 Mar 6 2001
LOWEST DAILY MEAN	0.00 Mar 25	0.00 Oct 9	0.00 Oct 1 1952
ANNUAL SEVEN-DAY MINIMUM	0.00 Mar 25	0.00 Oct 31	0.00 Oct 1 1952
MAXIMUM PEAK FLOW		2310 Mar 15	41600 Mar 6 2001
MAXIMUM PEAK STAGE		3.57 Mar 15	14.09 Mar 6 2001
ANNUAL RUNOFF (AC-FT)	5710	11800	38340
10 PERCENT EXCEEDS	15	30	50
50 PERCENT EXCEEDS	0.00	3.8	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00



## 11134800 MIGUELITO CREEK AT LOMPOC, CA

LOCATION.—Lat 34° 37' 54", long 120° 27' 50", in Lompoc Grant, Santa Barbara County, Hydrologic Unit 18060010, on left bank, 120 ft upstream from drop structure to debris basin, and 1,900 ft south of Lompoc Union High School.

DRAINAGE AREA.—11.6 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1970 to May 6, 1986, October 1987 to current year.

CHEMICAL DATA: Water years 1980–86, 1988–97.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 97.94 ft above NGVD of 1929, Santa Barbara County Flood Control District datum. Prior to May 6, 1986, on right bank at site 350 ft downstream at different datum.

REMARKS.—Records poor. No regulation or diversion upstream from station; some pumping from wells along stream for irrigation. See schematic diagram of Santa Ynez River Basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,660 ft<sup>3</sup>/s, Feb. 3, 1998, gage height, 4.61 ft, from theoretical rating curve above 50 ft<sup>3</sup>/s; no flow for many days in some years.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Jan. 25, 1969, reached a stage of 5.83 ft, site in use prior to 1986, from floodmark, discharge, 680 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.—Peak discharges greater than base discharge of 140 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. 16	1215	191	1.38	Mar. 15	0945	443	1.90
Dec. 19	2245	153	1.28				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.08	2.0	0.33	0.33	0.28	0.43	0.70	0.24	0.43	0.43	0.13	0.28
2	0.08	2.1	0.29	0.33	0.28	0.37	0.70	0.37	0.44	0.38	0.13	0.33
3	0.08	2.4	0.33	0.33	0.32	0.23	0.70	1.1	0.43	0.27	0.18	0.29
4	0.12	2.6	0.28	0.28	0.34	0.23	0.70	0.36	0.43	0.24	0.23	0.23
5	0.31	2.8	0.28	0.23	0.43	0.23	0.70	0.30	0.43	0.30	0.23	0.23
6	0.39	3.3	0.21	0.23	0.59	0.23	0.70	0.24	0.43	0.41	0.20	0.23
7	0.43	2.2	0.13	0.18	0.60	0.23	0.89	0.24	0.43	0.37	0.37	0.23
8	0.59	10	0.13	0.13	0.60	0.23	0.97	0.41	0.43	0.39	0.23	0.23
9	0.69	3.1	0.17	0.13	0.60	0.24	0.86	0.43	0.43	0.24	0.18	0.23
10	0.70	0.66	0.19	0.13	0.63	0.34	0.70	0.36	0.32	0.28	0.13	0.23
11	0.69	0.33	0.17	0.13	1.6	0.23	0.89	0.34	0.33	0.26	0.13	0.24
12	0.65	0.33	0.18	0.13	3.1	0.23	1.2	0.35	0.33	0.27	0.13	0.23
13	0.67	0.39	0.22	0.13	6.0	0.24	1.6	0.33	0.44	0.13	0.13	0.23
14	0.67	0.29	0.31	0.67	1.6	0.26	1.6	0.33	0.35	0.13	0.13	0.23
15	0.62	0.28	0.09	0.49	1.3	57	1.4	0.27	0.33	0.14	0.13	0.23
16	0.60	0.33	23	0.39	1.4	2.7	1.3	0.24	0.33	0.12	0.13	0.23
17	0.68	0.33	1.1	0.33	0.91	2.0	1.4	0.24	0.33	0.13	0.20	0.23
18	0.77	0.33	0.61	0.33	0.70	1.8	1.3	0.23	0.36	0.13	0.23	0.23
19	0.89	0.33	15	0.33	0.70	1.4	1.2	0.25	0.43	0.13	0.23	0.23
20	1.1	0.33	5.2	0.33	0.53	1.4	0.72	0.31	0.43	0.13	0.24	0.23
21	1.3	0.30	2.9	0.33	0.43	1.2	0.84	0.44	0.59	0.15	0.23	0.23
22	1.4	0.31	1.8	0.33	0.18	1.1	0.79	0.43	0.49	0.23	0.23	0.23
23	1.4	0.42	1.5	0.33	0.13	0.91	0.63	0.43	0.60	0.23	0.23	0.23
24	1.4	0.43	1.2	0.27	2.6	0.67	0.60	0.43	0.59	0.23	0.23	0.23
25	1.5	0.38	1.1	0.23	2.1	0.60	0.60	0.43	0.52	0.23	0.23	0.23
26	1.6	0.33	0.73	0.23	0.46	0.68	0.38	0.43	0.43	0.19	0.23	0.23
27	1.7	0.33	0.70	0.23	0.67	0.70	0.28	0.43	0.43	0.14	0.33	0.23
28	1.7	0.33	0.63	0.23	0.43	0.70	0.33	0.43	0.45	0.38	0.33	0.23
29	1.7	0.26	0.60	0.23	---	0.70	0.31	0.43	0.43	0.43	0.33	0.23
30	1.7	0.26	0.39	0.23	---	0.70	0.27	0.43	0.43	0.41	0.33	0.23
31	2.0	---	0.33	0.23	---	0.70	---	0.48	---	0.13	0.30	---
TOTAL	28.21	37.78	60.10	8.43	29.51	78.68	25.26	11.73	12.82	7.63	6.69	7.12
MEAN	0.91	1.26	1.94	0.27	1.05	2.54	0.84	0.38	0.43	0.25	0.22	0.24
MAX	2.0	10	23	0.67	6.0	57	1.6	1.1	0.60	0.43	0.37	0.33
MIN	0.08	0.26	0.09	0.13	0.13	0.23	0.27	0.23	0.32	0.12	0.13	0.23
AC-FT	56	75	119	17	59	156	50	23	25	15	13	14

## SANTA YNEZ RIVER BASIN

## 11134800 MIGUELITO CREEK AT LOMPOC, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.32	0.67	1.59	3.41	6.97	8.39	2.10	1.29	0.89	0.60	0.46	0.35
MAX	1.39	2.77	8.69	37.9	75.6	106	14.2	6.04	5.60	2.64	2.55	2.05
(WY)	1984	1996	1993	1995	1998	1995	1983	1983	2000	1983	2000	1983
MIN	0.001	0.001	0.008	0.019	0.047	0.091	0.076	0.053	0.008	0.016	0.006	0.000
(WY)	1973	1978	1990	1991	1972	1972	1972	1972	1992	1992	1972	1972

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1971 - 2003	
ANNUAL TOTAL	262.19		313.96			
ANNUAL MEAN	0.72		0.86		2.24	
HIGHEST ANNUAL MEAN					13.8	1995
LOWEST ANNUAL MEAN					0.15	1972
HIGHEST DAILY MEAN	23	Dec 16	57	Mar 15	1170	Mar 11 1995
LOWEST DAILY MEAN	0.06	Jul 5	0.08	Oct 1	0.00	Jul 21 1971
ANNUAL SEVEN-DAY MINIMUM	0.08	Aug 5	0.13	Jul 13	0.00	Sep 8 1971
MAXIMUM PEAK FLOW			443	Mar 15	2660	Feb 3 1998
MAXIMUM PEAK STAGE			1.90	Mar 15	4.61	Feb 3 1998
INSTANTANEOUS LOW FLOW			0.08	Oct 1		
ANNUAL RUNOFF (AC-FT)	520		623		1620	
10 PERCENT EXCEEDS	1.4		1.4		2.8	
50 PERCENT EXCEEDS	0.43		0.33		0.43	
90 PERCENT EXCEEDS	0.08		0.18		0.03	

## 11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA

LOCATION.—Lat 34° 46' 56", long 120° 31' 47", in Jesus Maria Grant, Santa Barbara County, Hydrologic Unit 18060009, on Vandenberg Military Reservation, on downstream side of San Antonio Road Bridge, 0.7 mi east of junction of San Antonio Road and Lompoc–Casmalia Road, and 3.8 mi south of Casmalia.

DRAINAGE AREA.—135 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1955 to September 1993, October 1994 to September 30, 2003 (discontinued).

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 160 ft above NGVD of 1929, from topographic map. Prior to June 27, 1958, at datum 2.00 ft higher.

REMARKS.—Records fair except for estimated daily discharges, which are poor. No regulation upstream from station. Flow affected by pumping from wells along stream for irrigation and beaver dam activity upstream from station. At times water is released to creek from Vandenberg Air Force Base Water-Treatment Plant.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,680 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 14.32 ft, from rating curve extended above 1,100 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 12.93 ft; minimum daily, 0.04 ft<sup>3</sup>/s, Jan. 22, 2001.

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)
Mar. 15	1615	178	2.78

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.64	0.39	0.62	1.6	0.94	1.3	1.4	0.89	0.79	0.49	0.40	0.55
2	0.59	0.29	0.49	1.5	0.91	1.3	1.4	1.4	0.70	0.49	0.40	0.52
3	0.69	0.26	0.59	1.4	0.89	1.3	1.3	2.1	0.77	0.48	0.40	0.52
4	0.71	0.23	0.75	1.3	0.86	1.4	1.2	1.5	0.79	0.48	0.39	e0.58
5	0.68	0.25	0.78	1.2	0.86	1.2	1.2	1.2	0.82	0.52	0.45	e0.57
6	0.62	0.30	0.87	1.2	0.85	1.2	1.3	1.1	0.79	0.50	0.57	e0.56
7	0.63	0.81	1.0	1.2	0.83	1.2	1.3	1.0	0.78	0.46	0.56	e0.54
8	1.00	2.2	0.84	1.1	0.81	1.1	1.2	1.00	1.2	0.48	0.47	e0.53
9	0.91	1.7	0.78	1.1	0.71	1.1	1.1	0.91	0.87	0.46	0.48	e0.52
10	1.1	0.71	0.73	1.1	0.74	1.2	1.2	0.82	0.80	0.46	0.49	0.59
11	1.00	0.44	0.63	1.2	1.2	1.2	1.2	0.81	0.69	0.47	0.42	0.82
12	0.80	0.42	0.56	1.1	1.7	1.1	1.2	0.85	0.70	0.47	0.42	0.53
13	0.85	0.40	0.69	1.1	2.1	1.1	1.7	0.85	0.67	0.48	0.45	0.52
14	0.84	0.54	0.76	1.2	1.6	1.1	1.8	0.84	0.65	0.50	0.43	0.62
15	0.88	0.52	0.97	1.1	1.2	49	1.6	0.81	0.63	0.51	0.41	0.70
16	0.82	0.57	4.4	1.1	1.4	17	1.3	0.78	0.57	0.58	0.43	0.68
17	0.80	0.67	4.2	0.95	1.3	3.9	1.3	0.75	0.55	0.57	0.32	0.68
18	0.69	0.64	3.1	0.99	1.1	3.3	1.2	0.71	0.59	0.44	0.36	0.74
19	0.77	0.61	1.9	0.98	1.1	2.5	1.2	0.71	0.60	0.43	0.43	0.67
20	0.88	0.60	35	1.0	1.2	2.3	0.95	0.64	0.64	0.36	0.41	0.73
21	0.98	0.65	9.7	1.1	1.1	2.1	0.96	0.79	0.59	0.49	0.41	0.71
22	0.92	0.75	33	1.1	1.0	1.9	0.92	0.73	0.93	0.50	0.38	0.74
23	0.60	0.82	4.7	1.0	1.1	1.9	0.91	0.80	0.64	0.47	0.35	e0.73
24	0.65	0.78	3.2	1.0	1.4	1.8	0.86	0.81	2.7	0.45	0.45	e0.72
25	0.58	0.80	1.6	0.91	2.1	1.7	0.83	0.89	0.80	0.48	0.45	e0.69
26	0.55	e0.80	1.4	0.85	1.5	1.6	0.90	0.85	0.94	0.52	0.49	e0.67
27	0.57	e0.78	1.4	0.91	1.4	1.4	0.89	0.76	0.48	0.48	e0.48	e0.65
28	0.39	0.80	1.6	0.91	1.4	1.3	0.97	0.70	0.49	0.53	e0.47	e0.67
29	0.43	0.68	2.0	0.91	---	1.2	0.96	0.72	0.54	0.55	0.47	e0.68
30	0.39	0.62	1.9	0.85	---	1.7	0.90	0.77	0.57	0.52	0.54	e0.66
31	0.35	---	1.6	0.86	---	1.3	---	0.79	---	0.50	0.53	---
TOTAL	22.31	20.03	121.76	33.82	33.30	112.7	35.15	28.28	23.28	15.12	13.71	19.09
MEAN	0.72	0.67	3.93	1.09	1.19	3.64	1.17	0.91	0.78	0.49	0.44	0.64
MAX	1.1	2.2	35	1.6	2.1	49	1.8	2.1	2.7	0.58	0.57	0.82
MIN	0.35	0.23	0.49	0.85	0.71	1.1	0.83	0.64	0.48	0.36	0.32	0.52
AC-FT	44	40	242	67	66	224	70	56	46	30	27	38

e Estimated.

## SAN ANTONIO CREEK BASIN

## 11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.04	1.65	2.79	11.0	28.1	21.5	7.03	1.42	0.92	0.68	0.69	0.78
MAX	12.9	6.73	10.6	104	273	234	149	3.85	2.07	1.59	1.84	3.09
(WY)	2001	1973	1956	1995	1998	1983	1958	1983	1983	1983	1981	2000
MIN	0.19	0.19	0.29	0.41	0.54	0.44	0.30	0.24	0.17	0.18	0.21	0.16
(WY)	1990	1990	1990	1991	1991	1990	1990	1990	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1956 - 2003	
ANNUAL TOTAL	419.59		478.55			
ANNUAL MEAN	1.15		1.31		6.35	
HIGHEST ANNUAL MEAN					39.7	
LOWEST ANNUAL MEAN					0.47	
HIGHEST DAILY MEAN	35	Dec 20	49	Mar 15	2040	Mar 2 1983
LOWEST DAILY MEAN	0.23	Nov 4	0.23	Nov 4	0.04	Jan 22 2001
ANNUAL SEVEN-DAY MINIMUM	0.30	Oct 31	0.30	Oct 31	0.08	Oct 23 2001
MAXIMUM PEAK FLOW			178		4680	
MAXIMUM PEAK STAGE			2.78		14.32	
INSTANTANEOUS LOW FLOW			0.00		Mar 1 1983	
ANNUAL RUNOFF (AC-FT)	832		949		4600	
10 PERCENT EXCEEDS	1.4		1.6		4.8	
50 PERCENT EXCEEDS	0.81		0.80		1.0	
90 PERCENT EXCEEDS	0.52		0.45		0.39	



## 11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA—Continued

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

Date	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Carbon- ate, wat flt incrm. titr., field, mg/L (00452)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)
OCT								
07...	--	--	--	--	--	--	--	--
NOV								
08...	--	--	--	--	--	--	--	--
DEC								
10...	--	--	--	--	--	--	--	--
JAN								
13...	--	--	--	--	--	--	--	--
FEB								
12...	--	--	--	--	--	--	--	--
MAR								
14...	--	--	--	--	--	--	--	--
APR								
10...	404	4	354	.46	30.1	654	1880	2.77
MAY								
08...	--	--	--	--	--	--	--	--
JUN								
02...	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--
AUG								
04...	--	--	--	--	--	--	--	--
SEP								
02...	--	--	--	--	--	--	--	--

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)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
OCT								
07...	1550	--	--	--	--	--	--	--
NOV								
08...	1450	--	--	--	--	--	--	--
DEC								
10...	1550	--	--	--	--	--	--	--
JAN								
13...	1860	--	--	--	--	--	--	--
FEB								
12...	1670	--	--	--	--	--	--	--
MAR								
14...	1910	--	--	--	--	--	--	--
APR								
10...	2040	.07	4.11	.114	.83	1670	e7	102
MAY								
08...	1800	--	--	--	--	--	--	--
JUN								
02...	1710	--	--	--	--	--	--	--
30...	1600	--	--	--	--	--	--	--
AUG								
04...	1560	--	--	--	--	--	--	--
SEP								
02...	1500	--	--	--	--	--	--	--

e Estimated.

## 11136100 SAN ANTONIO CREEK NEAR CASMALIA, CA—Continued

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

Date	Time	Depth at sample loca- tion, feet (81903)	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)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR									
10...*	1337	.28	758	9.4	99	8.3	2200	18.5	.30
10...*	1338	.31	758	9.4	99	8.2	2850	18.0	.60
10...*	1339	.30	758	9.4	100	8.2	2850	18.0	.90
10...*	1340	.30	758	9.4	100	8.2	2850	18.0	1.20
10...*	1341	.29	758	9.4	100	8.2	2850	18.0	1.50
10...*	1342	.28	758	9.4	100	8.2	2850	18.0	1.80
10...*	1343	.29	758	9.4	99	8.1	2850	18.0	2.10
10...*	1344	.29	758	9.4	99	8.1	2850	18.0	2.40
10...*	1345	.28	758	9.3	99	8.1	2850	18.0	2.70
10...*	1346	.28	758	9.3	99	8.1	2850	18.0	3.00
10...*	1347	.24	758	9.3	99	8.1	2850	18.0	3.30
10...*	1348	.21	758	9.3	99	8.1	2850	18.0	3.60
10...*	1349	.20	758	9.3	99	8.1	2850	18.0	3.90
10...*	1350	.15	758	9.3	98	8.1	2840	18.0	4.20

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 10, 1.2 ft<sup>3</sup>/s.

## 11136800 CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA, CA

LOCATION.—Lat 35° 01' 19", long 120° 13' 39", in SW 1/4 sec.14, T.11 N., R.32 W., San Luis Obispo–Santa Barbara County Line, Hydrologic Unit 18060007, on left bank, 270 ft downstream of bridge on State Highway 166, 1.5 mi downstream from Buckhorn Canyon, and 13 mi northeast of Santa Maria.

DRAINAGE AREA.—886 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1903 to December 1905 (published as "Santa Maria River near Santa Maria"), October 1959 to current year. Monthly discharge only for October 1903 and July 1904. Yearly estimate for water year 1941 (incomplete), published in WSP 1315-B.

REVISED RECORDS.—WDR CA-71-1: Drainage area. WDR CA-77-1: 1976.

GAGE.—Water-stage recorder. Elevation of gage is 760 ft above NGVD of 1929, from topographic map. Prior to October 1959, nonrecording gage at different site and datum.

REMARKS.—Records fair. No regulation upstream from station. Pumping from wells along stream for irrigation of several thousand acres in Upper Cuyama Valley.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 26,200 ft<sup>3</sup>/s, Feb. 23, 1998, gage height, 14.76 ft, from rating curve extended above 4,900 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height 14.76 ft; no flow at times in most years.

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. 13	1015	922	7.40

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	e0.00	0.00	4.6	0.65	4.2	2.2	1.2	0.56	0.21	0.07	0.04
2	0.00	e0.00	0.00	3.8	0.65	3.7	2.2	2.4	0.53	0.19	0.07	0.03
3	0.00	e0.00	0.00	3.4	0.61	3.0	2.2	6.5	0.54	0.18	0.08	0.03
4	0.00	e0.00	0.00	2.8	0.62	3.1	2.3	5.7	0.55	0.17	0.07	0.05
5	0.00	e0.00	0.00	2.3	0.63	2.8	2.4	4.5	0.58	0.15	0.08	0.04
6	0.00	e0.00	0.00	2.1	0.61	2.8	2.2	3.3	0.59	0.16	0.08	0.04
7	0.00	e0.00	0.00	1.8	0.63	2.7	2.1	2.7	0.51	0.16	0.06	0.03
8	0.00	2.0	0.00	1.6	0.61	2.5	1.9	2.4	0.54	0.13	0.05	0.04
9	0.00	13	0.00	1.6	0.55	2.2	1.7	2.0	0.51	0.15	0.05	0.03
10	0.00	3.5	0.00	1.6	0.59	2.0	1.6	1.9	0.53	0.11	0.04	0.03
11	0.00	0.02	0.00	1.5	1.1	1.9	1.6	1.7	0.53	0.10	0.04	0.02
12	0.00	0.00	0.00	1.3	2.4	1.8	1.6	1.6	0.53	0.10	0.03	0.03
13	0.00	0.00	0.00	1.3	212	1.7	3.2	1.5	0.49	0.09	0.03	0.03
14	0.00	0.00	0.00	1.3	57	1.7	5.0	1.5	0.45	0.08	0.03	0.03
15	0.00	0.00	0.00	1.2	18	18	3.7	1.4	0.43	0.09	0.02	0.03
16	e0.00	0.00	18	1.1	11	25	2.9	1.3	0.40	0.09	0.02	0.03
17	e0.00	0.00	8.8	1.0	7.3	32	2.6	1.2	0.36	0.06	0.03	0.03
18	e0.00	0.00	5.0	1.0	5.7	10	2.4	1.1	0.35	0.07	0.04	0.03
19	e0.00	0.00	3.0	0.95	4.6	6.8	2.1	0.95	0.35	0.11	0.04	0.02
20	e0.00	0.00	53	0.93	4.3	5.1	1.9	0.83	0.32	0.09	0.04	0.02
21	e0.00	0.00	20	0.87	3.6	4.0	1.8	0.76	0.33	0.08	0.04	0.02
22	e0.00	0.00	14	0.87	3.2	3.8	1.8	0.74	0.33	0.08	0.04	0.02
23	e0.00	0.00	7.2	0.90	2.9	3.5	1.7	0.73	0.34	0.08	0.05	0.01
24	0.00	0.00	4.9	0.85	3.2	3.2	1.7	0.75	0.33	0.07	0.03	0.02
25	e0.00	0.00	4.0	0.76	4.2	3.0	1.7	0.74	0.29	0.08	0.03	0.02
26	e0.00	0.00	3.1	0.75	3.6	2.6	1.5	0.71	0.25	0.08	0.04	0.03
27	0.00	0.00	2.5	0.79	5.8	2.5	1.4	0.64	0.24	0.08	0.03	0.03
28	0.00	0.00	3.6	0.80	4.9	2.4	1.7	0.62	0.24	0.08	0.04	0.02
29	e0.00	0.00	6.9	0.73	---	2.2	1.5	0.60	0.23	0.09	0.04	0.03
30	e0.00	0.00	5.5	0.68	---	2.2	1.3	0.60	0.23	0.09	0.03	0.02
31	e0.00	---	5.1	0.64	---	2.2	---	0.58	---	0.08	0.04	---
TOTAL	0.00	18.52	164.60	45.82	360.95	164.6	63.9	53.15	12.46	3.38	1.38	0.85
MEAN	0.000	0.62	5.31	1.48	12.9	5.31	2.13	1.71	0.42	0.11	0.045	0.028
MAX	0.00	13	53	4.6	212	32	5.0	6.5	0.59	0.21	0.08	0.05
MIN	0.00	0.00	0.00	0.64	0.55	1.7	1.3	0.58	0.23	0.06	0.02	0.01
AC-FT	0.00	37	326	91	716	326	127	105	25	6.7	2.7	1.7

e Estimated.



## 11136800 CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA, CA—Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.77	2.44	14.4	37.6	112	102	25.7	8.00	4.21	1.88	1.16	1.61
MAX	11.3	23.6	275	467	1210	974	243	96.9	66.0	26.2	20.8	22.7
(WY)	1999	1966	1967	1969	1998	1995	1998	1998	1998	1998	1998	1990
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1960	1960	1960	1960	1964	1961	1961	1961	1961	1960	1960	1960

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1960 - 2003
ANNUAL TOTAL	214.90	889.61	
ANNUAL MEAN	0.59	2.44	25.5
HIGHEST ANNUAL MEAN			168 1998
LOWEST ANNUAL MEAN			0.002 1964
HIGHEST DAILY MEAN	53 Dec 20	212 Feb 13	10000 Feb 24 1998
LOWEST DAILY MEAN	0.00 May 12	0.00 Oct 1	0.00 Oct 1 1959
ANNUAL SEVEN-DAY MINIMUM	0.00 May 12	0.00 Oct 1	0.00 Oct 1 1959
MAXIMUM PEAK FLOW		922 Feb 13	26200 Feb 23 1998
MAXIMUM PEAK STAGE		7.40 Feb 13	14.76 Feb 23 1998
INSTANTANEOUS LOW FLOW		0.00 Oct 1	
ANNUAL RUNOFF (AC-FT)	426	1760	18500
10 PERCENT EXCEEDS	0.39	4.0	20
50 PERCENT EXCEEDS	0.00	0.49	0.49
90 PERCENT EXCEEDS	0.00	0.00	0.00



11136800 CUYAMA RIVER BELOW BUCKHORN CANYON, NEAR SANTA MARIA, CA—Continued

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

Date	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Carbon- ate, wat flt incrm. titr., field, mg/L (00452)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)
JAN								
17...	--	--	--	--	--	--	--	--
FEB								
13...	--	--	--	--	--	--	--	--
MAR								
12...	--	--	--	--	--	--	--	--
APR								
08...	272	4	78.7	.50	11.0	615	1200	1.78
MAY								
08...	--	--	--	--	--	--	--	--
JUN								
03...	--	--	--	--	--	--	--	--
JUL								
01...	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--
SEP								
04...	--	--	--	--	--	--	--	--

Date	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, as N mg/L (00608)	Nitrite + nitrate water fltrd, as N mg/L (00631)	Nitrite water, fltrd, as N mg/L (00613)	Ortho- phos- phate, water, fltrd, as P mg/L (00671)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
JAN								
17...	1150	--	--	--	--	--	--	--
FEB								
13...	2910	--	--	--	--	--	--	--
MAR								
12...	1500	--	--	--	--	--	--	--
APR								
08...	1310	<.04	<.06	<.008	<.02	390	e7	13.9
MAY								
08...	1400	--	--	--	--	--	--	--
JUN								
03...	1230	--	--	--	--	--	--	--
JUL								
01...	1200	--	--	--	--	--	--	--
31...	1110	--	--	--	--	--	--	--
SEP								
04...	1040	--	--	--	--	--	--	--

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

Date	Time	Depth at sample loca- tion, feet (81903)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved 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)	Locatn in X-sect. looking dwnstrm ft from 1 bank (00009)
APR									
08...*	1255	.32	729	9.2	111	8.3	1720	24.5	.15
08...*	1256	.46	729	9.3	111	8.3	1730	24.5	.75
08...*	1257	.53	729	9.3	111	8.2	1730	24.5	1.35
08...*	1258	.58	729	9.3	111	8.2	1720	24.5	1.95
08...*	1259	.57	729	9.2	111	8.2	1730	24.5	2.55
08...*	1300	.55	729	9.3	111	8.2	1730	24.5	3.15
08...*	1301	.49	729	9.2	111	8.2	1730	24.5	3.75
08...*	1302	.38	729	9.2	110	8.2	1730	24.5	4.35
08...*	1303	.27	729	9.1	110	8.2	1730	24.5	4.95

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

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 08, 1.9 ft<sup>3</sup>/s.



## 11138500 SISQUOC RIVER NEAR SISQUOC, CA—Continued

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

Date	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Carbon- ate, wat flt incrm. titr., field, mg/L (00452)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)
OCT								
09...	--	--	--	--	--	--	--	--
NOV								
13...	--	--	--	--	--	--	--	--
DEC								
11...	--	--	--	--	--	--	--	--
JAN								
13...	--	--	--	--	--	--	--	--
FEB								
19...	--	--	--	--	--	--	--	--
MAR								
13...	--	--	--	--	--	--	--	--
APR								
09...	270	5	19.2	.41	16.4	378	778	1.16
MAY								
25...	--	--	--	--	--	--	--	--
JUN								
13...	--	--	--	--	--	--	--	--
JUL								
01...	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--
SEP								
05...	--	--	--	--	--	--	--	--

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)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
OCT								
09...	952	--	--	--	--	--	--	--
NOV								
13...	969	--	--	--	--	--	--	--
DEC								
11...	965	--	--	--	--	--	--	--
JAN								
13...	867	--	--	--	--	--	--	--
FEB								
19...	853	--	--	--	--	--	--	--
MAR								
13...	878	--	--	--	--	--	--	--
APR								
09...	850	<.04	<.06	<.008	.02	140	<10	4.0
MAY								
25...	787	--	--	--	--	--	--	--
JUN								
13...	823	--	--	--	--	--	--	--
JUL								
01...	849	--	--	--	--	--	--	--
30...	860	--	--	--	--	--	--	--
SEP								
05...	846	--	--	--	--	--	--	--

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

## SANTA MARIA RIVER BASIN

11138500 SISQUOC RIVER NEAR SISQUOC, CA—Continued

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

Date	Time	Depth at sample locat- ion, feet (81903)	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 un- f uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR									
09...*	1131	.22	743	9.5	101	8.3	1150	18.5	1.50
09...*	1134	.52	743	9.5	102	8.3	1150	18.5	3.00
09...*	1137	.68	743	9.5	102	8.3	1150	18.5	4.50
09...*	1138	.64	743	9.5	102	8.3	1150	18.5	6.00
09...*	1139	.78	743	9.5	102	8.3	1150	18.5	7.50
09...*	1140	.84	743	9.5	102	8.3	1140	18.5	9.00
09...*	1141	.80	743	9.5	102	8.3	1140	18.5	10.5
09...*	1143	.88	743	9.5	102	8.3	1150	18.5	12.0
09...*	1144	.86	743	9.5	102	8.3	1150	18.5	13.5
09...*	1146	.74	743	9.5	102	8.3	1150	18.5	15.0
09...*	1147	.66	743	9.5	102	8.3	1150	18.5	16.5
09...*	1148	.56	743	9.5	102	8.3	1150	18.5	18.0
09...*	1149	.42	743	9.5	102	8.3	1150	19.0	19.5

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 09, 17 ft<sup>3</sup>/s.

## 11140000 SISQUOC RIVER NEAR GAREY, CA

LOCATION.—Lat 34° 53' 38", long 120° 18' 20", in SW 1/4 sec.36, T.10 N., R.33 W., Santa Barbara County, Hydrologic Unit 18060008, on downstream side of Santa Maria Mesa Road Bridge, near left bank, 0.6 mi northeast of Garey, and 3.7 mi downstream from Tepusquet Creek.

DRAINAGE AREA.—471 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1940 to current year. Records for water year 1941 incomplete; yearly estimate and monthly discharge only for October 1940 and January 1941, published in WSP 1315-B.

REVISED RECORDS.—WSP 1011: 1941, 1943. WSP 1928: Drainage area.

GAGE.—Water-stage recorder and concrete control. Datum of main gage is 354.8 ft above NGVD of 1929, Santa Barbara County datum. See WSP 1735 for history of changes of main gage prior to Oct. 1, 1959. Oct. 1, 1959, to Dec. 30, 1965, at datum 6.00 ft higher. Since Oct. 1, 1959, supplementary gage on downstream side of bridge near right bank at same datum. Supplementary gage discontinued June 8, 1992.

REMARKS.—Records poor. No regulation upstream from station. Pumping from wells along stream for irrigation of about 7,000 acres upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 33,600 ft<sup>3</sup>/s, Mar. 1, 1983, gage height, 11.16 ft, from rating curve extended above 22,000 ft<sup>3</sup>/s, maximum gage height, 13.50 ft, Dec. 6, 1966; no flow for many days in each year.

EXTREMES FOR CURRENT YEAR.—Peak discharge greater than base discharge of 200 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)
Feb. 13	1315	533	6.08	May 4	0130	610	6.13
Mar. 15	2000	3,060	7.10				

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	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	15	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e383	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e257	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e188	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e120	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e53	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e29	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e23	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e17	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e12	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	80	0.00	0.00	e6.3	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	112	0.00	0.00	e3.2	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	27	292	e1.7	e0.95	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	e10	423	0.00	e0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	e3.8	e30	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	e1.1	e4.9	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	e0.00	e0.53	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	e0.33	0.00	e3.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	e4.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	e4.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	e4.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	e0.10	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	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	14.73	0.00	236.90	750.43	1.70	1107.45	0.00	0.00	0.00	0.00
MEAN	0.000	0.000	0.48	0.000	8.46	24.2	0.057	35.7	0.000	0.000	0.000	0.000
MAX	0.00	0.00	4.8	0.00	112	423	1.7	383	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	29	0.00	470	1490	3.4	2200	0.00	0.00	0.00	0.00

e Estimated.

## SANTA MARIA RIVER BASIN

## 11140000 SISQUOC RIVER NEAR GAREY, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.12	2.53	17.4	94.8	220	190	86.7	20.8	4.02	0.74	0.14	0.16
MAX	3.88	39.0	506	1531	3310	1833	1072	407	135	35.8	5.99	4.20
(WY)	1968	1966	1967	1969	1998	1983	1958	1998	1998	1998	1998	1998
MIN	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(WY)	1942	1942	1944	1944	1947	1947	1947	1946	1945	1942	1942	1942

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1942 - 2003
ANNUAL TOTAL	14.73	2111.21	
ANNUAL MEAN	0.040	5.78	52.2
HIGHEST ANNUAL MEAN			446 1998
LOWEST ANNUAL MEAN			0.000 1948
HIGHEST DAILY MEAN	4.8 Dec 21	423 Mar 16	13900 Feb 3 1998
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1941
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 1	0.00 Oct 1 1941
MAXIMUM PEAK FLOW		3060 Mar 15	33600 Mar 1 1983
MAXIMUM PEAK STAGE		7.10 Mar 15	13.50 Dec 6 1966
INSTANTANEOUS LOW FLOW		0.00 Oct 1	
ANNUAL RUNOFF (AC-FT)	29	4190	37840
10 PERCENT EXCEEDS	0.00	0.00	50
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00



## 11141050 ORCUTT CREEK NEAR ORCUTT, CA

LOCATION.—Lat 34° 53'01", long 120° 29'38", in SW 1/4 SE 1/4 sec.6, T.9 N., R.34 W., Santa Barbara County, Hydrologic Unit 18060008, on right bank, 10 ft upstream from Black Road Bridge, 0.2 mi northeast of State Highway 1, and 3.0 mi northwest of Orcutt.

DRAINAGE AREA.—18.5 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.—October 1982 to September 1992, October 1994 to current year.

GAGE.—Water-stage recorder and crest-stage gage. Elevation of gage is 160 ft above NGVD of 1929, from topographic map.

REMARKS.—Records fair. No regulation or diversion upstream from station. Natural flow affected by pumping and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,350 ft<sup>3</sup>/s, Mar. 5, 2001, gage height, 10.33 ft, from rating curve extended above 10 ft<sup>3</sup>/s, on basis of slope-area measurements at gage heights 4.83 and 7.53 ft, maximum gage height, 11.07 ft, Mar. 10, 1995; no flow at times in some years.

EXTREMES FOR CURRENT YEAR.—Peak discharge greater than base discharge of 25 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. 16	1530	49	2.98	Mar. 15	1200	94	3.37
Dec. 22	0015	53	3.02				

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

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.07	0.46	0.19	0.12	0.04	0.08	0.02	0.16	0.01	0.00
2	0.00	0.00	0.04	0.20	0.51	0.10	0.12	0.70	0.09	0.05	0.00	0.06
3	0.00	0.00	0.05	0.18	0.21	0.09	0.07	6.2	0.29	0.05	0.04	0.07
4	0.00	0.00	0.11	0.18	0.19	0.12	0.05	1.5	0.37	0.12	0.00	0.06
5	0.00	0.00	0.11	0.17	0.29	0.09	0.06	0.09	0.02	0.17	0.06	0.13
6	0.00	0.00	0.10	0.17	0.25	0.06	0.04	0.06	0.01	0.00	0.02	0.28
7	0.00	0.03	0.07	0.16	0.18	0.10	0.05	0.13	0.00	0.01	0.03	0.08
8	0.00	8.4	0.08	0.25	0.18	0.07	0.11	0.24	0.00	0.11	0.00	0.01
9	0.00	8.3	0.06	0.29	0.16	0.05	0.01	0.29	0.16	0.04	0.08	0.23
10	0.00	1.1	0.06	0.34	0.17	0.07	0.10	0.40	0.19	0.05	0.03	0.24
11	0.00	0.24	0.05	0.39	0.88	0.10	0.09	0.03	0.17	0.07	0.00	0.04
12	0.00	0.08	0.05	0.21	4.7	0.06	0.05	0.06	0.06	0.10	0.01	0.08
13	0.00	0.05	0.06	0.19	2.8	0.11	1.0	0.14	0.12	0.01	0.00	0.16
14	0.00	0.04	0.05	0.18	0.74	0.06	1.2	0.12	0.13	0.02	0.02	0.13
15	0.00	0.00	0.08	0.17	0.24	23	0.17	0.34	0.01	0.01	0.10	0.01
16	0.00	0.00	10	0.21	0.18	2.0	0.09	0.02	0.04	0.02	0.05	0.01
17	0.00	0.07	3.7	0.18	0.20	0.23	0.16	0.11	0.09	0.01	0.11	0.12
18	0.00	0.04	0.98	0.21	0.13	0.10	0.02	0.14	0.05	0.13	0.08	0.13
19	0.00	0.00	0.94	0.18	0.11	0.07	0.01	0.05	0.05	0.07	0.01	0.09
20	0.00	0.00	12	0.19	0.10	0.06	0.05	0.28	0.01	0.01	0.07	0.00
21	0.00	0.03	7.4	0.19	0.09	0.06	0.04	0.25	0.00	0.00	0.08	0.01
22	0.00	0.08	8.3	0.25	0.10	0.05	0.09	0.19	0.00	0.03	0.02	0.00
23	0.00	0.07	1.6	0.20	0.14	0.05	0.11	0.19	0.02	0.00	0.04	0.11
24	0.00	0.05	3.5	0.27	0.53	0.05	0.03	0.24	0.01	0.02	0.01	0.07
25	0.00	0.03	1.6	0.31	3.3	0.05	0.03	0.01	0.01	0.10	0.00	0.09
26	0.00	0.01	0.25	0.20	0.26	0.05	0.11	0.00	0.01	0.06	0.05	0.00
27	0.00	0.07	0.20	0.18	1.6	0.09	0.10	0.05	0.00	0.04	0.15	0.00
28	0.00	0.07	1.2	0.29	0.45	0.09	0.01	0.28	0.08	0.01	0.01	0.00
29	0.00	0.07	2.4	0.18	---	0.06	0.02	0.10	0.07	0.00	0.01	0.00
30	0.00	0.07	1.0	0.18	---	0.02	0.01	0.14	0.00	0.00	0.09	0.02
31	0.00	---	1.7	0.21	---	0.03	---	0.22	---	0.02	0.09	---
TOTAL	0.00	18.90	57.81	6.97	18.88	27.26	4.04	12.65	2.08	1.49	1.27	2.23
MEAN	0.000	0.63	1.86	0.22	0.67	0.88	0.13	0.41	0.069	0.048	0.041	0.074
MAX	0.00	8.4	12	0.46	4.7	23	1.2	6.2	0.37	0.17	0.15	0.28
MIN	0.00	0.00	0.04	0.16	0.09	0.02	0.01	0.00	0.00	0.00	0.00	0.00
AC-FT	0.00	37	115	14	37	54	8.0	25	4.1	3.0	2.5	4.4

## SANTA MARIA RIVER BASIN

## 11141050 ORCUTT CREEK NEAR ORCUTT, CA—Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.077	0.51	0.80	3.03	9.11	13.0	1.38	0.37	0.15	0.11	0.089	0.087
MAX	0.29	3.76	2.68	27.5	76.7	120	8.88	3.04	0.43	0.34	0.23	0.29
(WY)	1984	2002	1992	1995	1998	1995	1998	1998	1998	1998	1983	2002
MIN	0.000	0.000	0.018	0.040	0.070	0.059	0.020	0.031	0.009	0.003	0.003	0.005
(WY)	1995	1995	1996	1985	1984	1989	1990	1986	1996	1996	1992	1996

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1983 - 2003
ANNUAL TOTAL	149.77	153.58	
ANNUAL MEAN	0.41	0.42	2.36
HIGHEST ANNUAL MEAN			13.8 1995
LOWEST ANNUAL MEAN			0.090 1990
HIGHEST DAILY MEAN	13 Jan 27	23 Mar 15	1460 Mar 10 1995
LOWEST DAILY MEAN	0.00 Mar 3	0.00 Oct 1	0.00 Oct 1 1982
ANNUAL SEVEN-DAY MINIMUM	0.00 Sep 26	0.00 Oct 1	0.00 Oct 1 1982
MAXIMUM PEAK FLOW		94 Mar 15	4350 Mar 5 2001
MAXIMUM PEAK STAGE		3.37 Mar 15	11.07 Mar 10 1995
INSTANTANEOUS LOW FLOW		0.00 Oct 1	
ANNUAL RUNOFF (AC-FT)	297	305	1710
10 PERCENT EXCEEDS	0.59	0.38	1.2
50 PERCENT EXCEEDS	0.08	0.07	0.08
90 PERCENT EXCEEDS	0.00	0.00	0.00



## 11141050 ORCUTT CREEK NEAR ORCUTT, CA—Continued

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

Date	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Carbon- ate, wat flt incrm. titr., field, mg/L (00452)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)
NOV 08...	--	--	--	--	--	--	--	--
DEC 16...	--	--	--	--	--	--	--	--
JAN 17...	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--
MAR 14...	--	--	--	--	--	--	--	--
APR 05...	368	3	451	.41	20.4	516	1830	2.72
MAY 08...	--	--	--	--	--	--	--	--
MAY 30...	--	--	--	--	--	--	--	--
JUL 02...	--	--	--	--	--	--	--	--
SEP 05...	--	--	--	--	--	--	--	--

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)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
NOV 08...	1120	--	--	--	--	--	--	--
DEC 16...	2260	--	--	--	--	--	--	--
JAN 17...	2200	--	--	--	--	--	--	--
FEB 13...	1050	--	--	--	--	--	--	--
MAR 14...	1830	--	--	--	--	--	--	--
APR 05...	2000	.08	15.3	.142	1.22	490	14	49.9
MAY 08...	1370	--	--	--	--	--	--	--
MAY 30...	2070	--	--	--	--	--	--	--
JUL 02...	2320	--	--	--	--	--	--	--
SEP 05...	1770	--	--	--	--	--	--	--

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

Date	Time	Depth at sample loca- tion, feet (81903)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved percent of sat- uration (00301)	pH, water, unfltrd std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, deg C (00010)	Locatn in X-sect. looking dwnstrm 1 bank (00009)
APR 05...*	1344	.08	760	9.3	95	8.0	2980	16.5	.30
05...*	1345	.10	760	9.3	95	8.0	2980	16.0	.50
05...*	1346	.18	760	9.3	95	8.0	2980	16.0	.70
05...*	1347	.30	760	9.3	95	8.0	2980	16.0	.90
05...*	1348	.33	760	9.3	95	8.0	2980	16.0	1.10
05...*	1349	.34	760	9.3	95	8.0	2980	16.0	1.30
05...*	1350	.32	760	9.4	95	8.0	2980	16.0	1.50
05...*	1351	.30	760	9.4	96	8.0	2980	16.0	1.70
05...*	1352	.25	760	9.4	96	8.0	2980	16.0	1.90
05...*	1353	.20	760	9.4	95	8.0	2980	16.0	2.10
05...*	1354	.10	760	--	--	8.0	2980	16.0	2.30

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 05, 0.08 ft<sup>3</sup>/s.

## 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.

### Crest-Stage Partial-Record Stations

Records collected at crest-stage partial-record stations are presented below. Discharge measurements made at miscellaneous sites are given in separate tables. The following table contains annual maximum discharges for crest-stage stations. A crest-stage station is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for the current year is given. Information on some lower floods may have been obtained but is not published here. The years given in the period of record represent water years for which the annual maximum has been obtained.

Annual maximum discharge at crest-stage partial-record stations during water year 2003

Station no.	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Annual maximum Gage height (ft)	Discharge (ft <sup>3</sup> /s)
BRISTOL LAKE BASIN							
10253000	Gourd Creek near Ludlow, CA	Lat 34° 40' 35", long 116° 01' 20", in SW 1/4 sec.23, T.7 N., R.9 E., <a href="#">San Bernardino County</a> , Hydrologic Unit 18090208, at culvert on National Trails Highway (formerly U.S. Highway 66), and 8.5 mi southeast of Ludlow.	0.30	1959–74, 1976–2003	2-13-03	12.01	26
MOJAVE RIVER BASIN							
10262600	Boom Creek near Barstow, CA	Lat 34° 54' 20", long 116° 56' 55", NW 1/4 NE 1/4 sec.2, T.9 N., R.1 W., <a href="#">San Bernardino County</a> , Hydrologic Unit 18090208, at culvert on Interstate Highway 15, and 4.3 mi east of Barstow.	.24	1956–66, a1967–73, 1976–97, 1999–2003	4-14-03	9.00	11
ANTELOPE VALLEY							
10263900	Buckhorn Creek near Valyermo, CA	Lat 34° 53' 35", long 117° 55' 13", in SW 1/4 sec.15, T.3 N., R.10 W., <a href="#">Los Angeles County</a> , Hydrologic Unit 18090206, Angeles National Forest, at culvert on State Highway 2, and 8.1 mi southwest of Valyermo.	.48	a1961–66, 1967–69, 1971–73, 1977–2003	2-12-03	3.54	56
10264530	Pine Creek near Palmdale, CA	Lat 34° 36' 09", long 118° 14' 48", in SE 1/4 SW 1/4 sec.15, T.6 N., R.13 W., <a href="#">Los Angeles County</a> , Hydrologic Unit 18090206, on left bank, at culvert on Elizabeth Lake Road, and 7.5 mi northwest of Palmdale.	1.78	1958–73, 1977–88, a1988–94, 1996–2003	2-12-03	10.92	4.4
10264560	Spencer Canyon Creek near Fairmont, CA	Lat 34° 46' 33", long 118° 34' 08", in SW 1/4 SW 1/4 sec.15, T.8 N., R.16 W., <a href="#">Los Angeles County</a> , Hydrologic Unit 18090206, at culvert on State Highway 138, and 8.5 mi northwest of Fairmont.	3.60	1959–64, a1965–73, 1974, 1978–2003	2-13-03	10.12	26
10264605	Joshua Creek near Mojave, CA	Lat 35° 00' 45", long 118° 20' 40" in SE 1/4 SE 1/4 sec.27, T.11 N., R.14 W., <a href="#">Kern County</a> , Hydrologic Unit 18090206, at culvert on Tehachapi–Willow Springs Road, and 10.0 mi southwest of Mojave.	3.83	1959–73, a1989–94, 2000–03		—	0

a Operated as a continuous-record station.

## Discharge at Partial-Record Stations and Miscellaneous Sites

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)
SANTA ANA RIVER BASIN							
11070185	Lamb Canyon Creek at Victory Ranch, near San Jacinto, CA	Lat 33° 51'31", long 117° 00'53", in NW 1/4 NW 1/4 sec.5, T.4 S., R.1 W., <a href="#">Riverside County</a> , Hydrologic Unit 18070202, on left bank, at private road culvert crossing, 1.25 mi upstream of confluence with San Jacinto River, and 6.0 mi northwest of San Jacinto.	3.97	1997–2003	03-15-03	3.59	9.8
SANTA YNEZ RIVER BASIN							
11131700	Santa Rita Creek near Lompoc, CA	Lat 34° 38'41", long 120° 22'09", in Santa Rita Grant, <a href="#">Santa Barbara County</a> , Hydrologic Unit 18060010, on left bank, 2.4 mi upstream from mouth, and 6.5 mi east of Lompoc.	14.1	1976–79 1981–2003	unknown	unknown	e<5
11133700	Purisima Creek near Lompoc, CA	Lat 34° 41'34", long 120° 25'51", in Purisima Grant, <a href="#">Santa Barbara County</a> , Hydrologic Unit 18060010, on right bank, 1.1 mi northeast of junction of Buener Road and Lompoc–Casmalia Road, and 4.0 mi northeast of Lompoc.	4.75	a1972–75 1976–2003	3-15-03	1.53	13
11135200	Rodeo–San Pasqual Creek near Lompoc, CA	Lat 34° 38'42", long 120° 30'57", in Lompoc Grant, <a href="#">Santa Barbara County</a> , Hydrologic Unit 18060010, on left bank, 0.1 mi east of Dewolf Avenue at Highway 246, and 3.3 mi west of Lompoc.	7.80	1971–72 1973–78 1980–2003	unknown	unknown	e<1

**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 2003

Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water year)	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
SANTA YNEZ RIVER BASIN						
11134500	Santa Ynez River	Lat 34° 40'06", long 120° 28'29", in Lompoc Grant, T.8 N., R.34 W., Santa Barbara County, Hydrologic Unit 18060010, 1.0 mi downstream from Highway 1, and 2.2 mi northeast of Lompoc.	820	a1955–75 b2001 2003	10-21-2002 10-25-2002 11-15-2002 01-10-2003 01-17-2003 01-24-2003 01-31-2003 02-07-2003 02-15-2003 02-21-2003 03-02-2003 03-07-2003 03-17-2003 03-21-2003 03-28-2003 04-04-2003 04-11-2003 04-19-2003 04-25-2003 05-02-2003 05-09-2003 05-16-2003	4.15 2.19 3.12 16.0 13.5 8.59 7.77 6.07 29.2 16.8 12.1 10.8 179 54.7 19.7 10.2 4.65 20.8 8.70 8.99 23.3 6.57

e Estimated.

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

a Operated as continuous record.

b Not previously published.

# ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD SITES

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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.

## SANTA MARIA RIVER BASIN

345727120375401 GREEN CANYON CREEK AT MAIN STREET, NEAR GUADALUPE, CA

LOCATION.—Lat 34° 57'27", long 120° 37'54", [Santa Barbara County](#), Hydrologic Unit 18060008, at culvert, on West Main Street, and 3.6 mi southwest of Guadalupe.

DRAINAGE AREA.—Not determined.

PERIOD OF RECORD.—Water years 1986 to current year.

CHEMICAL DATA: Water years 1986 to current year.

REMARKS.—Records good.

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)
APR 21...	1545	8.6	758	9.2	104	8.0	2760	21.0	1300
SEP 08...	1230	7.2	758	12.4	147	8.0	3080	23.5	1600
Date	Noncarb hardness, wat flt field, mg/L as CaCO3 (00904)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Sodium, percent (00932)	Alkalinity, wat flt inc titr., field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm., titr., field, mg/L (00453)
APR 21...	980	293	131	5.92	2	160	21	299	359
SEP 08...	1300	377	166	6.79	2	215	22	317	387
Date	Carbonate, wat flt incrm., titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue sum of water, fltrd, tons/acre-ft (70303)	Residue evap. at 180degC, wat flt mg/L (70300)	Ammonia, fltrd, mg/L as N (00608)
APR 21...	3	194	.48	26.8	945	2070	3.01	2210	.08
SEP 08...	5	228	.4	26.8	1080	2460	3.47	2550	e.03
Date	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Boron, water, fltrd, ug/L (01020)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)	CIAT, water, unfltrd, ug/L (75981)	CEAT, water, unfltrd, ug/L (75980)	
APR 21...	30.9	.181	.25	316	e7	193	<.2	<.2	
SEP 08...	37.6	.086	.20	442	<24	101	<.2	<.2	

e Estimated.

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

## ANALYSES OF SAMPLES COLLECTED AT WATER-QUALITY PARTIAL-RECORD SITES

## SANTA MARIA RIVER BASIN

345727120375401 GREEN CANYON CREEK AT MAIN STREET, NEAR GUADALUPE, CA—Continued

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

Date	Ala-chlor, water, unfltrd ug/L (77825)	Ametryn water, unfltrd ug/L (82184)	Atra-zine, water, unfltrd ug/L (39630)	Broma-cil, water, unfltrd ug/L (30234)	Buta-chlor, water, unfltrd ug/L (30235)	Butyl-ate, water, unfltrd ug/L (30236)	pheno-thion, water, unfltrd ug/L (39786)	Carbo-Car-boxin, water, unfltrd ug/L (30245)
APR 21...	<.1	<.1	<.1	<.2	<.1	<.1	<.02	<.2
SEP 08...	<.1	<.1	<.1	<.2	<.1	<.1	<.02	<.2
Date	Chlor-pyrifos water, unfltrd ug/L (38932)	Cyana-zine, water, unfltrd ug/L (81757)	Cyclo-ate, water, unfltrd ug/L (30254)	Diazi-non, water, unfltrd ug/L (39570)	Diphen-amid, water, unfltrd ug/L (30255)	Disul-foton, water, unfltrd ug/L (39011)	Ethion, water, unfltrd ug/L (39398)	Fonofos water, unfltrd ug/L (82614)
APR 21...	.12	<.2	<.1	<.02	<.1	<.10	<.01	<.01
SEP 08...	.19	<.2	<.1	e.01	<.1	<.10	<.01	<.01
Date	Hexa-zinone, water, unfltrd ug/L (30264)	Mala-thion, water, unfltrd ug/L (39530)	Methyl para-thion, water, unfltrd ug/L (39600)	Metola-chlor, water, unfltrd ug/L (82612)	Metri-buzin, water, unfltrd ug/L (82611)	Para-thion, water, unfltrd ug/L (39540)	Phorate water, unfltrd ug/L (39023)	Prome-ton, water, unfltrd ug/L (39056)
APR 21...	<.2	<.30	<.01	<.2	<.1	<.01	<.02	<.2
SEP 08...	<.2	e.12	<.01	<.2	<.1	<.01	<.02	<.2
Date	Prome-tryn, water, unfltrd ug/L (39057)	Propa-chlor, water, unfltrd ug/L (30295)	Propa-zine, water, unfltrd ug/L (39024)	Sima-zine, water, unfltrd ug/L (39055)	Sime-tryn, water, unfltrd ug/L (39054)	Terba-cil, water, unfltrd ug/L (30311)	Tribu-phos, water, unfltrd ug/L (39040)	Tri-flur-alin, water, unfltrd ug/L (39030)
APR 21...	<.1	<.1	<.1	<.1	<.1	<.2	<.02	<.1
SEP 08...	<.1	<.1	<.1	<.1	<.1	<.2	<.02	<.1
Date	Vernol-ate, water, unfltrd ug/L (30324)	Aldrin, bed sedimnt ug/kg (39333)	alpha-Endo-sulfan, bed sedimnt ug/kg (39389)	Chlor-dane, tech-nical, bed sedimnt ug/kg (39351)	Diel-drin, bed sedimnt ug/kg (39383)	Endrin, bed sedimnt ug/kg (39393)	Hepta-chlor epoxide, bed sedimnt ug/kg (39423)	Hepta-chlor, bed sedimnt ug/kg (39413)
APR 21...	<.1	<.2	<.2	<3	1.8	<.2	<.2	<.2
SEP 08...	<.1	<.2	<.3	<4	<4.0	<16	<.2	<.2

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



## SANTA MARIA RIVER BASIN

345727120375401 GREEN CANYON CREEK AT MAIN STREET, NEAR GUADALUPE, CA—Continued

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

Date	Lindane bed sedimnt ug/kg (39343)	Mirex, bed sedimnt ug/kg (39758)	p,p'- DDD, bed sedimnt ug/kg (39363)	p,p'- DDE, bed sedimnt ug/kg (39368)	p,p'- DDT, bed sedimnt ug/kg (39373)	p,p'- Meth- oxy- chlor, bed sedimnt ug/kg (39481)	PCBs, bed sedimnt ug/kg (39519)	Toxa- phene, bed sedimnt ug/kg (39403)
APR								
21...	<.2	<.2	25	150	110	<2.5	<5	<50
SEP								
08...	<.2	<.2	e25	160	e130	<2.5	<5	e500

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

Date	Time	Depth at sample locatn, feet (81903)	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, deg C (00010)	Locatn in X-sect. looking dwnstrm ft from l bank (00009)
APR									
21...*	1519	.55	758	9.0	101	8.0	2750	21.0	.20
21...*	1520	.62	758	9.2	103	8.0	2760	21.0	1.20
21...*	1521	.77	758	9.2	104	8.0	2760	21.0	2.20
21...*	1522	.92	758	9.2	104	8.0	2750	21.0	3.20
21...*	1523	1.13	758	9.2	104	8.0	2760	21.0	4.20
21...*	1524	1.23	758	9.2	104	8.0	2760	21.0	5.20
21...*	1525	1.16	758	9.2	103	8.0	2750	21.0	6.20
21...*	1526	1.13	758	9.2	104	8.0	2750	21.0	7.20
21...*	1527	1.12	758	9.2	104	8.0	2750	21.0	8.20
21...*	1528	.84	758	9.1	102	8.0	2750	21.0	9.20
21...*	1529	.46	758	9.1	102	8.0	2750	21.0	10.2
SEP									
08...*	1251	.79	758	12.3	145	8.0	3100	23.5	.70
08...*	1252	.55	758	12.3	146	8.1	3100	23.5	1.70
08...*	1253	.63	758	12.3	146	8.1	3080	23.5	2.70
08...*	1254	.70	758	12.3	146	8.1	3090	23.5	3.70
08...*	1255	.97	758	12.5	148	8.0	3090	23.5	4.70
08...*	1256	1.29	758	12.5	147	8.0	3090	23.5	5.70
08...*	1257	1.37	758	12.4	147	8.0	3080	23.5	6.70
08...*	1258	.62	758	12.4	147	8.0	3080	23.5	7.70

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

e Estimated.

\* Instantaneous discharge at time of cross-sectional measurement: Apr. 21, 8.6 ft<sup>3</sup>/s; Sept. 8, 7.2 ft<sup>3</sup>/s.

## OWENS LAKE BASIN

361121117571301 NORTH HAIWEE RESERVOIR SITE J NEAR OLANCHA, CA

LOCATION.—Lat 36° 11' 21", long 117° 57' 13", in SW 1/4 SE 1/4 sec.15, T.20 S., R.37 E., Inyo County, Hydrologic Unit 18090103, 6 mi southeast of Olancha and 8 mi north of Dunmovin.

PERIOD OF RECORD.—July to October 2002 (discontinued).

CHEMICAL DATA.—July to October 2002 (discontinued).

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

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	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 un-filtrd, uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)
OCT									
22...	1536	2.70	.10	661	10.5	122	8.5	364	15.5
22...	1537	2.70	1.0	661	10.6	122	8.5	364	15.5
22...	1538	2.70	2.0	661	10.6	122	8.6	364	15.5

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	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 un-filtrd, uS/cm 25 degC (00095)
OCT								
22...	1545	2.70	1.5	661	10.6	122	8.5	364

Date	Temperature, water, deg C (00010)	Hard-ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Organic carbon, water, unfltrd mg/L (00680)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
OCT								
22...	15.5	85	22.4	6.99	<10	2.5	2.6	5.7

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

## OWENS LAKE BASIN

361127117575101 NORTH HAIWEE RESERVOIR SITE H NEAR OLANCHA, CA

LOCATION.—Lat 36° 11'27", long 117° 57'51", in SW 1/4 SW 1/4 sec.15, T.20 S., R.37 E., Inyo County, Hydrologic Unit 18090103, 6 mi southeast of Olancha and 8 mi north of Dunmovin.

PERIOD OF RECORD.—July to October 2002 (discontinued).

CHEMICAL DATA.—July to October 2002 (discontinued).

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

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf wat 25 degC (00095)	Temper-ature, water, deg C (00010)
OCT									
22...	1445	2.10	.10	661	10.1	117	8.5	363	15.5
22...	1446	2.10	1.0	661	10.4	121	8.5	363	15.5

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf wat 25 degC (00095)
OCT								
22...	1451	2.10	1.5	661	10.4	121	8.5	363

Date	Temperature, water, deg C (00010)	Hard-ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Organic carbon, water, unfltrd mg/L (00680)	Copper, water, fltrd, ug/L (01040)	Copper, unfltrd recover-able, ug/L (01042)
OCT								
22...	15.5	84	22.2	6.95	<10	3.0	2.5	6.4

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

## OWENS LAKE BASIN

361128117573501 NORTH HAIWEE RESERVOIR SITE I NEAR OLANCHA, CA

LOCATION.—Lat 36° 11' 28", long 117° 57' 35", in SE 1/4 SW 1/4 sec.15, T.20 S., R.37 E., Inyo County, Hydrologic Unit 18090103, 6 mi southeast of Olancha and 8 mi north of Dunmovin.

PERIOD OF RECORD.—July to October 2002 (discontinued).

CHEMICAL DATA.—July to October 2002 (discontinued).

REMARKS.—Composite from samples at depths of 1, 4.5, and 7 meters.

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

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	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 (00400)	Specif. conduc-tance, wat unfltrd uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)
OCT									
22...	1507	8.20	.10	661	10.2	118	8.5	364	15.5
22...	1508	8.20	1.0	661	10.3	118	8.5	364	15.0
22...	1510	8.20	2.0	661	10.3	118	8.5	363	15.0
22...	1511	8.20	3.0	661	10.3	118	8.5	364	15.0
22...	1512	8.20	4.0	661	10.2	117	8.5	363	15.0
22...	1513	8.20	5.0	661	10.2	117	8.5	363	15.0
22...	1514	8.20	6.0	661	10.1	116	8.5	363	15.0
22...	1515	8.20	7.0	661	10.2	116	8.5	363	15.0
22...	1516	8.20	8.0	661	9.6	109	8.4	364	14.5

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	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 (00400)	Specif. conduc-tance, wat unfltrd uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)
OCT								
22...	1524	8.20	661	10.3	118	8.5	364	15.0

Date	Hard-ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Organic carbon, water, unfltrd mg/L (00680)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
OCT							
22...	85	22.4	6.99	<10	4.3	2.3	5.8

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

## OWENS LAKE BASIN

361221117572301 NORTH HAIWEE RESERVOIR SITE F NEAR OLANCHA, CA

LOCATION.—Lat 36° 12'21", long 117° 57'23", in SW 1/4 SE 1/4 sec.10, T.20 S., R.37 E., Inyo County, Hydrologic Unit 18090103, 6 mi southeast of Olancha and 8 mi north of Dunmovin.

PERIOD OF RECORD.—July to October 2002 (discontinued).

CHEMICAL DATA.—July to October 2002 (discontinued).

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

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	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 (00400)	Specif. conduc-tance, wat unfltrd uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)
OCT									
22...	1136	2.40	.10	661	8.3	94	8.3	348	14.5
22...	1137	2.40	1.0	661	9.8	111	8.3	355	14.5
22...	1138	2.40	2.0	661	9.8	111	8.3	355	14.5

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	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 (00400)	Specif. conduc-tance, wat unfltrd uS/cm 25 degC (00095)
OCT								
22...	1143	2.40	1.5	661	9.8	111	8.3	355

Date	Temperature, water, deg C (00010)	Hard-ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Organic carbon, water, unfltrd mg/L (00680)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
OCT								
22...	14.5	82	21.8	6.79	<10	2.2	1.5	2.3

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

## OWENS LAKE BASIN

361224117573201 NORTH HAIWEE RESERVOIR SITE G NEAR OLANCHA, CA

LOCATION.—Lat 36° 12'24", long 117° 57'32", in NE 1/4 SW 1/4 sec.10, T.20 S., R.37 E., Inyo County, Hydrologic Unit 18090103, 6 mi southeast of Olancha and 8 mi north of Dunmovin.

PERIOD OF RECORD.—July to October 2002 (discontinued).

CHEMICAL DATA.—July to October 2002 (discontinued).

REMARKS.—Composite from samples at depths of 1, 4.5, and 7 meters.

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

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	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 unfltrd 25 degC (00095)	Temper-ature, water, deg C (00010)
OCT									
22...	1324	8.80	.10	661	10.3	118	8.3	355	15.0
22...	1325	8.80	1.0	661	10.6	122	8.3	355	15.0
22...	1326	8.80	2.0	661	10.7	121	8.3	355	14.5
22...	1327	8.80	3.0	661	10.7	122	8.3	355	14.5
22...	1328	8.80	4.0	661	10.7	122	8.3	355	14.5
22...	1329	8.80	5.0	661	10.7	122	8.3	355	14.5
22...	1330	8.80	6.0	661	10.7	122	8.3	355	14.5
22...	1331	8.80	7.0	661	10.7	122	8.3	355	14.5
22...	1332	8.80	8.0	661	10.8	122	8.3	355	14.5

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	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 unfltrd 25 degC (00095)	Temper-ature, water, deg C (00010)
OCT								
22...	1335	8.80	661	10.6	122	8.3	355	15.0

Date	Hard-ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Organic carbon, water, unfltrd mg/L (00680)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
OCT							
22...	82	21.6	6.73	<10	2.3	1.7	1.9
22	--	21.6	6.76	<10	2.4	1.3	2.1

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

## OWENS LAKE BASIN

361226117574501 NORTH HAIWEE RESERVOIR SITE E NEAR OLANCHA, CA

LOCATION.—Lat 36° 12'26", long 117° 57'45", in NW 1/4 SW 1/4 sec.10, T.20 S., R.37 E., Inyo County, Hydrologic Unit 18090103, 6 mi southeast of Olancha and 8 mi north of Dunmovin.

PERIOD OF RECORD.—July to October 2002 (discontinued).

CHEMICAL DATA.—July to October 2002 (discontinued).

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

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	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 (00400)	Specif. conduc-tance, wat unfltrd, uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)
OCT									
22...	1117	3.10	.10	661	9.9	112	8.3	354	14.5
22...	1118	3.10	1.0	661	9.8	111	8.3	354	14.5
22...	1119	3.10	2.0	661	9.9	112	8.3	354	14.5

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	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 (00400)	Specif. conduc-tance, wat unfltrd, uS/cm 25 degC (00095)
OCT								
22...	1122	3.10	1.5	661	9.8	111	8.3	354

Date	Temperature, water, deg C (00010)	Hard-ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Organic carbon, water, unfltrd mg/L (00680)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
OCT								
22...	14.5	82	21.7	6.77	<10	3.3	1.4	2.4

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

## OWENS LAKE BASIN

361304117573301 NORTH HAIWEE RESERVOIR SITE C NEAR OLANCHA, CA

LOCATION.—Lat 36° 13'04", long 117° 57'33", in NE 1/4 SW 1/4 sec.3, T.20 S., R.37 E., Inyo County, Hydrologic Unit 18090103, 6 mi southeast of Olancha and 8 mi north of Dunmovin.

PERIOD OF RECORD.—July to October 2002 (discontinued).

CHEMICAL DATA.—July to October 2002 (discontinued).

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

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd std units (00400)	Specif. conduc-tance, wat unf wat 25 degC (00095)	Temper-ature, water, deg C (00010)
OCT									
22...	0910	1.80	.10	661	9.6	109	8.3	354	14.5
22...	0911	1.80	1.0	661	9.6	109	8.3	355	14.5

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	Baro-metric pres-sure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)
OCT								
22...	0917	1.80	1.0	661	9.6	109	8.3	355

Date	Time	Temper-ature, water, deg C (00010)	Hard-ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Organic carbon, water, unfltrd mg/L (00680)	Copper, water, unfltrd fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
OCT									
22...	14.5	82	21.7	6.77	<10	2.8	1.2	2.4	

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



## OWENS LAKE BASIN

361306117574101 NORTH HAIWEE RESERVOIR SITE D NEAR OLANCHA, CA

LOCATION.—Lat 36° 13'06", long 117° 57'41", in SE 1/4 SW 1/4 sec.3, T.20 S., R.37 E., Inyo County, Hydrologic Unit 18090103, 6 mi southeast of Olancha and 8 mi north of Dunmavin.

PERIOD OF RECORD.—July to October 2002 (discontinued).

CHEMICAL DATA.—July to October 2002 (discontinued).

REMARKS.—Composite from samples at depths of 1, 4.5, and 8 meters.

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

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	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 unfltrd 25 degC (00095)	Temper-ature, water, deg C (00010)
OCT									
22...	1049	9.80	.10	661	9.6	109	8.2	353	14.5
22...	1050	9.80	1.0	661	9.7	110	8.3	353	14.5
22...	1051	9.80	2.0	661	9.7	110	8.3	353	14.5
22...	1052	9.80	3.0	661	9.7	110	8.3	353	14.5
22...	1053	9.80	4.0	661	9.7	111	8.3	353	14.5
22...	1054	9.80	5.0	661	9.8	111	8.3	353	14.5
22...	1055	9.80	6.0	661	9.7	110	8.2	352	14.5
22...	1056	9.80	7.0	661	9.6	107	8.1	350	14.0
22...	1057	9.80	8.0	661	9.3	104	8.0	349	14.0
22...	1058	9.80	9.0	661	9.2	103	8.0	350	13.5

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	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 unfltrd 25 degC (00095)	Temper-ature, water, deg C (00010)
OCT								
22...	1102	9.80	661	9.7	110	8.3	353	14.5

Date	Hard-ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Organic carbon, water, unfltrd mg/L (00680)	Copper, water, unfltrd, recover-able, ug/L (01040)	Copper, unfltrd recover-able, ug/L (01042)
OCT							
22...	81	21.5	6.65	<10	3.8	e1.1	2.2

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

## OWENS LAKE BASIN

361306117575301 NORTH HAIWEE RESERVOIR SITE B NEAR OLANCHA, CA

LOCATION.—Lat 36° 13' 06", long 117° 57' 53", in SW 1/4 SW 1/4 sec.3, T.20 S., R.37 E., Inyo County, Hydrologic Unit 18090103, 6 mi southeast of Olancha and 8 mi north of Dunmavin.

PERIOD OF RECORD.—July to October 2002 (discontinued).

CHEMICAL DATA.—July to October 2002 (discontinued).

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

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	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 unfltrd uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)
OCT									
22...	0851	3.00	.10	661	9.7	108	8.3	353	14.0
22...	0852	3.00	1.0	661	9.7	108	8.3	353	14.0
22...	0853	3.00	2.0	661	9.7	109	8.3	353	14.0
22...	0854	3.00	2.9	661	9.7	108	8.3	353	14.0

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	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 unfltrd uS/cm 25 degC (00095)
OCT								
22...	0903	3.00	1.5	661	9.7	108	8.3	353

Date	Temperature, water, deg C (00010)	Hard-ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Residue total at 105 deg. C, sus-pended, mg/L (00530)	Organic carbon, water, unfltrd mg/L (00680)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
OCT								
22...	14.0	82	21.6	6.69	<10	2.6	1.4	2.5

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

## OWENS LAKE BASIN

361331117575201 NORTH HAIWEE RESERVOIR SITE A NEAR OLANCHA, CA

LOCATION.—Lat 36° 13'31", long 117° 57'52", in SW 1/4 NW 1/4 sec.3, T.20 S., R.37 E., Inyo County, Hydrologic Unit 18090103, 6 mi southeast of Olancha and 8 mi north of Dunmovin.

PERIOD OF RECORD.—July to October 2002 (discontinued).

CHEMICAL DATA.—July to October 2002 (discontinued).

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

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	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 (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)
OCT									
22...	0820	2.50	.10	661	9.3	101	7.9	351	12.5
22...	0822	2.50	1.0	661	9.4	102	7.9	351	12.5
22...	0824	2.50	2.0	661	9.4	102	7.8	352	12.5

Date	Time	Depth to bot. from surface at samp locatn, meters (82903)	Sam-pling depth, meters (00098)	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 (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)
OCT								
22...	0825	2.50	1.0	661	9.4	102	7.9	351

Date	Time	Temper-ature, water, deg C (00010)	Hard-ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Organic carbon, water, unfltrd mg/L (00680)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
OCT								
22...	0825	12.5	82	21.8	6.62	3.3	1.2	2.7

## OWENS LAKE BASIN

365746117220301 MESQUITE SPRING NEAR SCOTTYS CASTLE, CA

LOCATION.—Lat 36° 57' 46", long 117° 22' 03", in NE 1/4 NE 1/4 sec.35, T.11 S., R.42 E., Inyo County, Hydrologic Unit 18090203, 4.8 mi south of Scottys Castle and 27.4 mi north of Stovepipe Wells.

PERIOD OF RECORD.—October 2002 to September 2003 (discontinued).

CHEMICAL DATA.—October 2002 to September 2003 (discontinued).

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

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, field, std (00400)	Specific conductance, uS/cm (00095)	Temperature, deg C (00010)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	
OCT	23...	1100	e.10	716	7.5	97	7.9	<sup>1</sup> 1240	25.0	26.2	14.1
MAR	23...	1530	e.10	709	8.3	103	7.9	1250	22.0	27.1	14.2
Date	Time	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, water flt, mg/L as CaCO3 (29801)	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, water, fltrd, mg/L (70300)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	
OCT	23...	13.4	230	e326	84.6	3.74	69.9	174	827	e.06	
MAR	23...	7.80	221	353	82.6	3.46	67.0	172	820	<.10	
Date	Time	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd, mg/L (00665)	Fecal coliform, M-FC, 0.7u MF col/100 mL (31625)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic, water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	
OCT	23...	.205	<.002	.013	.012	<1	e1	1.10	42.5	22	
MAR	23...	.272	<.002	.018	.018	<1	e2	.92	35.4	23	
Date	Time	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium, water, fltrd, ug/L (01130)	
OCT	23...	<.06	1280	.05	.8	.05	.9	<10	<.08	219	
MAR	23...	<.06	1460	.04	1.0	.06	.7	<10	<.08	186	

e Estimated.

<sup>1</sup> Laboratory value.

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

## OWENS LAKE BASIN

365746117220301 MESQUITE SPRING NEAR SCOTTYS CASTLE, CA—Continued

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

Date	Mangan- ese, water, fltrd, ug/L (01056)	Molyb- denum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Stront- ium, water, fltrd, ug/L (01080)	Thall- ium, water, fltrd, ug/L (01057)	Vanad- ium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)
OCT 23...	.3	15.5	1.34	1.5	<.20	320	<.04	14.9	<1
MAR 23...	<.2	16.6	.60	1.4	<.20	344	<.04	14.3	M
Date	C-13 / C-12 ratio, water, unfltrd per mil (82081)	C-14 countng error, water, fltrd, percent modern (49934)	C-14, water, fltrd, percent modern (49933)	Deu- terium/ Protium ratio, water, unfltrd per mil (82082)	O-18 / O-16 ratio, water, unfltrd per mil (82085)	Sr-87/ Sr-86 ratio, water, fltrd, per mil (75978)	Tritium 2-sigma water, unfltrd pCi/L (75985)	Tritium water, unfltrd pCi/L (07000)	Uranium natural water, fltrd, ug/L (22703)
OCT 23...	-6.15	.420	55.43	-108	-13.84	.71112	.64	-.2	5.62
MAR 23...	-6.19	.450	55.05	-108	-13.86	.71116	.58	.1	6.32

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

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# Conversion Factors

Multiply	By	To obtain
<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:

$$^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32$$



1879–2004